

Whither Myrdal?

An Inquiry into the Theoretical and Educational Contributions of the *Asian Drama*

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MAXWELL C. CAUGHRON

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Abstract

This study revisits many of the theoretical contributions and policy recommendations in Swedish Sociologist Gunnar Myrdal's 1968 three-volume work *Asian Drama: An Inquiry into the Poverty of Nations*. The analysis in this dissertation returns in the same geographic territory considered in the original study using two complementary tracks. The first track (Chapters 2-7) compares and contrasts several of Myrdal's theories in *Asian Drama* against his contemporary modernization theorists. The theories tested in this thesis include the need to expand the scope of development economics; the role of values in modernization; circular and cumulative causation; the need to address inequality for development; and the 'soft state'. Each of these theories is addressed separately and the impact of each theory on the succeeding development discourse is discussed. Here, the author argues that many of Myrdal's theories had been prematurely brushed aside by the later rise of neo-liberal and post-modernist movements. Myrdal's arguments appear to be regaining a foothold in the contemporary discourse on developmental economics. In The second track of the research, Chapters 7-12, the author empirically tests the suitability of the theories above using basic education skills outcomes as a proxy for state competence in South and Southeast Asia. In particular, the author examines Myrdal's spatial component of circular causation as well as Myrdal's more specific policy suggestions concerning the educational sector. The data-driven empirical section in Chapters 9 through 11 is concerned with India at the district level. In Chapter 12, the geographic dimension of education issues are examined more concisely in Pakistan, Sri Lanka, Bangladesh, The Philippines, Malaysia, and Thailand. In each country the Getis- Ord G_i^* Hotspot spatial analysis tool and the "overlay" toolset in the ArcGIS 10.1 Geographic Information Systems (GIS) software suite are used to create spatial models of the geographic distribution of different exogenous and endogenous educational factors and their relationship to student outcomes at the primary school level. From this analysis, the district level clustering of higher and lower student skills outcomes in the educational sector, and Myrdal's specific policy recommendations on how best to expanded universal literacy are tested empirically. In conclusion, Myrdal's theoretical understanding of the 'soft state', and the independent and instrumental importance of addressing inequality are largely supported by the data. However, empirical support for Myrdal's theory of circular causation is less apparent using this methodology.

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List of Acronyms Used in Dissertation

ADB	Asian Development Bank
AFC	Asian Financial Crisis
ARMM	Autonomous Region of Muslim Mindanao
ASEAN	Association of South East Asian Nations
ASER	Annual Status of Education Report
BNA	Basic Needs Approach
BRC	Block Resource Center
BRIC	Brazil Russia India China
CCC	Circular and Cumulative Causation
CIEFL	Central Institute of English and Foreign Languages
CIIL	The Central Institute of Indian Languages
CoV	Coefficient of Variance
CRC	Cluster Resource Center
DIET	District Institute of Education and Training
EdCIL	Education Consultants India
eGINI	Educational GINI coefficient
EFA	Education for All
EGS	Education Guarantee Scheme
ESRI	Environmental Systems Research Institute
ILO	International Labour Organization
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GER	Gross Enrollment Ratio

GG Good Governance

GIS Geographic Information Systems

GNP Gross National Product

GOI Government of India

HDI Human Development Index

HDR Human Development Report

HSTP Hoshangabad Science Teaching Program

HUAC House of Un American Activities Committee

IAEA International Association for the evaluation of Educational Achievement

IGNOU Indira Gandhi National Open University

ILO International Labour Organization

IT4D Information Technology for Development

MDGs Millennium Development Goals

MICS Multiple Indicator Cluster Survey

MITI The Ministry of International Trade and Industry

MNSDS Minimal National Social Data Set

MYS Mean Years of Schooling

NCAER National Council of Applied Economic Research

NCERT National Council of Education Research and Training Universities

NCTE National Council for Teacher Education

NER Net Enrollment Ratio

NIC Newly Industrialized Countries

NIE New Institutional Economics

NIEPA National Institute for Education, Planning and Administration

NLS New Literacy Studies

NPE National Policy on Education

OECD Organization for Economic Cooperation and Development

PDF Portable Document Format

PIRLS Progress in International Reading Literacy Study

PNG Papua New Guinea

PPP Public Private Partnership

PRA Participatory Research Approach

SAP Structural Adjustment Program

SC Scheduled Castes

SCERT State Counsel of Educational Research and Training

SPM Sijil Pelajaran Malaysia

ST Scheduled Tribes

STD Standard Deviation

TIMSS Trends in International Mathematics and Science Study

TPR Teacher Pupil Ratios

UNCED United Nations Convergence on Environment and Development

UNDG United Nations Development Group

UNDP United Nations Development Program

UNRISD United Nations Research Institute for Social Development

UNESCO United Nations Educational, Scientific, and Cultural Organization

UPSR Ujian Penilaian Sekolah Reddah

USCES US Center for Education Statistics

USCSS United States Council on Social Sciences

WHO World Health Organization

WOMP World Order Models Project

WTO World Trade Organization

WWII World War II

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Chapter 1 Introduction: A Tryst Denied

1.1 Introduction

As the colonial era ended in Southern Asia¹, the founding fathers of the newly independent countries inherited a nation of freshly minted citizens lacking formal education or basic literacy skills. Local leaders recognized this severe limitation to development and proclaimed that providing quality universal education must be among the highest national priorities of the state. At the dawn of Indian independence and emblematic of this regional aspiration, in Indian Prime Minister Jawaharlal Nehru's famous "Tryst with Destiny" addressed the problem in India,

"The future is not one of ease or resting but of incessant striving so that we may fulfill the pledges we have so often taken and the one we shall take today. The service of India means the service of the millions who suffer. It means the ending of poverty and ignorance and disease and inequality of opportunity" (Nehru, 1947).

Two years later, the Indian Constitution enshrined Nehru's promise with the passage of Article 45 proclaiming that, "The state shall endeavor to provide within a period of ten years from the commencement of this Constitution for free and compulsory education for all children until they complete the age of 14 years" (GoI, 1949). This promise of socialized education expanded upon other educational provisions in Articles 29 and 30 of the Constitution, that granted equal opportunity in the state provisions of educational institutions and the rights for minorities and tribal groups to establish and administer educational institutions (GoI, 1949). Elsewhere, in neighboring countries of Southern Asia,

¹ The author finds it necessary to mention one important note on the nomenclature particular to this study. In *Asian Drama*, the focus of this research, author Gunnar Myrdal uses the term "South Asia" to describe the territory covered by states that stretched from Pakistan to the west; Thailand to the east and; and Indonesia to the south as shown on the map in Figure 1.2. However, his unique use of the term is potentially confusing to the reader given the more subsequent crystallization of regional groupings between South and Southeast Asia, usually along the Indian-Myanmar border. To avoid this confusion this study uses the less solidified term, "Southern Asia" to refer to Myrdal's somewhat unique conception of the grouping of countries he included in his study area. This change in regional terminology is somewhat unwieldy, but doing so is done to minimize confusion for the reader.

other founding fathers penned similar state promises for mass education, Ho Chi Minh included universal education provisions into the 1930 Ten-Point Plan for the Vietnamese Communist Party (Minh, 1930), and Burma's Nu U (1951) referenced the need to, "rebuild the pillar of education" as a foundational goal of the Burmese state. In flowing rhetorical terms and in volumes of often wildly optimistic planning documents, Southern Asian governments had committed themselves to providing universal education.

From these shared humble educational beginnings and common aspirations, the decolonized Southern Asian countries adopted similar educational policies, which, most often extended an unreformed educational institutions inherited from the colonial period. These planning documents often emphasized quantitative goals for the educational sector at the national and state levels rather than qualitative changes. However, despite similar rhetoric on the governments' commitments to provide quality education for all, the ability for states to deliver on their promises has been spatially unequal between and within countries. This spatial inequality of educational opportunities and outcomes has had enormous ramifications in shaping the nature of, and the extent to which, larger socio-economic development of these societies has been possible. This gap between the states' aspirations, and the actual educational outcomes is the central focus of this dissertation.

The strong chance for failure of the Southern Asian states to deliver on their promise of enlightening their populations was predicted as early as the 1960s. Swedish Sociologist Gunnar Myrdal (1898-1987) was among the foundational theorists on the role that education plays in socio-political and economic development. In his monumental work *Asian Drama: An Inquiry into the Poverty of Nations* published after ten years of research in 1968, Myrdal concluded that the governments' needed radical educational policy reforms and improvements. In particular, Myrdal saw the need for education to not only be universal, but to be practically relevant to improve the daily lives of the general population. To make these improvements, he suspected, would require a bold state-led mission to tackle pervasive social and economic inequalities in the region long suffering from internal stagnation exacerbated by Western colonialism.

This dissertation returns to, and resurrects for empirical testing, some of the major theoretical themes in *Asian Drama* with specific attention to the educational sector. This is done by taking advantage of over forty years of hindsight as well as the availability of expanded and more reliable empirical evidence, new indicators, and analytical tools that were unavailable to Myrdal in his time. The thesis works on two complementary tracks. The first looks into the relevance of the theoretical concepts of the 'soft state' and Myrdal's spatial understanding of the cumulative causation against the competing visions of his contemporaries and then against the larger changes in the developmental discourse. The second track tests Myrdal's theories against his policy recommendations in the educational sector. Before moving to the significance of the study, the research questions, and methodology, the next section grounds Myrdal's work into historical context.

1.2 Background of the Study: Von Hayek and Myrdal

Myrdal wrote the *Asian Drama* in a period in which the economic and social paradigms for development were quickly being undermined. Throughout the world, and especially in Southeast Asia, the disconnect between the optimistic economic models and social and political difficulties that existed "on the ground" became difficult to reconcile. From many angles, Myrdal attacked the neoclassical assumption that economic growth is sufficient to alleviate the real and profound human suffering that he saw occurring throughout South and Southeast Asia. He argued that instead of focusing myopically on economic growth and market development, governments should instead use state power to address the immense poverty and social inequality to improve the "levels of living" of the population at large. He felt that improving the educational capacities at the primary level was an essential component of this larger task.

In part due to the theoretical contributions of *Asian Drama*, Myrdal was awarded the 1974 Nobel Prize for Economics. He begrudgingly shared this honor with his ideological opposite Austrian theorist Fredric von Hayek. Both von Hayek and Myrdal were awarded the prize, "for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena" (Royal Swedish Academy of Sciences, 1974). There was little love lost

between Myrdal and von Hayek whose title of the hugely influential work, “The Road to Serfdom” was likely a knock on the subtitle of Myrdal’s earlier book, “Rich Lands and Poor: the Road to Prosperity” (1957). At several points in this dissertation, the author suggests that the shared Nobel Prize between such disparate theoretical points of view offers a useful historical marker in development economics. Both theorists offered radically different notions of what should succeed the waning dominant theories of neoclassical economics and modernization theory during what Booth (1985) would later refer to as the impasse in the social sciences.

Von Hayek’s view of unrestrained free markets and a rollback of the state won the day. Von Hayek’s ideas were quickly translated into foreign policy beginning in Chile with the full vigor and strength of Anglo-American political and military power under the Reagan and Thatcher administrations. When the Berlin wall fell in 1989, the Communist challenge had been foiled and von Hayek’s vision of market fundamentalism combined with at least a modicum of democratic principles grew increasingly global. Neoliberalism became ubiquitous and was referred to in its early iterations as “the only option” by Margret Thatcher and later as, “the golden straight jacket” by influential New York Times economist Thomas Friedman (1999), and most hyperbolically as, “the end of history” by third-wave modernization theorist Francis Fukuyama (1989).

Markets boomed in the 1990s throughout Asia not only in the established capitalists strongholds of Japan, Seoul, Bussan, and Hong Kong but gradually further south in the “tiger” outposts of Southeast Asia in Singapore, Kuala Lumpur, Penang, Bangkok, Jakarta, and elsewhere. The foreign direct investment (FDI) fueled neoliberal boom stalled with the Asian Financial Crisis (AFC) in 1997 and 1998, but new growth poles emerged in China’s southeast coast. Economists assumed that from these forward operating bases of international capitalism, wealth would gradually spread further into provinces bringing with them the package of (capital “D”) “Development” replete with education and health benefits, political stability and even meaningful political democratization. After all, as US President John F. Kennedy (1963) famously quipped, “a rising tide raises all boats” -- or does it?

Despite sustained GDP growth in South and Southeast Asia, the benefits have been highly uneven (Rigg, 2003), and other flaws in the neoliberal model have become increasingly impossible to ignore even in the most developed regions of the world. Recently, protests around the world have attacked both the pillars of the neoliberal and statist models of development. In 2011 the Arab Spring began in Tunisia, Libya, and Egypt against the entrenched cronyism, corruption, and institutional weakness of the state, echoes of the same concerns in Manila (People Power) in 1986, and later and more continuously in Thailand and Indonesia. In Greece, Spain, Italy and elsewhere citizens have resented government imposed austerity measures that have gutted the social safety nets in ways reminiscent of the IMF imposed Structural Adjustment Programs (SAPs) implemented from Africa to Russia to Mexico to Indonesia and beyond.

Recent protests against inequality have occurred in many of the countries where the neoliberal policies had been most successfully pursued and matched with high GDP. At the time of this writing, riots against neoliberalism are raging in Brazil and Turkey and even in the heart of capitalism with the Occupy Wall Street movement in New York. In short, it appears that exuberance of the neoclassical and subsequent neoliberal model and its promise of trickle-down growth spreading are increasingly at odds with expanding social and economic inequalities and public discontent. This has strong echoes with the economic situation Myrdal and von Hayek were embroiled in in the late 1960s.

The current wave of global discontent has brought into sharp focus the inconsistencies between the proclamations of both the dominant political and economic theories and the obvious need for more inclusive economic structures and governments that are more responsive to addressing inequalities. As this dissertation shows, the contemporary discontent and disconnect between neoliberal economic models and gritty on the ground realities echo similarities of the fork in the road that Myrdal and Hayek's sharing of the Nobel Prize represented forty years earlier. In fact, many of the social issues that Myrdal considered to be crucial for development in the 1960 remain relevant today including inequality, corruption, land reform, democratization, and increased attention in improving the health and education of the population, remain among the most pervasive components of the wave current protests (The Economist, 2013). In such a background,

this thesis suggests that it is worthwhile to resurrect the *Asian Drama* to test whether Myrdal's view represents a road not taken in the 1970s and how much it retains its theoretical relevance as an alternative normative force as the world searches for new paradigms for new realities in the 21st century.

Figure 1.1 "March of Protest" Edition Cover



Source: The Economist June 29, 2013

1.2.1 Educational Inequality as a Proxy for Myrdal's Larger Framework

Due to the wide breadth of theoretical topics and policy recommendations in *Asian Drama*, and that it spanned over two thousand pages over three-volumes; testing Myrdal's full gambit of theories and policy recommendations is beyond the scope of this research. Instead, this dissertation focuses on five of Myrdal's larger major theoretical offerings and then tests them against the education sector. The theories discussed include his critique on neoclassical economics (Chapter 1); his conception of modernization (Chapter 2); inequality (Chapter 4); circular and cumulative causation (Chapter 6); and the 'soft state' (Chapter 7). Second, these theories are tested where they relate to the educational sector in Southern Asia (Chapters 8 -12) in the same territorial footprint Myrdal used in *Asian Drama* (as circumscribed in Section 1.5) and in greater depth in India. Of the many social

and economic factors that Myrdal examined, his insights regarding the educational sector offer a useful proxy to test the key features of his larger argument. By using educational inequality as a proxy, and spatial inequality of basic education attainment in particular, this thesis has attempted to address Myrdal's theoretical points above simultaneously. The following points illustrate why the educational sector is a uniquely useful proxy for practical, theoretical and methodological reasons:

Clear policy Recommendations: one criticism of *Asian Drama* has been that it is long on theory, but lacked specific recommendations for policy makers (Winterford, 1971). This is a fair criticism for many of sections of the book, but in his education discussion (Myrdal, 1968, Chapters 31-33) Myrdal offers clearer and more tangible testable policy recommendations against which the subsequent empirical evidence and scholarship can more feasibly be tested than other issues such as corruption.

Availability of meaningful and comparable educational indicators: The need for states to collect relevant and precise indicators for planning and development is a major theme in the *Asian Drama* and is addressed in this dissertation in Chapters 2 and 3. Many of the areas that Myrdal felt to be key for development, such as changing social norms, are difficult to quantify and measure, unlike the more reliable, and readily accessible educational statistics in most countries in the region. Moreover, due to the professionalization and influence of international organizations, UNESCO most especially, the methodologies and indicators collected in the education sector are more standardized since the 1989 UNDP Human Development report (1990) (see Section 2.5.3). More recently multi-country and multi-regional student skills testing and the publication of student learning outcomes by both national governments, international and regional development institutions including the Asian Development Bank (2001), World Bank (1997), and NGOs such as ASER (2012) have made comparative studies analytically relevant. Another reason to use the education sector as a proxy is that educational data is often available at the regional, state, provincial, and district level which allows for robust testing of the spatial aspects of Myrdal's cumulative causation model (Section 5.2). Modern indicators to measure educational inequality serve as useful targets against which the educational

achievements or failures of the states can be assessed, and also allow the 'soft state' hypothesis to be tested.

Availability of new indicators in education: Since the publication of *Asian Drama*, new indicators have been developed which allow for new approaches in assessing inequalities of educational attainment in and between societies. Particularly useful for the purpose of this dissertation has been the development of the educational GINI (eGINI) coefficient. That theoretical and methodological groundwork was established by Barro and Lee (1993; 1997) with other contributions from Psacharopoulos & Arriagada (1986), and Nehru, Swanson, & Dubey (1995). To date, the indicator has been used primarily in determining education at the national level in more extensive multi-county studies Barro & Lee (2000), and less frequently in comparing regions within developing countries. The exception to this trend being eGINI research conducted in Thailand (Prasartpornsirichoke & Takahashi, 2013) and the Philippines (Siddhanta & Nandy, 2004).

State sovereignty in educational policy: As previously mentioned, the universalization of literacy and primary school matriculation were among the most foundational social goals set by the various newly independent governments at the initial stage of independence. It provides a useful proxy to test Myrdal's 'soft state' concept (Chapter 6) and the ability of the state to fulfill one of its foundational promises to its people. Secondly, educational policy, implementation, budget allocation, teacher training, facilities construction and maintenance are understood to be, at least historically, under the purview of the state where as in other sectors (such as defense or economics) the state has less control over exogenous factors. Thus, the educational sector offers a more delineated test of the states' effectiveness in fulfilling its promises.

The relative sovereignty of state in defining education system relative to other sectors: The educational sector is useful as a proxy for testing the capacity of the state because, as we have shown, the state has committed itself to improving the sector. As such, state effectiveness relative to other actors in the educational arena including the international development organizations (especially UNESCO), as well as local NGOs, and private institutions can be tested.

Theoretical fit to the spirit of *Asian Drama*: Testing the cumulative causation and ‘soft state’ theses using economic inequality in terms of per-capita or GINI coefficient data as opposed to education data would have confined the thesis into the same neoclassical models that Myrdal was writing to protest against. In contrast, focusing on educational inequality is closer to Myrdal’s suggestion on improving the levels of living and social that Myrdal saw as under-addressed aspects of modernization in the economic discussion. There is a gap in the literature regarding spatial inequalities in the educational sector compared to the lengthy discussion on spatial economic inequalities (see Chapter 5.2). Furthermore, concentrating on educational inequality at the primary level, and on basic skills also fits with Myrdal’s recommendation that development needs to be focused on improving basic skills universally, and the need to address wider multivariate inequality. These are all issues which can be tested in the educational sector.

The generally appreciated role of education in development: Since the publication of *Asian Drama*, the importance of education, especially primary education, have become increasingly understood both in their instrumental role in raising economic productivity under the Human Capital paradigm (Psacharopoulos, 1973; 1994), but also as an independent value as an aspect of human capability model (Sen, 1999).

The geographic component of cumulative causation: The spatial component of educational inequality is also useful in testing the geographic component of cumulative causation theory central to Myrdal’s study as in Section 5.2.1. The geographical and regional focus of education is a trending theme in the literature.

1.3 Significance of the Study

In addition to contributing to the fast-growing literature on educational inequality and its relevance to development, this dissertation also has significance in the fields of Asian studies, geography, developmental economics, and education. Some of the specific contributions to the different disciplines are described below.

1.3.1 Contribution to the Asian Studies

This dissertation is being submitted towards a Ph.D. in Asia-Pacific Studies, and as such, its contributions to the field should be highlighted. In Asian Studies, there has long been a tendency to ghettoize research by looking at case studies in a single country. Clifford Geertz, for example, was primarily an Indonesian scholar and Fred Riggs's (1966) concept of the bureaucratic polity model was built on Thai case studies alone. As noted in Parnwell's (1996) *Introduction to Southeast Asian Studies*, this tendency to focus on a particular country has long been a feature of the field. While there are certainly notable exceptions such as Jonathan Rigg's excellent *Southeast Asia: The Human Landscape of Modernization and Development* (2003), the tendency for individual country studies to remain the rule rather than the exception. In keeping with the same focus as in the original study, this study is primarily concerned with India, but also contributes to the comparative literature by analyzing spatial features of educational equality between countries and even between sub national regions.

In addition to being international in scope, this paper is also cross regional. This is because *Asian Drama* was written at a time when the academic and regional demarcation between South and Southeast Asia had not become crystallized at the Indian-Burmese border. Myrdal's geographic delineation of what he called "South Asia" allows for interesting cross-regional comparisons between South, Southeast, and Northeast Asia rarely found in Asian studies works.

Lastly, as previously stated Southern Asia has long been a place where theories are tested. Berger (1993) offered that Southeast Asia was the region where early modernization theory had been tested and found wanting. Other theories did not "fit" in the context of Southern Asia include Communism in Asian peasant societies of Vietnam, Laos, and Cambodia; Fabian Socialism in India; and more recently of neoliberalism and the developmental states in Singapore, Thailand, and Indonesia. This thesis attempts to subject Myrdal's work through the same gauntlet.

1.3.2 Contribution to the Field of Geography

Beginning perhaps with Darwin's theory of natural selection and the geographic component of Marx's dialectic, the linkages between development theory testing and geography have been closely intertwined. Among the most persistent features of developmental geography is whether, how, and where, there is (or is not) convergence or divergence between regions of perceived social and economic development. On this crucial point, modernization theorists Myrdal, Hirschman, and Schumpeter had much in common theoretically in their understanding in the mechanics of growth poles, they differed widely as to whether it was a feature of modernization that was to be encouraged or discouraged. Finally, the majority of studies looking at the spatial dimension of the convergence or divergence of development issue have most often concerned themselves with the spread or concentration of economic wealth, usually defined them in terms of GNP, or per-capita GDP. Bucking this trend, this thesis instead looks at the problem of the spatial inequalities of basic education through Myrdal's dissident lens.

At a more technical level This thesis also takes advantage of the availability of new spatial analysis tools such as the Getis-Ord G_i^* hotspot tool which allows the research to identify areas in which different social and economic phenomena cluster into hot and cold spots. This tool allows testing of Myrdal's theories of the "spread" and "backwash" effects. More importantly, a spatial model makes it easier to identify the different social, and economic factors between states that determine educational outcomes. The methodological use of the tool, and its theoretical contribution to Geographic Information Science are expanded upon in the methodology section 1.6.

1.3.3 Contribution to Developmental Economics

More recently as part of a long-term challenge to neoliberalism, heterodox economists have examined some of Myrdal's heterodox views especially towards his understanding of economies of scale. Acemoglu and Robinson's meticulously researched book *Why Nations Fail* (2012) borrowed heavily from Myrdal's conceptions of the importance of initial conditions and the need for inclusive economic institutions. However to date, there are no studies of which the author is aware that have returned to his conception of the 'soft state' or circular cumulative causation with relation to the same

geographic area as delineated in the original *Asian Drama* text. Doing so offers a useful touchstone with which to examine which of the issues that Myrdal found to be essential for economic development have borne fruit and, which have not. Thus, returning to the scene of the original Drama is important in testing Myrdal's foundational work against the subsequent historical and theoretical record.

Unlike Myrdal's other more frequently cited works such as *American Dilemma* (Myrdal, 1944), his study *Asian Drama* has not been integrated into the larger body of regional studies. Another reason for Myrdal's work being pushed to the academic sidelines of economics may be in part due to his inability (and strident unwillingness) to build an econometric model of his understanding of development (Myrdal, 1968 Appendix II). In the foundational work on New Economic Geography the monumentally influential Paul Krugman, himself an admirer of Myrdal, wrote of Myrdal and Hirschman that,

"Myrdal's effective presentation of the idea of circular and cumulative causation or Hirschman's evocation of linkages, were stimulating and immensely influential in the 1950s and early 1960s. By the 1970s...they had come to seem not so much as wrong, but as meaningless.... Where were the models? And so high development theory was not so much rejected as simply bypassed" (Krugman, 1991, p. 27).

Later Krugman dismisses Myrdal and Hirschman's unwillingness to develop an econometric model as "vain". Krugman is essentially missing one of Myrdal's larger points: that he was against the use of universal models for development as a matter of principle, and that economics needed to move away from econometric model building and instead focus economic discussions on the practical and immediate needs of the realities in a region.

Krugman's quote above also highlights that part of the crossroad between the type of bottom-up development. Neoliberalism in the 1970s was at crossroads in the economics discussions and in academia in general. The fall of modernization theory and the rise of neoliberalism also coincided with the dominance of econometric economics over the more theoretical and increasingly grounded economics. What was unable to be modeled mathematically was irrelevant. The pendulum of the discourse also seems to be swinging

back towards away from a focus on economic modeling and more toward regional and real-world grounding, and a concentration on inequality and addressing basic needs (Section 2.5.1). One important example of this swing back to the more historically grounded economic analysis, is the recent and highly influential book *Capital in the Twenty-First Century* by French economist Thomas Piketty (2014) who suggests that the field of economics has been overly infatuated with mathematical model building at the expense of understanding contemporary challenges:

“To put it bluntly, the discipline of economics has yet to get over its childish passion for mathematics for purely theoretical and often highly ideological speculation, at the expense of historical research and collaboration with other social sciences. Economists are all too often preoccupied with petty mathematical problems of interest only to themselves. This obsession with mathematics is an easy way of acquiring the appearance of scientific without having to answer the far more complex questions posed by the world we live in” (p. 74).

If the dominance of model building in economics is in fact waning, there is more reason to return to Myrdal’s work as it is one of the more influential iconoclasts against the model builders of his time (Chapter 5),

1.3.4 Contribution to Education

Although the focus of this research is on theory testing Myrdal’s concepts rather than the education sector per say, it also has significance specific to the educational field and is highly relevant to several current debates in the literature. Most importantly, this thesis injects a geographic approach into the discourse on the inequality of access to primary education that is often lacking. This is especially true of works in South Asia where sub-state inequalities are lost when national statistics are aggregated. Furthermore, as this thesis addresses a wide range of educational issues at the district and state level are useful for both Indian policy makers and for the development community whose discourse significantly influence them.

1.4 Research Questions

This dissertation seeks to address the following three Research Question and sub-questions. The chapters in which each is specifically addressed are stated in parenthesis.

Research Question 1: Are Myrdal's theoretical contributions in *Asian Drama* relevant to the development discourse?

- 1.1 How do Myrdal's theoretical understanding of development economics (Chapter 2); modernization theory (Chapter 3); indicator collection; the 'soft state' (Chapters 6 & 7); the need to address social inequality (Chapter 4); and circular and cumulative causation (Chapter 5) as stipulated in *Asian Drama* differ from those of his contemporary mid-twentieth century economists and social scientists?
- 1.2 How have Myrdal's theoretical contributions listed above fared against the major trends, movements, trends and criticisms in the developmental discourse subsequent to the publication of the *Asian Drama* ?
- 1.3 Have subsequent changes in economic and social development indicators progressed as Myrdal had predicted? (Chapters 2 and 3)

Research Question 2: Have Myrdal's theoretical and policy suggestions with regards to the education sector in *Asian Drama* been addressed by countries and states in Southern Asia and India in particular?

- 2.1 Do Southern Asian states' continue to prioritize quantitative expansion over qualitative improvements as Myrdal suggested in *Asian Drama* ?
- 2.2 Which education related indicators are collected by the state in Southern Asia, and how accessible is this data subsequent to the publication of *Asian Drama* ? (Chapter 8 on India, Chapter 12 on other countries)

2.3 What national and international tests of educational outcomes do different countries participate in and how accessible is this data? (Chapter 8 on India, Chapter 12 on other countries)

2.4 Have Southern Asian states, especially India, prioritized the attention on adult education; teacher training; adopting new curriculum and teaching methodologies (Chapters 8 – 12)?

Research Question 3: What is the spatial dimension of educational inequality in Southern Asia, and in India in particular?

3.1 Do education outcomes cluster into higher and lower areas? (Chapters 8-12)

3.2 Do the spatial distribution of adult literacy rates; children's educational outcomes; and primary school absentee rates overlap? If so, where and to what degree? (Chapter 8 for India; Chapter 12 for other countries)

3.3 How are educational outcomes related to state and national boundaries (Chapters 8 – 12)?

3.4 Do more developmental and liberalized states have more or less spatial equality in the educational sphere than other states (Chapters 8 – 12)?

3.5 Are there regional patterns to educational outcomes across countries and India's states? (India's states: Chapters 8 – 11; other countries in Chapter 12)

3.6 Are high or low educational outcomes associated with more or less equality between districts within states? (Chapters 8 – 11)

3.7 To what extent does Myrdal's conception of the 'soft state' apply to the educational sector?

3.8 To what extent does Myrdal's conception of the importance of social equality apply to educational outcomes?

3.9 What are the spatial distributions of the following teacher related educational factors and how do they relate spatially to student outcomes in India:

3.9.1 Teachers per 100,000 population (Section 10.5.1);

3.9.2 Single teacher Schools (Section 10.5.2);

3.9.3 Teacher Pupil Ratios (TPRs) (Sections 10.5.4 and 10.5.5);

3.9.4 Female Teachers (Section 10.5.3)

3.9.5 Contract Teachers (Section 10.5.6)

3.10 What are the spatial distributions of the following infrastructure related educational factors and how do they relate spatially to student incomes in India?

3.10.1 Schools per 100,000 population (Section 11.4.1)

3.10.2 Schools with less than 50 students (Section 11.4.2);

3.10.3 New school construction (Section, 11.4.3)

3.10.4 Classrooms Condition (Sections 11.4.4 and 11.4.5,)

3.10.5 Common toilets (Section 11.4.6);

3.10.6 Schools with blackboards (Section 11.4.7);

3.10.7 Schools with kitchen sheds (Section 11.4.8)

3.11 How do spatial distributions of exogenous economic and social factors relate spatially to educational outcomes inequality in India?

3.11.1 Decadal growth rate (Section 9.2);

3.11.2 Scheduled Caste areas (Section 9.3);

3.11.3 Scheduled Tribal areas (Section 9.4);

3.11.4 Government ownership of schools (Section 9.5);

3.11.5 Sex ratio (Section 9.6);

3.11.6 Population growth (Section 9.7)

1.5 Spatial and Temporal Scales of Analysis

This research tries to stay true to the territorial region covered in the original *Asian Drama*. However, some differences warrant a brief discussion of the spatial and temporal

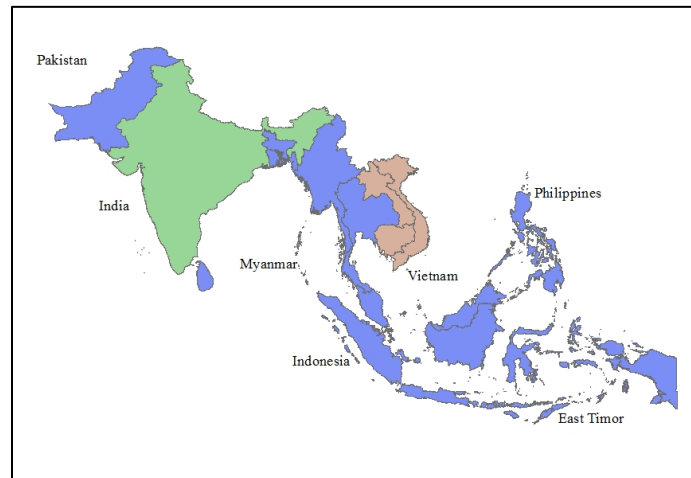
scope used in this study and the justification for them. Myrdal's study focused on the territory from Pakistan in the west, Indonesia in the south, and Thailand to the east (See Figure 1.2). Because Singapore's expulsion from Malaysia coincided closely with the publication of *Asian Drama*, Myrdal's mostly excluded it from the study. Because of this, it is excluded from the present study as well. In addition, despite the fact that it shared many of the socio-economic issues facing the countries that were included into the study, the Indochinese states of Laos, Cambodia, and Vietnam were not included in the *Asian Drama* because Myrdal felt they were too unstable to comment upon with any certainty (Myrdal, 1968 p. 21). Indochinese exclusion was common for scholars in the period as much of Southeast Asia was closed to research by foreign academics (Neher, 1984). Although Myrdal included the remaining countries in his study, they were not given equal analytical weight or attention. In Part II of *Asian Drama*, Myrdal says that his research primarily focuses on India, and only secondarily on Sri Lanka, Thailand, Malaya (now Malaysia), Indonesia and the Philippines. The smaller states of Nepal, Bhutan, Maldives, Brunei Darussalam, are ignored in both this and Myrdal's original study. Finally, while it is tempting to include the dramatic rise of neighboring China, Hong Kong, and Taiwan into the geographical scope of this study, they are not included, simply because they were not included in the original *Asian Drama*. However, there are two places where Northeast Asia is pulled into the discussion. In Section 6.4 the East Asian Developmental State is compared to the Southern Asia 'Soft State' and, in Chapter 7 educational features between the two regions are compared.

This study will use the currently used English name for the country rather than the names used by Myrdal. Therefore, Ceylon is referred to as Sri Lanka; the Federation of Malaya as Malaysia; and Burma as Myanmar. Like Myrdal and other regional scholars, this research employs a comparative approach at several spatial scales ranging from the regional to the national, state, and district levels. This was chosen primarily because Myrdal's *Asian Drama* uses the same approach.

The mapping section of this thesis (Chapters 9 – 11) focuses specifically on the case of India. India was also deliberately chosen as the centerpiece for this paper for several reasons. First, Myrdal himself admits that *Asian Drama* is primarily a study of India and

that the other countries included for comparison to it (Myrdal 1968, Chapter 1). The second reason for focusing on India is the degree to which data at the district level is available, through both the Government of India, and NGOs including the aforementioned ASER Centre. Moreover, the Indian educational system as stipulated by the Indian Constitution has a decentralized implementation away from the federal government in New Delhi to the various states. This stands in contrast to other more centralized states like Thailand. Because India has decentralized its education sector, it is possible to make comparisons between states with respect to policy implementation. Furthermore, focusing on the state and district levels increases n-sizes, and when supplemented by the district data allows for more a more precise analysis on the spatial patterns of educational outcomes relative to the states. Such comparisons are impossible to do with the provincial level data available for Indonesia, Myanmar, Thailand, or Malaysia (Chapter 12). Concentrating on the spatial discussion on India is also useful given the degree of inequality in the country, which in turn allows for a wider range of outcomes and spatial relationships than in the smaller countries in the region.

Figure 1.2 Contemporary political map of South and Southeast Asia as covered in Myrdal's *Asian Drama* study. India (green) is the focus country of the paper; purple areas are mentioned in comparison to India and Indochina (red) is referenced occasionally.



Source: created by Author

1.6 Methodology

1.6.1 GIS Methodology

The theoretical rationale for using a Geographic Information Systems (GIS) methodology to test Myrdal's understanding of educational inequality, circular causation, 'soft state', and inequality was given above in Section 1.3. One of Myrdal's overarching concerns was the tendency for the fruits of modernity (and educational achievement) to cluster in urban enclaves. As such, the hotspot tool is uniquely suited to test whether or not his fears came to pass. In this subsection, the tools used to check Myrdal's fears are discussed in detail. First, the data was accumulated primarily from government and NGO sources online educational portholes and aggregated census documents. Next, the data was geocoded into a database by the author at the national, state, and district level linking the data to administrative polygon maps downloaded from Diva-GIS (DIVA-GIS, 2010). Then these maps were uploaded into the ESRI ArcGIS 10.1 software platform. This stage proved to be unexpectedly difficult because of the frequent city and district name changes and border changes in the study area. This problem was particularly acute at the district level, especially in underdeveloped states and regencies of India and Indonesia, and unfortunately resulted in null districts in the data in these areas.

Once geocoded, only very simple calculations were made by the author from the raw data. Where possible, the author consciously sought to generate per capita and percentage-based statistics in order to avoid the obvious distortions that wide differences in population between districts and states inevitably create. At this stage, two maps for each educational issue were generated: a Getis-Ord G_i^* hotspot map; an overlaid Getis-Ord G_i^* hotspot map. The methodology and theoretical explanation for each are described in the next subsection.

1.6.2 Getis-Ord G_i^* Hotspot Map

The first map, the Getis-Ord G_i^* hotspot map is a spatial analyses tool capable of generating hot spot and cold spots from the geocoded data of the various factors included in the study. While this thesis may well be the first to use the tool for analyzing the spatial contours of education inequality, the use of the tool is largely "out of the box" and its








development is not an important contribution of the thesis. According to the developer of the tool,

“[the Getis-Ord G_i^* hotspot] tool identifies statistically significant spatial clusters of high values (hot spots) and low values (cold spots)... It returns the z-score and p-value field names as derived output values for potential use in custom models and scripts. The z-scores and p-values are measures of statistical significance, which tell you whether or not to reject the null hypothesis, feature by feature. In effect, they indicate whether the observed spatial clustering of high or low values is more pronounced than one would expect in a random distribution of those same values. A high z-score and small p-value for a feature indicates a spatial clustering of high values. A low negative z-score and small p-value indicates a spatial clustering of low values. The higher (or lower) the z-score, the more intense the clustering. A z-score near zero indicates no apparent spatial clustering,” where, “Z-scores are simply standard deviations. If, for example, a tool returns a z-score of +2.5, you would say that the result is 2.5 standard deviations....The Hot Spot Analysis tool calculates the Getis-Ord G_i^* statistic (pronounced G-i-star) for each feature in a dataset. The resultant z-scores and p-values tell you where features with either high or low values cluster spatially. This tool works by looking at each feature within the context of neighboring features. A feature with a high value is interesting but may not be a statistically significant hot spot. To be a statistically significant hot spot, a feature will have a high value and be surrounded by other features with high values as well. The local sum for a feature and its neighbors is compared proportionally to the sum of all features; when the local sum is very different from the expected local sum, and that difference is too large to be the result of random chance, a statistically significant z-score results” (ESRI, 2012).

This process generated seven-classification maps based on the z-scores. The seven classifications include three degrees of hot spots (shades of red), three degrees of cold spots (shades of blue), and a white “unclustered” category for z-scores between ± 1.65 standard deviations. The classifications used in the spatial analysis sections of this thesis are given in Table 1.1. For each factor, a different italicized upper-case letter or abbreviation was assigned (i.e., *C* for Average Student Outcomes or *AGE* for percentage of the population between 0 and 6). The intensity of the hot or cold spot (weak, medium, or extreme) is denoted by the subscripts *w*, *m*, and *e*; and finally the direction of the hot or cold spot’s z-score is denoted by a “+” or a “-”. Therefore, a district with a z-score of average student capabilities between +1.65 and +1.97 is depicted on the map in a light red is

classified as a $Cw+$ hotspot in the nomenclature, conversely a district with a z-score below -2.58 would be the darkest shade of blue on the map and would be classified as $AGe-$ cold spot.

Table 1.1 Classifications and legend used in the hot and cold spots maps generated from the Getis-Ord G_i^* hotspot spatial analysis tool

Z-score range	Intensity of hotspot	Nomenclature used in the study (subscript)	Color on map
Less than -2.58 std. dev.	Extreme cold spot	e-	
-2.58 to -1.97 std. dev.	Medium cold spot	m-	
-1.96 to -1.66 std. dev.	Weak cold spot	w-	
-1.65 to 1.65 std. dev.	Unclustered	<none>	
1.66 to 1.96	Weak hotspot	w+	
1.97 to 2.58	Medium Hotspot	m+	
More than 2.58	Extreme Hotspot	e+	

Source: ESRI ArcGIS 10.1 legend color scheme with author's nomenclature

As part of the hotspot analysis process, the analyst is asked to choose the conception of spatial relationships between the districts. This choice alters the algorithm used in the analysis performed on the raw data. After trial and error with different options, the most consistently meaningful conception of the geography was the “Contiguity Edges and Corners” option (using Euclidian distance). This option minimized the dissimilar geographic size and topology of the districts creating varied hotspot maps. Other options, including the fixed or inverse conception of spatial relationships showed less spatial variance between different maps. The hotspots generated by this tool are only statistically reliable for n values over thirty. Therefore in India, the tool is just statistically significant at the state level in states, which have over thirty districts (Madhya Pradesh, Bihar, Maharashtra, Rajasthan, Odisha, Tamil Nadu, and Uttar Pradesh). However, the empirical chapters also include Andhra Pradesh, Gujarat, and Karnataka, where there are nearly thirty districts. These states are included for comparison but are below the recommended n-value threshold for the tool and are thus included in the study as approximations.

1.6.3 Getis-Ord G_i^* Hotspot Overlay Map

After creating the Getis-Ord G_i^* hotspots for each of the various elements as described above, the “Union” tool was used to overlapped two hotspot maps. This allows us to examine, in which districts and to what intensity, and were hotspots of different educational, economic, and social factors were spatially related to one another. In these maps the spatial relationships between the various factors and also the degree to which they are bounded (or not bounded) by state borders. From these patterns Myrdal’s ‘soft state’ hypothesis can be tested. For the most part, the average ASER achievement scores are used as the “base layer” against which other factors are overlaid. Using student achievement outcomes was chosen as the base layer because of the primacy that Myrdal gave to the tangible skills that the education imparted rather than the years of school attended (see Section 8.2). Hypothetically, given unlimited time and resources, it would be possible to create overlapping hotspot maps of all the factors Myrdal presented in the *Asian Drama* to exhaustively test every part of his theory of circular and cumulative causation, but this is well beyond the scope of this research and one of the reasons that a proxy indicator was chosen methodologically.

The nomenclature and legend for the overlay maps expand on the hotspot legend described in Section 1.6.2. Just as in the hotspot maps, the overlay maps use lighter shades represent less intense absolute z-scores. Also similar to the hotspot maps, the same subscripts (w , m , and e) are used in the overlay maps to show intensity; and plus and minus signs indicate whether the standard deviation is positive or negative (see table 1.1). In all of the overlay maps, the first factor is overlaid on a second factor (usually student capabilities). This creates four possible combinations based on the hotspot classifications from the maps used.

- A positive z-score in the top map (in this case X) and a positive z-score in the base map (in this case Y) has the nomenclature $X+Y+$ and is displayed as a shade of green depending on the intensity of the Standard deviation.

- A negative z-score in the top map (in this case X) and a negative z-score in the base map (in this case Y) has the nomenclature $X-Y-$ and is displayed in a shade of red depending on the intensity of the Standard deviation.
- A positive z-score in the top map (in this case X) and a negative z-score in the base map (in this case Y) has the nomenclature $X+Y-$ and is displayed as unchecked shades of blue.
- A negative z-score in the top map (in this case X) and a positive z-score in the base map (in this case Y) with the nomenclature $X-Y+$ also has shades of blue with diagonal lines.

In the overlay technique, the maps are conservatively constructed biasing the less intense of the two standard deviations used. For example, a district which has a z-score of over 2.58 in a given factor (X_e+) but only has a weaker but still statistically significant score in the second factor (Y_w+) will be classified as (X_w+Y_w+) in the overlapping section. Choosing this method means there are fewer, but more meaningful, overlapping hotspots. More practically, this means that there are fewer hotspots to discern in an already admittedly complex classification system.

This dissertation also introduces new terms to describe spatial patterns within a state. The first term is “state saturation” is used to refer to the degree to which a hotspot, cold spot, or overlap of two factors has similar results within a state. A second term used is “state bounded” which refers to the degree to which a factor is contained within state boundaries. The third term, “sub-state regionalism” indicates the degree to which there is a sharp difference between two or more sub-regions of the state in terms of educational outcomes. Finally, “regionalism” refers to the degree to which a hot spot, cold spot, or overlapping classification crosses state boundaries, but is not limited by state boundaries.

Figure 1.3 Legend and Z-Scores for overlay maps in Chapter 8-11

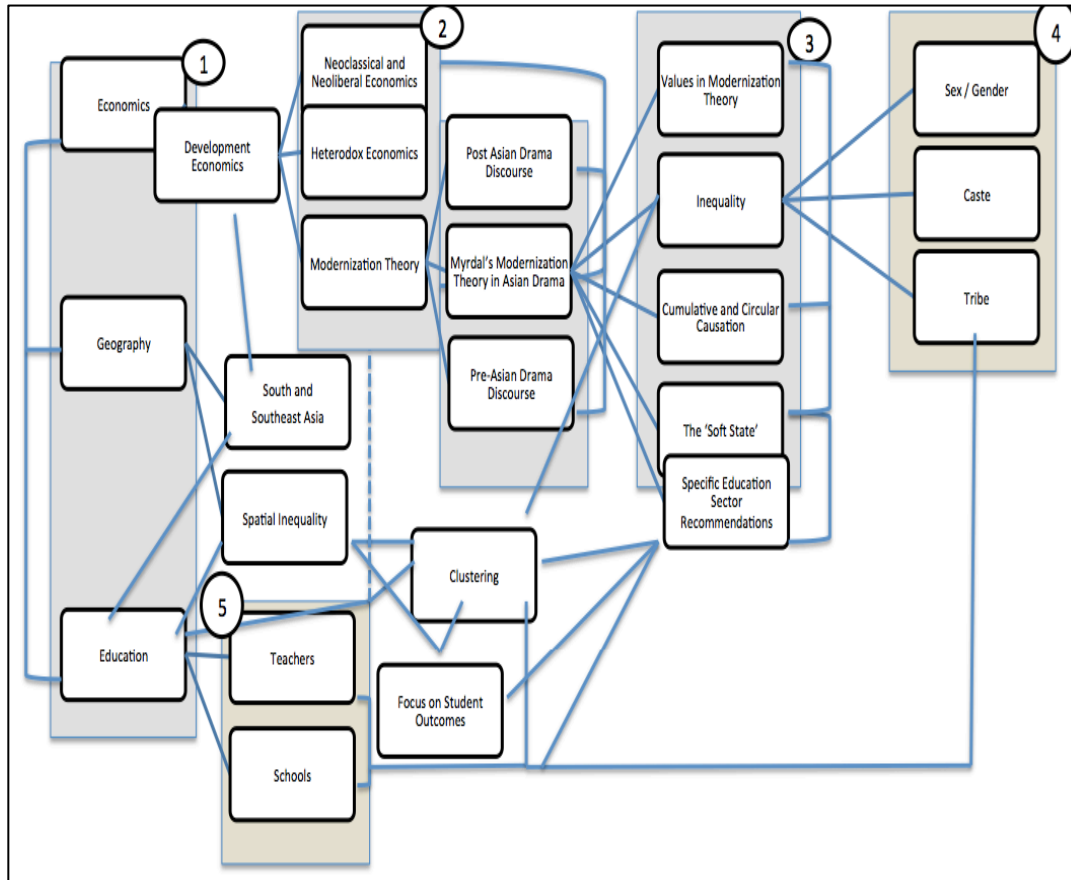
$X+Y+$ X & Y : both +1.65 to 0	$X-Y-$ both: 0 to -1.65	$X-Y+$ $X \geq 0$ & $Y \leq 0$	$X+Y-$ $X < 0$ & $Y \geq 0$
X_w+Y_w+ both: +1.66 to 1.96	X_w-Y_w- both: -1.66 to -1.97	X_w-Y_w+ $X \geq 1.65$ & $Y \leq -1.65$	X_w+Y_w- $X \leq 1.65$ & $Y \geq -1.65$
X_m+Y_m+ both: +1.97 to +2.58	X_m-Y_m- both: -1.97 to -2.58	X_m-Y_m+ $X \geq 1.97$ & $Y \leq -1.97$	X_m+Y_m- $X \leq 1.97$ & $Y \geq -1.97$
X_e+Y_e+ both: $\geq +2.58$	X_e-Y_e- both: ≤ -2.58	X_e-Y_e+ $X \geq 2.58$ & $Y \leq -2.58$	X_e+Y_e- $X \leq 2.58$ & $Y \geq -2.58$

Source: conceived of and compiled by author

1.7 Theoretical Framework and Organization of the Research

In order to answer the Research Questions presented in Section 1.4 in a logical manner, this thesis flows from the more theoretical aspects of Myrdal's *Asian Drama* towards more empirical testing of these issues using the spatial modeling techniques described in the methodology section above. In Figure 1.4, the theoretical conceptualization of the thesis as a whole is diagrammed. Given the complexity of the figure, it is worth discussing its different components and their relationship to the research questions and to the thesis's organization. In Box 1 in Figure 1.4 shows, the paper incorporates three general academic disciplines: economics, geography, and education. Of the three disciplines, the theoretical discussions are addressed with relation to development economics, whereas the techniques and topics from geography and education are used to test the economic theories empirically.

Figure 1.4 Theoretical Framework for the dissertation



Source: conceived and generated by author

The web of relationships in Box 2 in the diagram mirrors the complex relationship between different factors of development as discussed in the Chapter 2 and 3. In these chapters, Myrdal's heterodox economic vision is compared to competing neoclassical and neoliberal models (Chapter 2), and his conception of modernization (Chapter 3) against major trends in the discourse preceding and succeeding Myrdal's publication of the *Asian Drama*. This process answers Research Question One. In Box 3 in figure 1.4 the research delves further into the specific theoretical issues explored in the research including: the relationship that values have with one another in Myrdal's modernization theory (Chapter 3); inequality (Chapter 4); cumulative and circular causation (Chapter 5); the 'soft state' (Chapter 6). Throughout these first six chapters, changes in the indicators used are highlighted in order to answer Research Question 1.1, 1.2, and 1.3 (Myrdal's theoretical contribution to the

development discourse). These chapters are more theoretically intensive, but are grounded into the Southern Asian study region whenever possible.

At this point, the first half of the dissertation is completed, and the paper transitions from testing Myrdal's more abstract theoretical discussions using the discourse, towards testing them in the educational sector itself. This is done to address Research Questions 2, 3, and 4. In Figure 1.4, this shift moves towards the issues stemming from the education sector on the far left of the diagram. By using the spatial analysis methods discussed in Section 1.6 above, Myrdal's theories from the first half are tested in India (Chapters 8 – 11); and then in the other countries included (Chapter 12). The use of these tools allows us to identify spatial patterns in the data and the impact of state boundaries to examine Myrdal's conceptions of the 'soft state' in the educational sector. First the social, economic, and demographic features exogenous to the education sector (Box 4 in figure 1.4) are explored in Chapter 9. The second two spatial analysis sections (Box 5 in Figure 1.4 above) test Myrdal's specific policy recommendations on improving the teaching profession (Chapter 10), and the relative unimportance of expanding educational facilities and schools quantitatively (Chapter 11). Finally, this paper concludes with a summary of the significant findings, answers to the Research Questions as well as policy recommendations, suggestions of future avenues of research, and a conclusion.

Chapter 2 Myrdal's Critique of Neoclassical Economics Revisited

2.1 Introduction

The purpose of this second chapter is to contextualize Myrdal's *Asian Drama* into the greater field of developmental and heterodox economics before, during, and after its publication in 1968, and is included to answer Research Question 1. After summarizing Myrdal's critique of the neoclassical economic paradigm of his time, his critique is held up against both his contemporary economists and then against the subsequent developmental discourse. Conducting this survey shows that despite the sidelining of the *Asian Drama* by name, many core conceptual elements he outlined in the book continue to retain surprising relevance. More specifically, this chapter opines that as the neoclassical school faded in developmental theory in the 1960s, the deviation between Myrdal's multivariate approach to development and von Hayek's neoliberal view has grown in time. The study also proposes that the dominance of the neoliberal model appears to itself reached its zenith in the 2010s, and that economics may begin to move towards the type of heterodox development pioneered by Myrdal. Organizationally, the chapter begins with an outline of the core features of the neoclassical economic model and Myrdal's analysis of it. This is followed by a comparison between Myrdal's normative conception of a reformed development economics explored in the *Asian Drama* have been included into the Basic Needs Approach (BNA); the growth of information technology (IT4D); the Millennium Development Goals (MDGs) and the rise of Non-governmental organizations (NGOs). Following this discussion, a short subsection traces the rise of the neoliberal school in relation to Myrdal's development agenda.

2.2 The Neoclassical Economic Approach

Following two disastrous World Wars and the Great Depression, economics was bolstered by the success of the Marshall Plan (Hunt, 1986; Rapley, 1996) and the emergent rebuilding of Japan, and booming economies in the West. The neoclassical economists had aptly demonstrated the practicality of its theories by applying them to increasingly larger and more complex projects from the Tennessee Valley Authority, Keynesian Economics in

the US and Europe during the Depression, later in the reconstruction of Europe and Japan (Peet & Hartwick, 2009). This confidence in the neoclassical model and the technocratic institutions associated with it were parlayed and put into practice with the financial, military, and political backing of an ascendant United States and its European allies to win the hearts and minds of recently (and soon to be) independent sovereign states against competing overtures from Soviet Union. No less than then US President Harry S. Truman articulated the West's Post-WWII development project:

“For the first time in history humanity possesses the knowledge and skill to relieve the suffering of these people [the world's poor]... I believe that we should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life... greater production is the key to prosperity and peace. And the key to greater production is a wider and more vigorous application of modern scientific and technical knowledge” (Truman, 1949 in Escobar, 1995 p. 3).

Building on these genuine successes, Myrdal's Western mid-20th Century contemporaries turned their attention to creating the conditions suitable for economic “take-off”. Economists and social scientists were confident that the decolonizing world would industrialize quickly. Based on their econometric modeling, they expected poor countries to catch up to the West within in a short period. All that was needed was sound technocratic economic assistance, essential technological transfer, capital investment, and trade (Chabbott, 2003).

These neoclassical economists considered their field to be the most scientifically rigorous and impartial of the social sciences in terms of mathematical precision (Peet & Hartwick, 2009). However, this proclaimed level of objective science was only possible by consciously ignoring the complexities of the human condition, including social behavior, psychology, institutions, and the dynamism of history, as Myrdal would point out. Regarding these irreducible issues as just noise, neoclassical economics instead focus specifically on “economic factors” of production in terms of land, labor, and capital. This abstraction of the human condition is done to the point to which its practitioners claim that their models (and by extension conclusions) are non-normative, and are therefore, universally applicable across time and cultures (Peet & Hartwick, 2009, p. 47). Stripping

the complexity of human societies of everything characteristic but the “purely” economic features allowed for the creation of ever more complex mathematical models (econometrics) to be devised. It should also be added for that the neoclassical models are also devoid of geographic, cultural, and human factors (Spence, 2002).

Truman’s quote above launched the greater developmental project in a quickly decolonizing world. The quote underscores several important aspects of the modernization project as conceived. First, the “store of technical knowledge” for poverty alleviation that Truman alluded to include the both the theoretical understanding of economics and emerging social science as well as the organizational capacity under the Breton Woods institutions. These institutions included the International Monetary Fund (IMF), The World Bank Group and its five agencies, as well as the General Agreement on Tariffs and Trade (GATT), which would later be replaced, by the World Trade Organization (WTO) in 1995 as well as the government, military, and academic institutions mostly based in the US. Second, in Truman’s quote above it’s clear that from the very launch of the development project it was assumed that that increased economic growth was either synonymous to development project or at least central to it. It is also worth mentioning that although Nehru and Truman had different normative visions for the future of development in a decolonized world, one can’t help but notice the pervasive sense of optimism both leaders rhetoric between Truman’s quote above and Nehru’s quote in the beginning of this Chapter 1. For his part, Myrdal did not share this optimism and remained deeply pessimistic about the prospects for the post-war developmental agenda as formulated in Section 5.2.2.

The details of the neoclassical model are outside the scope of this paper, but suffice to say the overriding concern of its proponents was to raise per-capita Gross National Product (GNP) in the developing world. This was to be done through physical investments of land, labor and capital, made through domestic savings and international aid and loans in an economic strategy that became known as the Harrold-Dumar model. The fixation on increasing GNP per-capita, for the most part, ignored the distribution of wealth within society, and was based on several underlying assumptions, including the existence of functioning markets; relative social equality; informational symmetry; and the functioning norms and institutions found in the Western world. Reflecting the dominance of the model

of the time, it is worth noting that even dissenting economic models, most notably Raul Prebisch's import substitution model (Love, 1980), were largely derived from the same econometric modeling, and were built on many of the same underlying basic assumptions about the societies as the neoclassical economists.

2.3 Myrdal's Critique of Neoclassical Economics

By the mid-1960s, the shine came off of the orthodox approach to development described above. Myrdal's contemporaries attacked the conventional approach to economics from several angles. The *dependencia* school questioned the model's fixation with capital formation insofar that it had done little to alleviate many of the major developmental problems, including the persistence of poverty; unemployment; a failure to industrialize; and the encroachment of corrupt and nationalist economics which conspired a structural underdevelopment in the global South (Higgott, Robsion, Hewison, Rodan, 1985). Another attack came from Schmoller, who, like Myrdal (Section 2.3.2) challenged the assumptions of the classical approach as "naïve and unscientific" (Peet & Hartwick, 2009).

Although ostensibly a neoclassical economist by training, Myrdal found both the orthodox view of development and its fixation on raising per-capita GDP to be a relatively minor issue compared to more pressing social concerns affecting Southern Asia. Myrdal felt that the concentration on income growth falsely assumed that the economic gains would be distributed equitably among different groups in society due to the overlapping and reinforcing social and economic gulfs between the elite and the general public in the region (an issue return to in Chapter 4).. Instead, he felt that development needed to be consciously planned and administered by an activist state committed to improving the lives (or "levels of living" in his terminology) of the poorest in society. This stood in strong opposition to his neoclassical, and later neoliberal rivals as is later shown.

2.3.1 Myrdal's Critique on the Suitability of Neoclassical Indicators

Myrdal's second criticism against the neoclassical approach to development was the suitability of the indicators chosen by the model. While he does not dismiss their usefulness in Western development, he repeatedly questions whether they are applicable to the social,

economic, historical, and political characteristics of Southern Asia. In addition to these wider observations, he was skeptical about the empirical data that was being collected. Under the maxim that what is not measured is not addressed, he continued to attack the type of research then being conducted by the dominant development institutions that applied Western economic indicators to the state of South Asia as “inappropriate to the existing conditions... [Creating] mountains of figures [that] have either no meaning or a meaning other than that imputed to them” (Myrdal, 1968 p.10). So great is Myrdal’s objection to the use of conventional Western economic techniques to the region, that *Asian Drama* can be seen as an encyclopedic attempt to show the methodological flaws of using indicators out of context and, by extension, the need to develop more appropriate indicators for the most pressing problems facing the region (Myrdal, 1968 p. 11).

In particular, Myrdal disapproved of the centrality of GDP as the paramount indicator in developmental economics. This is not to say however, that he dismissed the importance of economic growth altogether as subsequent steady-state economic, and anti-development economists would argue on social or environmental grounds. Myrdal’s criticism was not so much that GDP was irrelevant and that economic growth was something to be avoided, but rather that it was not a very accurate measure of economies or a society’s degree of development. This stance put him at odds with both the neoclassical economists and the hardline elements of the competing Communist view that equated capitalist growth with imperialism.

2.3.2 Myrdal’s Critique on the Universality of Neoclassical Indicators

From a youthful age, Myrdal had dissented vigorously against the abstraction and claims of universality that dominated economics at the time, especially for its lack of overtly stated values and priori assumptions. According to Dykema (1986), as a scholar,

“Myrdal criticized economic analysis from Adam Smith to neoclassical theory for its hidden value content. His prescription for addressing the assumptions of the neoclassical model were simple, he simply proposed that all valuations because they are ‘superfluous metaphysical ballast’ detrimental to the task of observing and describing empirical reality and analyzing and explaining causal relations between economic facts” (p. 147).

By 1957, Myrdal wrote regarding neoclassical economics,

“When the observations of facts do not agree with a theory, i.e. when they do not make sense in the frame of the theory utilized in carrying out the research, the theory has to be discarded and replaced by another one which promises a better fit” (Myrdal, 1957).

As such, *Asian Drama* is an outline of the issues that he did see as relevant to development in Southern Asian in a post-colonial context. The modernization goals that he did see as meaningful to improving the circumstances of the region are discussed in detail in Section 3.3. Moreover, in the second half of this dissertation, it is shown that the single-minded focus on stimulating economic growth as the overriding goal of the development project is paralleled in the educational sector by a similar fixation on increasing enrollment rates and expanding access to schools without adequate attention to the pitfalls that expanding an unreformed education system would entail.

2.3.3 The Questionable Reliability of Indicators themselves

Myrdal’s hope for the inclusion of more relevant social indicators into the developmental economic discourses was exacerbated by what he saw as the lack of precise and methodologically sound data being collected in Southern Asia. He beseeched governments and development actors to expand the collection, availability, and accuracy of social and economic indicators. Throughout the text, he laments how difficult it was to conduct a scientifically useful academic study without meaningful figures. In his view, only by gathering better data can workable national development policies and programs be designed, let alone implemented, or evaluated. At one point Myrdal wrote on the issue, “in the underdeveloped countries of South Asia, most of the crucial data are deficient in scope and reliability” (Myrdal, 1971, p. 13). As consistent with his instance on diligently addressing inequality, he also urged development agencies to segment the statistics they collected by, “income, social, and ethnic groups; between town and rural groups; or ethnic groups in South Asia. [Because] many of the items for which data are available are consumed, in large part, by a tiny upper-class minority, usually concentrated in the urban centers” (Myrdal, 1968 p. 99). The availability and reliability of academic indicators for the education section are addressed in the second half of this dissertation (Chapters 9 -12).

2.4 Myrdal's Critique of Development Economic Methodologies

Given the lack of reliable statistical data available for Myrdal to analyze during the study, the reader is amazed at Myrdal's ability to create such a comprehensive study and agenda for future research. It also explains in part why there are so few econometric figures or calculations provided in a study that is a, at its core, a work of economics. Although Myrdal championed the creation of relevant and increasingly precise and comparable indicators, he was highly suspicious as to the usefulness of econometrics and of the tendency in economics to overemphasize the importance of arithmetical model building. Myrdal has a more nuanced approach to econometrics and suggested that mathematical tools be used sparingly and to avoid applying them to areas where the knowledge is not yet fully understood,

"We in most respects far from the stage where algebraic master models for the whole economy, or large sections of it, have meaning, there are many specific relationships where, to the great advantage of further intensive empirical research, and an algebraic statement of the problem can be useful,"

However in no uncertain terms he warns that the use of such tools can suggest a degree of knowledge that is not fully justified:

"But to construct models in the air, out of uncritically conceived concepts that are inadequate to reality and usually not logically consistent, and so pretend to have knowledge when none has been established, does not represent scientific progress; it comes near to being an intellectual fraud" (Myrdal, p. 31).

Myrdal also disagreed with the historical and non-geographic nature of the neoclassical model. Instead, he is far more concerned with grounding economics into the local historical, social, and institutional context where it is being applied. The language he uses in the quote below shows the primary importance Myrdal places on contextual economic research, in no uncertain terms:

"When we economists, working within our tenacious but variegated and flexible tradition of preconceptions that admittedly are not too badly fitted to our own conditions, suddenly turn to countries with radically different conditions, the risk of fundamental error is exceedingly great" (Myrdal, 1968, p.10).

2.4.1 Myrdal on Widening the Research Agenda

In contrast to the neoclassical (and later neoliberal) fixation on GDP and growth-related indicators, Myrdal pleaded to widen the economic discussion of the meaning of development by including a much wider range of social and economic characteristics into his modernization values (Section 3.3) and his circular causation model (Chapter 5). Myrdal only includes three strictly economic indicators in his suite of the modernization goals listed Table 3.1. These are (goal 2) raising productivity; (goal 4) rise in levels of living; and (goal 5) social and economic equalization (discussed further in Chapter 3). Of these goals, only the first is strictly related to neoclassical economic theory. Even Myrdal's prescriptions for productivity improvements are themselves more related to social factors (including education) than they are to classical economic modeling (Myrdal, 1968, Chapter 2, p. 49-69). The other two economic related aspects of his modernization goals address inequality in ways very different from the neoclassical model described above. Pulling together Myrdal's contributions to economics together, Reynolds (1974) offers that,

"Myrdal was one of the first to articulate dissent to the primacy and over-reliance on the Harrold-Domar type of economic growth models for development, in favor of a more historically rooted development which considered the political institutions and cultural attitudes of the study area, and for examining institutional reform and non-financial measures rather than relying purely on economic growth models" (p. 484).

2.5 Subsequent Indicators and a Widening of the Research Agenda

Immediately following the publication of *Asian Drama* in 1968, the dominance of the neoclassical model in economics was already being threatened. The gap between the theoretical claims modeled by the neoclassical approach and the reality on the ground became the so-called impasse of developmental economics based on Booth's influential 1985 which documented both the failures of both the neoclassical and Marxist approaches to development to describe accurately the processes of either development or underdevelopment.

2.5.1 1970s: The Basic Needs Approach and Institutional Expansion

Soon after the publication of *Asian Drama*, the reformist Basic Needs Approach (BNA) spearheaded by Dudley Seers emerged. This school echoed much of Myrdal's

development agenda by suggesting that what was needed in development was not a fixation with economic growth and industrialization, but a focus on addressing basic needs to create,

“a reduction in the incidence of absolute poverty, in the level of unemployment and underemployment, and in inequality between regions... Inequality for him [Seers], extends beyond disparities of income and wealth to encompass things like unequal access to health care, education, and even political power” (Othick, 1983, p. 64).

The International Labour Organization (ILO) shared this view and put forward the Declaration of Principles and Program of Action for a Basic Needs Strategy for Development at the 1976 Conference on World Employment. The BNA approach expanded in the 1970s into many of the same disciplines that Myrdal included in the *Asian Drama* and geared toward active state support of the most in need. This is evident in following quote by Chambers (1993) on the BNA approach,

“[The sectors of interest are] health, education, farming, reproductive practices, [and are] designed to create a minimum level of welfare for the weakest groups in society. Development practice became characterized by district and regional planning (supported by major international donor institutions), by proliferating field bureaucracies and by development solutions through targeting (of social groups—particularly by women and children, of sectors and of regions) to overcome the recognized inadequacies of the planning fantasies of the 1960s” (p. 108).

Whether or not Chambers meant to include Myrdal into those planning fantasizers is unknown.

Not only are there similarities to Myrdal in the suggestion for the government and the developmental community to address fundamental needs and inequality (from the top down), but also the explicit inclusion of the importance of the educational sector. Moreover, in the quote above the BNA included spatial inequalities in the access to services; and is reminiscent of the geographic aspects of Myrdal’s cumulative causation model as discussed in Sections 4.4 and 5.2. The BNA also resonated with Myrdal’s view in that it conceived of poverty as multifaceted, but was essentially a technocratic top-down government driven affair. However, The emphasis on a top-down implementation in

the BNA was identified as a problem. Hettne (1995) for one saw that one underlying problem with the approach was that it left policy making and implementation, “vulnerable to changing fashions in the international aid bureaucracy ” (p.180). This suggests that even by the 1970s the state’s economic sovereignty for development planning as Myrdal envisioned it was already being encroached upon by the imposition of an expanding international development community (see Chapter 6). For his part, Goulet (1971) added the concept of “core values” to the BNA development discourse, which interjected the issues of sustenance, self-esteem and freedom:

“Life sustenance is concerned with the provision of basic needs. No country can be regarded as fully developed if it cannot provide its entire people with such basic needs as housing, clothing, food and minimal education... Self-esteem is concerned with feelings of self-respect and independence. A country cannot be regarded as fully developed if it is exploited by others or cannot conduct economic relations on equal terms. Freedom refers to the ability of people to determine their destinies. No person is free if they are imprisoned on the margin of subsistence with no education or skills” (Thirlwall, 2008, p. 39).

In the quote above, one can see that Goulet’s “sustenance value” have similar in meaning to Myrdal’s concept of the “levels of living”. Second, Goulet’s concept of state self-esteem and ability to conduct trade on its terms is similar to Myrdal’s concept of the economic sovereignty of the state (Chapter 6). Moreover, both share a conception of the nationalist based maximizing state sovereignty, independence, and planning.

Along with Seers and Goulet, a theoretical shift in developmental priorities from the neoclassical preoccupation with GNP per capita towards the inclusion of more social was also mirrored in indicator development of the time. For example, the Physical Quality of Life Index was developed by David Morris (1979), which included infant mortality, life expectancy, and literacy. The Index was an early multivariate indicator that built upon Myrdal theoretical underpinnings.

Despite the increased integration of theory, indicators, and institutional development in the BNA was not without its critics. Simon (1999) notes that despite the admirable goals of the BNA, the most radical conceptual aspects of the BNA philosophies were regularly devalued in practice. He saw this disconnect as exceptionally wide between

the international development industry's incentives and the delivery of needed goods, seeing that all too often the high minded views of the BNA had been, "reduced from agendas for change and empowerment into little more than shopping lists that are hawked to donors for implementation, commonly more in line with donors' than recipients' priorities" (p. 27). Simon's view dovetails somewhat with Myrdal's formulation of the 'soft state'. Insofar as a gap between the well meaning plan and sub-par implementation developed. Regardless of the limitations of the BNA approach, attempts to refocus development activities and resources towards a state and international development system directed to meet social and economic needs of the very poor evaporated with the neoliberal structural reforms beginning in the 1980s. However, the BNA did adopt many of the aspects of development which Myrdal advocated for and also laid much of the theoretical and indicator groundwork for development of later theories and indicators. This is especially true of the MDGs (Section 2.5.10) and the NGO-led the bottom-up approach (Chapter 6) in the 1990s.

At the same time that the BNA was gaining ground in the late 1960s and 1970s, Institutional capacity was also being expanded at the international level as well. During this time new organizations flourished under the United Nations Development Group (UNDG) that eventually included the Food and Agriculture Organization (FAO), World Health Organization (WHO) United Nations Development Program (UNDP), UN United Nations Research Institute for Social Development (UNRISD), and the Asian Development Bank (ADB) and other powerful developmental organizations. These institutions were themselves backed by other existing international organizations concerned with development and statistic collection and development such as the Organization for Economic Cooperation and Development (OECD), the World Bank among many others. The expansion of the international organization's proceeded so quickly they began to address, often in very fine detail, nearly all of the issues that Myrdal bundled into the "levels of living" in *Asian Drama*.

Despite the mission to improve the lives of the poor in addressing many of the sectorial issues that Myrdal's suggested were essential, these international institutions tended to represent the opinions of the Western developmental community. As such, they

controlled the purse strings, and had the political and economic leverage to encourage the adoption of their agenda. Many of these policy discussions were portrayed as universally applicable in the developing world despite the cultural and historical differences in the needs of different communities. This universalism was in stark contrast to Myrdal's suggestion that policies be formulated to meet the tailored to the needs and contexts of developing countries. Secondly, the inherently global nature of the bureaucracies are examples of a transition away from the state-centric planning state that Myrdal envisioned towards a more globalized multi-actor conception of development. Given the stress that Myrdal put on state sovereignty, state-led planning (Chapter 6), there is a disconnect between the two approaches. However, Myrdal does quote UNESCO quite extensively in his discussion on education, as will be seen in Chapters 7.

2.5.2 1980s: A Lost Decade for the Heterodox Approach

The fall of the neoclassical model, which Myrdal anticipated, finally erupted in the 1980s with the meteoric rise of the “counter-revolution” of neoliberal economics. This is not to say that the heterodox approach Myrdal advocated was entirely abandoned, only that the neoliberals had seized the microphone, power, purse, and politics in developmental economics. As such, the 1980s have been referred to as the “lost decade of development”. At this juncture, the study first, traces the legacy of the heterodox approach pioneered by Myrdal from the 1980s. Then, the end of the chapter returns to the rise of the von Hayek inspired neoliberal approach in more detail.

2.5.3 1990s and The Minimal Dataset

In the late 1980s and early 1990s, many of the more influential and widely collected indicators became further developed, standardized, and made generally more suitable for both temporal and geographical comparisons. The United Nations *Handbook on Social Indicators* (1989) was a particularly significant milestone in formalizing and refined lingering theoretical and methodological issues. This was, in turn further refined in the *Minimal National Social Data Set* (MNSDS) (1997), the final version of which included hundreds of indicators and standardized methodologies for a host of social and economic issues, including those many that corresponded closely with the values Myrdal included in the *Asian Drama* as listed in Table 2.1 below:

Table 2.1 Indicators included in the Minimal Social Data Set and equivalent issues found in Myrdal's *Asian Drama* (chapters in parenthesis)

Issues covered in Minimal Data Set	Similar issue covered in Myrdal's major concepts in <i>Asian Drama</i>
Population composition and change	Population Policy (Chapter 27); Economics of Population Policy (Appendix 7)
Human settlements and housing and geographical distribution of population	Levels of living and Equality (Chapter 12); Spatial Aspects in Cumulative Causation (Appendix 2)
Households and families, marital status, fertility	Population Policy (Chapter 27); Health (Chapter 30)
Health and human services, impairment and disability, nutrition	Health (Chapter 30); Levels of living and Equality (Chapter 12)
Learning and educational services	Education (Chapters 31, 32, 33)
Economic activity and population not economically active	Unemployment and underemployment (Chapter 21); Labor in and outside traditional Agriculture (Chapter 22-23)
Socio-economic groups and social mobility	A theme throughout the book; Equality and Democracy (Chapter 16)
Income, consumption, and wealth	Modernization value of Productivity
Social security and welfare services	Not explicitly covered in <i>Asian Drama</i>
Leisure, culture and communications	Not explicitly covered in <i>Asian Drama</i>
Time use	Productivity Modernization goal
Public order and safety	Loosely covered in Modernization goal of national cohesion
Plans for future work in natural environment, social relationships and political activities	Environmental planning not a major feature in the <i>Asian Drama</i> ; but Planning is a core feature throughout the book especially: Concepts and planning of Socialism (Chapter 17); Concepts and practice of democratic planning (Chapter 18); A Third World of Planning (Chapter 15)

Source: MSDS and Myrdal, 1968 compiled by author

The table above shows that almost all the research paths and indicators that Myrdal had specified as essential unaddressed issues in the literature had been included in the report. Furthermore, the inclusion of the methodological guide to collecting the data also addressed the unreliability and unsuitability of the existing indicators discussed in Section 2.3.2 and 2.3.2. This is especially true for the indicators he considered were important in his discussion for raising the levels of living. However, absent from the list above are indicators for the measurement of state capacity and competence, its stance on corruption, and of changes in social values and attitudes that were also at the core of the *Asian Drama*.

2.5.4 New Institutional Economics

The 1990s also saw the reemergence of a reformed neoclassical approach in the form of the New Institutional Economics (NIE), which incorporated many of the critiques on the neoclassical model and was incorporated the lessons from the success of the newly industrialized countries of Northeast Asia. Addressing Myrdal's critique of the neoclassical economics of his time, NIE, as the name suggested, examined the need for institutional reform (in both the organizational bureaucratic as well as normative sense) as prerequisites for development to occur. Here according to North (1995):

"Institutions are thus the rules of the game of society, the humanly devised constraints that structure human interaction. They are composed of formal rules (statute law, common law, regulations), informal constraints (conventions, norms of behavior and self-imposed rules of conduct), and the enforcement characteristics of both" (p. 23).

North also adds if the elites do not see a need to reform inefficient institutions, there is little chance for development to occur. Here, one can see that the reconstituted NIE, unlike the neoliberal model, addresses both the need for government institutions and the need for those institutions to be efficient and effective (i.e. not soft), as well as the sway that elite motivations have in shaping the development trajectories of the nation. All of these are shared aspects of Myrdal's modernization goals (Section 3.3). Also similar to Myrdal's modernization values, the NIE approach includes a tentative appropriation of the modernization schools insistence on the need for cultural and attitudinal changes needed among both the elites and the public as necessarily for sustained growth. This inclusion also is reminiscent of Myrdal's development agenda.

Surprisingly given their predilection for neoclassical economics, the World Bank (1997) incorporated much of North's theoretical NIE model into their *World Development Report: The State in a Changing World*. In the report, there is a concerted and deliberate attempt to bring the state back into the arena of development in order to provide for and shape the institutions needed for neoclassical models of predictions to work. In his position as Chief Economist (for the World Bank Joseph Stiglitz (1986), like Myrdal before him, rejected many of the neoclassical economic assumptions and suggested that a more useful and appropriate role for the World Bank would be to redefine its role as a gatherer and

disseminator of information. He also envisioned a World Bank active in indicator creation and methodological standardization. This realignment of Bank fits with Myrdal's conception view that the international development agencies should be more humble in their approach to development and shed their self-anointed role as the dictator of development policy.

Although there are similarities between Myrdal's and the NIE approach, it is not accurate to say that the NIE is a fully-fledged and wholehearted return to a "Myrdalian" view of economics. The role of the state that the NIE economic approach advocated was far less intrusive compared to the highly interventionist state Myrdal advocated for. Furthermore, the NIE approach does not combine an active state with the same intensity for addressing social inequality that Myrdal advocated. Nor does NIE pay suggest that more policy attention should be committed to improving basic needs as Myrdal's vision had. In fact, that role of the state as conceived by the NIE in the 1990s was uninvolved in the social sphere as either the harbinger for "rationalization", or to thwart traditionalism.

2.5.5 Indicators Development in the Immediate Post-Cold War Era

Whereas the 1980s formalized the statistical standards for the statisticians themselves, it was the 1990 publication of the First *Human Development Report* (HDR) published by the UNDP led by economist Amartya Sen that has been credited for more firmly solidifying social indicators into mainstream economic development theory. Furthermore, the report included a complete standardized collection of human development indicators useful for both international and temporal comparisons. Thematically, the report focused on GDP, maternal mortality, under-five mortality, female literacy, adult literacy, school enrollment and life expectancy (UNDP, 1990). The report was released during the collapse of Communism in Russia and Eastern Europe at a pivotal moment in world history and reflected the optimism of a development community that felt free from the shackles and geopolitical alignments of the Cold War.

The report is also notable for being the first publication published by the UNDP to include the Human Development Index (HDI). This was a seminal moment for a indicator and represented a real challenge to the primacy of GNP as a measure of socioeconomic

development. The report's multivariate development agenda stressed pro-poor policies, as Myrdal's had advocated in *Asian Drama* earlier. Interestingly, the report includes a direct criticism of equating GNP with growth, a charge that Myrdal frequently makes throughout *Asian Drama* :

"The central message of this Human Development Report is that while growth in national production (GDP) is absolutely necessary to meet all essential human objectives, what is important is to study how this growth translates- or fails to translate- into human development in various societies" (UNDP, 1990).

The HDI is composed of health components (life expectancy at birth); educational components (adult literacy rate and gross primary, secondary, and tertiary gross enrollment ratios); and a standard of living component (GDP per capita in purchasing power parity). The advancement of the indicators represented the near-universal adoption in the development community that growth was not enough and that development policy needed to reflect inter-related nature of the economic and the social spheres.

2.5.6 Sustainable Development

In the early 1990s, the global developmental institutions and the indicators created and utilized to measure that agenda were as close as they would come to the development agenda Myrdal suggested in 1968. In 1992, however, the development discourse shifted towards a rapidly sustainable development paradigm. Although Myrdal did not write about ecological impacts of development, the inclusion of environmental factors should not be considered a wide theoretical departure from Myrdal's general understanding of the nature of planning and the need for the developmental community to address the most pressing problems that existed "on the ground" rather than in theory (Section 3.3.1). Furthermore, the importance of social indicators were not ignored in favor of environmental approaches but, instead, were integrated. The underlying theories of the sustainable development framework and Agenda 21 (1993), are also consistent with Myrdal's suggestion that state-led planning by national governments were essential for success. Moreover, the sustainable development paradigm encouraged projects to be rationally planned and geared toward the particular needs and socioeconomic contexts of individual countries and localities. However, the difficulty in meaningfully implementing Agenda 21 policies of the sustainable

development model by national and state governments, as well as the inability for mass mobilization of the general public for action, let alone addressing the litany of issues in the program, are reminiscent of the implementation weaknesses Myrdal considered as characteristics of the 'soft state'.

2.5.7 The Rise of Gender Empowerment Movements

The 1990s also began an explosion in research and indicators that stressed gender inequality and the importance of advancing women's rights as essential to development and poverty alleviation. This is most clearly seen in the many gender-focused studies released annually by the UN Development Group. The UNRISD, for example, included *Integrating Gender into Development Policy* as a major area of research in the 1990s. Similar to the sustainable development concept, this increased theoretical attention on gender issues in turn lead to the inclusion of new indicators and indices to measure the inequalities. One such index is the Gender Empowerment Measure (GEM), which gages the influence of women in planning and decision-making in both politics and the economy (Willis, 2005). Although Myrdal's research had a significant focus on the importance of alleviating other types of inequality it telling that he omits to the extent that he does, the glaring gender inequalities in Southern Asia and their impact as an obstacle to the modernization project. The exception to this omission occurs in the educational sector, which is returned to in much detail in Chapter 7. Although Myrdal did not address gender issues head on, its inclusion into the discourse, like that of environmental issues, is certainly within his theoretical approach.

2.5.8 Social Capital Approach

The inclusion of the Social Capital approach to development also incorporated many of the proto-concepts that Myrdal championed for developmental economics in *Asian Drama*. Although the nuances of the many divergent avenues of the social capital conception are beyond the scope of this review, proponents of the approach emphasize the importance of institutions, norms, and values, especially trust and connectivity in explaining why some groups have been able to modernize quickly (Uphoff, 1999). The Social Capital approach's attention to values and attitudes represents something of a return to the Weberian inspired mid-century modernization theorists of which Myrdal is certainly

included (Section 3.3). The inclusion of social capital into the economic discussion is reminiscent of Myrdal's critique on the over reliance on modeling. These similarities are clear in the following summary of the Social Capital approach from Bebbington (2008):

“Economists used it as way of describing the ‘something special’ that their econometric tools could otherwise not handle: the social relationships through which information was exchanged, the social bases of collective action in community development, and so on. However, it was the non-economists in the Bank—or, more precisely those who questioned the value of formal econometric approaches – who made most use of the concept” (p. 134).

The fact that the social capital theory was eventually accepted into the World Bank, again shows the adoption of social factors into the developmental discourse into mainstream economics.

2.5.9 Increasing Importance of Information Technology for Development

Gradually, the 1990s also saw quantitative and especially qualitative improvement in the development of informational technology that greatly aided all facets of data collection, dissemination, availability, and processing (Castells, 2000). The rise of informational technology in turn led to the idealistic visions of the importance of technology for the development in the IT4D concept. From the vantage point of the developing countries, optimists felt that technology could be used to flatten the economic playing field by lowering the barriers of entry for less developed economies to engage in the international economy—especially considering the lower cost of labor (Friedman, 2006). For others the increasing role of information technology in the economy was seen to merely create a new type of inequality between the technologically enable haves and have nots (Rodgers 2003, 1962).

Like the related subject of globalization, Myrdal did not anticipate the quantum improvements in technology that were just the over-the-horizon from his vantage point in the late 1960s. There is surprisingly little discussion in the *Asian Drama* regarding the importance of technology in development, and what brief mention there is is concerned primarily with irrigation technology (Myrdal, 1968, pp. 696-967); and the need for technology to be, essentially scaled down to be, appropriate to meet the developmental

needs for Southern Asia (Myrdal, 1968, pp. 703-704). Myrdal also lays out the need for mass communications as part of his conception of a reformed educational sector (Chapter 7) which suggests that a contemporary “Myrdalian” approach would probably embrace the rise of IT4D insofar that it was made appropriate to address the needs of those at the bottom. However given Myrdal’s close eye toward inequality (Chapter 4) it is equally likely he would have recognized the digital divide as another way in which the elite expanded their advantages, as Rodgers suggested.

2.5.10 Millennium Development Goals

The adoption and acceptance of the Millennium Development Goals in 2000 at the Millennial Summit also showed remarkable similarity to Myrdal’s proposed research agenda in 1968. The eight goals, 18 targets, 48 indicators adopted to be the benchmarks for development closely reflect Myrdal’s understanding of the interrelated nature of social and economic development (Chapter 5) and the need to focus on basic needs, inequality, and the suitability and reliability of the indicators chosen. Also similar to Myrdal’s own view of development and the need to address multivariate inequality, Riggs (2008) suggests the MDG goals, “not only link with each other but are implicated in some deeper and arguably even more profound aspects of inequality” (p. 35). Specifically the goals are:

Table 2.2 Millennium Development Goals

- | |
|---|
| <ol style="list-style-type: none">1) Eradicating extreme poverty and hunger;2) Achieving universal primary education;3) Promoting gender equality and empowering women;4) Reducing child mortality rates;5) Improving maternal health;6) Combating HIV/AIDS, malaria, and other diseases;7) Ensuring environmental sustainability;8) Developing a global partnership for development |
|---|

Source: United Nations, 2010

The MDG goals have a strong connection to Myrdal’s theoretical foundations. With the exception of the third and seventh goals (and the goal to address AIDS which of course

was not known at the time of *Asian Drama*), all of the sectors that the MDGs address were mentioned exhaustively in *Asian Drama* and are included in Myrdal's discussion on the 'levels of living'. The MDGs were launched with an almost impossibly difficult deadline for their accomplishment, a feature that is congruent with Myrdal's suggestion that addressing underdevelopment more slowly would have a lower likelihood of success. Furthermore, that the international developmental community could craft a set of universal goals highlights its rise vis a vis the sovereign state in setting the development agenda, and the power of the developmental technocrat. The adoption of universal goals also reflects the development community's tacit acceptance that there is a core of relevant goals equally applicable throughout the world independent of local historical, cultural, and political conditions a view that may or may not square with Myrdal's modernization goals.

The MDGs are not without their critics. Jeffery James (2006) has argued that some of the MGDs confuse means with ends. He notes, for example, that the goal to achieve worldwide primary education concentrates on the means rather than the ends of universal literacy and numeracy; an issue returned to in greater detail in Chapter 8. Another critique on the MDG goals comes from Satterthwaite (2003), who, like Myrdal forty years earlier, suggested that the statistics gathered by the MDGs are themselves of limited value:

"The achievement of the poverty target for example goal one target one is income-based and related to official data and basic needs as ascertained by 'experts.' Other forms of deprivation (linked to social exclusion, political marginality, and cultural rights) are ignored, and the inequalities in power, which are often the root, cause of poverty, overlooked. It also means that governments and organizations are likely to focus their energies on interventions that will improve the chances of meeting the MDGs, rather than on more deep-seated, political and problematic manifestations of deprivation.... The general criticism that development has become a technocratic project informed by experts, driven by governments and multilateral agencies, and based on measures of success that pay little heed to local desires is equally apposite to the MDG initiatives" (Hasan, Patel, Satterthwaite, 2005).

In the criticism above the MDGs are characterized as overly technocratic, non-indigenous, and unwilling to address the deeper political and social weaknesses, which led to the deprivation in the first place. This argument is reminiscent of Myrdal's critique on the "beam in the eye" of the international development community and, what he saw as a

general unwillingness for it to challenge the deeper social inequalities and a tendency for to instead fixate on quantitative and technocratic goals. Using a wider analytical lens, the MDGs were applied solely to the developing world. Also, no such reform package was imposed made to limit the power of the international developmental organizations themselves in the wake of increasingly obvious social costs of the Structural Adjustment Programs (SAPs) that we address in Section 2.6. Similarly, the MDGs are silent on the role and reform of the rich world for its role in fostering corruption, exploitation, and money laundering in the developing world. These are issues that Myrdal would chide the development community for as a lack of self-introspection. The fact that there are traces of Myrdal in both the creation of, and a critique on the MDGs attests to both the subtlety (or ambiguity) of Myrdal's argument.

2.5.11 NGOs and Subsequent Indicator Collection

Non-Governmental Organizations (NGO) have emerged as a major player in development economics and have made a significant impact on indicator creation, collection, and monitoring. As might be expected, this has been especially true in evaluating the performance of the government itself in sensitive or embarrassing areas that governments often lack the self-reflection or institutions to evaluate independently. The professionalization and expansion of properly conducted values surveys is another area of indicator development that has occurred since the publication of *Asian Drama* that Myrdal would very much appreciate.

NGO collection, and contribution to increasingly complex indicators and the incredible expansion of access to the technology available for data distribution and advanced statistical calculations, has also had an impact on the nature of development. The importation of large quantitative models from the similarly expanding field of econometrics has shifted development studies as a whole increasingly towards quantitative statistical research and "modelability" as essential to legitimizing findings. In the same vein, focusing on the quantitative approach, one misses the importance of the unique historical initial conditions faced by different countries and sub-regions upon and before independence. Thus, a development theory dependent on statistical analysis-- even if accurate and well defined—likely mask important historical and cultural aspects of the

society. A recent criticism by Hossain, Kathuria, & Islam (2010) below follows Myrdal's example:

"One needs to move away from a mere emphasis on relative income levels (or even human development indicators) and provide a more complex interpretation of initial conditions by emphasizing historical legacies and institutions. It is at this juncture that one can emphasize common traditions that bind the economies of the region together – despite frequently highlighted differences in religion and ethnicity" (p. 6).

2.6 Neoliberal Critique on Neoclassical Economics

To this point the historical development of some of the major movements in developmental economics that have bloomed, in part, from Myrdal's heterodox economics has been addressed. In the shorter subsection, it is shown that Myrdal's view was not the only critique on developmental economics in the immediate post-war period. Friedrich August von Hayek launched an opposing vision to Myrdal's on developmental economics was the form of neoliberalism. Whereas Myrdal saw the weaknesses in the neoclassical approach in narrow-minded fixation on economic growth and the need for state and social intervention, the neoliberal challenge or "counter-revolution" (Toye, 1987) criticized state intervention as the root of the problem. Instead of downgrading the importance of the state and favoring markets, the neoliberals doubled-down on the importance of economic growth and markets at the expense of state influence on the economy. According to Hill et. al (2012), there are two issues, which differ between the previously discussed neoclassical argument and the emerging neoliberal argument. The first is a rejection of the neoclassical economic view that assumed that markets as being natural and self-regulating. Instead, neoliberals saw markets as socially constructed and therefore, needed to be deliberately created and maintained with the minimal of state interference or regulation; and secondly that the features and logic of markets need to be extended into all facets of the society and especially into government itself. Under such an agenda, the neoliberals transformed the neoclassical defined role of the state from being the moderator of capitalism to its handmaiden. Ideally, for neoliberals this would be done by establishing and prioritizing those institutions which encourage markets including, the

“legal system, sound money, public order, and national defense- to secure private property and economic competition; but the state refrains from direct intervention in markets to achieve economic growth because the public involvement is believed to distort prices and benefit powerful interest groups“ (Harvey, 2005; 2).

2.6.1 The Morality of Markets

By explicitly associating free markets with human freedom, Von Hayek and his acolytes saw the economic models not only in descriptive terms of traditional economic models, or as tools for efficient allocation, but as a moral force in its own right. For the neoliberals, the morality of markets was juxtaposed against an ineffective and immoral state suffocating under its own antiquated bureaucratic weight and its tendency towards rent-seeking, corruption, and red tape. It therefore followed that what ever hampered markets needed to be abolished, or at least, in the words of American tax activist Grover Norquist, be made “small enough to drown in a bathtub”. The embedded distrust of the state and the exultation of the markets were praised in the so-called East Asian Miracle. When times were good in Asia the praise was lavished on the regions encouragement of export markets and free trade policies, but when things turned sour, the state and the bureaucracies were quickly blamed for intruding on markets; and crony-capitalism, market manipulation and corruption were blamed for the AFC (Dixon, 1999; Mohan, Brown, Millward, Zack-Williams, 1999).

As part of its critique on government, the neoliberal vision focuses on the expansion of individual freedoms and economic freedoms in particular. All of this stands in stark contrast with many of the core features Myrdal put forth in *Asian Drama* including, the need to address social inequalities between the elite and the general public (Chapter 4); the essential role of the state in fostering development even in opposition to market forces; and the requirement that governments to prioritize the basic needs of those at the bottom over the need for rapid economic growth. Furthermore, the sheer simplicity and assumed universality of the neoliberal model also lies in direct contrast to Myrdal’s attention to adjusting the developmental agenda to fit with the realities on the ground.

2.6.2 Neoliberalism in Action

After sharing the Nobel Prize in economics in 1976 with Gunnar Myrdal, the mantle of neoliberalism was passed from von Hayek to Milton Friedman. As the leader of the Chicago School, Friedman not only expanded the economic theories of neoliberalism with his contribution of monetarism, but found more political opportunities to enact the theories of neoliberalism into policy beginning in Chile in the 1973. Thus from the beginning, neoliberalism was associated with the expansion of free-market capitalism in the developing world. However, it was the election of Ronald Reagan and Margret Thatcher, which brought neoliberalism to the forefront of policy and the institutional strength of the neoliberal coalition mushroomed beginning in the late 1970s. Under the auspicious of the World Bank, IMF, the WTO, transnational capital and corporate capital-reinforced indirectly by Western economic military power, neoliberalism played a concerted role in opening statist economies to market forces and liberalizing economies in order to provide a foothold for an increasingly global capitalism.

Beginning with Latin America neoliberal policies enforced by the Washington Consensus took advantage of the weakness of the developing world during the debt crisis of the late 1970s. This continued in the 1980s when the bill for the social and infrastructure development projects recommended by the developmental community in the 1960s, and 1970s was due exacerbated by falling commodity prices (Willis, 2005). The already dire problem was made worse with the global recession of 1981-2 and the subsequent rise in economic protectionism in the developed world and capital flight to 'safer' countries. This created a policy window for the neoliberals in which a bailout was tied to deeper cuts in state budgets. The developmental organizations used their economic and political leverage to push through neo-liberal policies forcing borrowing countries to loosen their governments' control of the "commanding heights of the economy" by liberalizing financial markets, cutting social spending and raising taxes in order to create a more balanced budget in exchange for further assistance from the World Bank and IMF (Cran, 2002). This policy became especially prevalent after the fall of the command economies that its backers of the neoliberal state and of free market claimed, "There is no alternative" (Thomas, 2000).

As the history of neoliberal policies above suggests, in many cases and many places neoliberalism was forcefully imposed upon recalcitrant public and governments. In contrast, it is almost impossible to find any country in which the human development approach, which Myrdal pioneered, let alone a sustainable development approach has been imposed on a reluctant public or government, largely because of the features of the 'soft state' described in Chapter 6.

2.6.3 Structural Adjustment Programs (SAPs)

One of the primary policy tools of the neoliberal school was the rapid imposition of the Structural Adjustment Programs (SAPs). The objective of the programs according to Simon (1995) were comprised of four main elements:

1. The mobilization of domestic resources;
2. Policy reforms to increase economic efficiency;
3. The generation of foreign exchange revenue from non-traditional sources through diversification, as well as through increased exports of traditional commodities;
4. Reducing the active economic role of the state and ensuring that this is non-inflationary.

Of which objectives were divided into stabilization and adjustment measures, which include:

1. A public sector wage freeze;
2. Reduced subsidies on basic foods and other commodities, and on health and education;
3. Currency devaluation;
4. Export promotion;
5. Downsizing the civil service;
6. Economic liberalization
7. Privatization
8. Tax reduction

Even a cursory look at these policy proscriptions will show that they are almost completely in the service of markets (and by extension to benefit existing economic elites)

both domestically and abroad, and are opposed to state intervention into the economy. As such, they are contradictory to both Myrdal's and the subsequent human development model. In many cases translated into the downsizing the civil service, freezing public wages, and reducing state subsidies for basic needs and health and educational services--policies entirely the opposite Myrdal suggested.

2.6.4 SAP Overreach

The SAP programs were usually seen by recipient (or imposed upon) populations as overly punitive and socially intrusive. In the subsequent global backlash against the SAPs even the IMF itself eventually admitted that, "the early SAPs were exclusively economic and neglected or retarded social development" (Simon, 2008, p. 89). Unsurprisingly, the poor suffered the brunt of the SAP measures that benefited local elites; exacerbating the economic and social inequality that Myrdal was adamant that socio-economic policies should target. SAP policies also had an important spatial component as well. According to Simon, Just as SAPs and PRSPs are often claimed to benefit the elites of impoverished countries, so broader globalization processes are claimed to do the same, thereby exacerbating inequality. As Joseph Stiglitz (2002, p. 53) notes "Globalization has been hijacked by the special interests in the North, sometimes at the expense of the poor in developing countries This has led to a growing divide between 'the haves and the have-nots' with the latter continuing to live in dire poverty" (p. 53). The tensions between the human development approach and the SAP policies were clearly apparent and split the development community as early as 1987 when UNICEF published *Adjustment with a Human Face* (Cornia, Jolly, Steward, 1987) which documented health and education sector consequences of SAPs as well as the disproportionate burden on women and children. Ten years later Chossudovsky (1997) went so far as to say that the SAPs committed " economic genocide" in the name of reform (p. 42).

The SAPs and the related Economic Recovery Programs (ERPs) billed themselves as a "counter-revolution" against the neoclassical approach, but in practice retained many of the core features of the same neoclassical model that Myrdal sought to reform earlier. The ability of the IMF and the World Bank (with the tacit backing of the American political and military power) to impose the SAPs on a mostly unwilling recipient population also attests

the degree to which state sovereignty in political and economic planning had been eroded with the rise of globalization and the development industrial complex itself (Bracking, 1999; Mohan, Brown, Millward, Zack-Williams, 1999).

2.6.5 The Counter-Counter Revolution

The rapid rise of the neoliberal model in developmental economics, discussed above, appears to be losing steam in the mid-2010s. Writing of the failures of neoliberalism the influential neo-Keynesian economist Paul Krugman as early as 1992 suggested in monograph of the same name that a “counter-counter revolution” is due and that that a revival of a more state regulated market-based approach may be overdue (Krugman, 1992). The overreach of the neoliberal approach and its inability to alleviate inequality and basic needs have become especially apparent in the developing world, and a Post-Washington consensus has emerged. The features and priorities of the so-called Post-Washington consensus parallels closely with those Myrdal advocated in his reaction to the overreach of the neoclassical approach of his time. Specifically, a new paradigm with policies geared for pro-poor growth and poverty reduction based on continued domestic policy reform and growth through trade liberalization has emerged in fits and starts. This “alternative agenda” also returns ownership of development policy back to the nation-state and even to the type (if not extent) of state social and economic planning that Myrdal advocated (Cammack, 2000).

The Washington consensus is certainly not in full retreat. Thomas (2006) has suggested that despite the handover of planning and implementation for development back to the nation state, critics suggest that the IMF and World Bank, through the power of the purse, have only further infiltrated themselves into the developmental process. More worrying, Thomas suggests that the role of international organizations themselves in creating and exacerbating poverty have also been swept under the rug. In the same report, Caroline Thomas discusses the agenda of the Alternative Declaration drafted by the NGO Forum at the Copenhagen Summit which advocates for a development program even closer to that of Myrdal’s state-centric, primarily top-down, inequality sensitive, and trade skeptical approach to development. According to Thomas (2006), the Alternative Declaration has,

“enshrined principles of community participation, self-reliance, and sustainability. The role of women and youth was singled out... The Alternative Declaration represents an alternative vision of the past, present, and future that rejects the importance of the private sphere. It rejects the economic liberalism accepted by governments of North and South, seeing it as a path to aggravation rather than alleviation of the global social crises. Moreover, it identified trade liberalization and privatization as causes of the growing concentration of wealth globally. It called for the immediate cancellation of all debt, improved terms of trade, transparency, and accountability of the IMF and World Bank, and the regulation of multinationals. An alternative view of democracy was central to its conception of development” (p. 658).

There is also increasing level of skepticism on the altruism of the developmental agencies themselves. Pogge (2007) for one believes,

“that the predominate intellectual and academic responses in global institutions primarily serve the career goals of those who recommend development policies, such as the WTO and the World Bank, perpetuates its own existence and a certain ideology (neoliberal convictions) without adequately delivering to the poor. Overall, global institutions and their rules as well as dominant paradigms contribute to the persistence of inequality” (p. 16)

2.6.6 Wither the GDP?

The debate on the centrality of GDP as the defining indicator of development has had a long echo in the subsequent developmental and economic communities. Like many of the issues that Myrdal addressed in *Asian Drama*, his criticism on the usefulness of concentrating on GDP was not as much disproven as ignored during the period of neoliberal economic ascendancy. However, the discontent against GDP and per-capita GDP as the defining indicator of a societies' development remains an active line of inquiry. In a recent review on the weakness of GDP as in indicator and the search for possible alternatives for measuring development comes from Fleurbaey (2009):

“GDP statistics measure current economic activity but ignore wealth variation, international income flows, household production of services, destruction of the natural environment, and many determinants of well-being such as the quality of social relations, economic security and personal safety, health, and longevity. Even worse, GDP increases when convivial reciprocity is replaced by anonymous market relations and when rising crime, pollution, catastrophes, or health hazards trigger defensive or repair expenditures” (Fleurbaey, 2009).

On these grounds, there have been concerted efforts to replace GDP with more accurate and holistic indicators that reflect a larger social reality. Doing so would be greatly beneficial in several areas of development. Again, quoting Fleurbaey (2009),

“The practical importance of a measure of social welfare can hardly be overstated. Policy decisions, cost-benefit analysis, international comparisons, measures of growth and inequality studies consistently refer to evaluations of individual and collective well-being. The fact that monetary measures still dominate in all such contexts is usually interpreted as imposed by the lack of a better index rather than reflecting a positive consensus” (p. 1039).

The search of a more meaningful indicator to supplant the primacy of GDP is currently a major research effort of the Report by the Commission on the Measurement of Economic Performance and Social Progress co-chaired by Nobel Prize winners Joseph E. Stiglitz and Amartya Sen with contributions from some of the most prestigious universities worldwide and sponsored in part by the French government. In the most recent report by the commission they have offered that a multi-dimensionality of well-being of consisting of: “material living standards (income, consumption and wealth; health; education; personal activities including work; political voice and governance; social connections and relationships; environment (present and future conditions); security, of an economic as well as a physical nature” (CMEPSP, 2009, p. 15). Although the commission’s task is not specifically designed as an indicator for development per say, it does match Myrdal’s conception of development and especially of his modernization goals that are explored in the following chapter.

2.7 Chapter Summary and Significance to Research Questions

This first theoretical chapter addressed Research Question 1 by contextualizing, comparing, contrasting, and analyzing Myrdal’s development economic agenda stipulated in *Asian Drama* against the then dominant neoclassical model against which it was originally written. Doing so, it was showed that Myrdal’s conception of a wider vision of development economics (and the indicators for development) elevated the importance of social factors over economic growth, equality, and the role of the state was subsequently emulated in different guises. This chapter traced the gradual adoption of Myrdal’s

suggestions for widening the economic research agenda away from a fixation on markets to one which:

- Incorporates social indicators into the agenda;
- Concentrates research and policy efforts on the problems facing basic needs;
- Doesn't assume social equality or universality;
- Develop useful, meaningful and precise indicators.

In Section 2.6 Myrdal's economic approach was compared to his rival neoliberal contemporaries and successors in order to answer Research Questions 1.2 and 1.3 respectively. Here it becomes clear that while the neoliberal development model has dominated much of the discourse since the 1980s, it appears to have weakened and that type of heterodox discourse Myrdal championed maybe be ascendant.

Chapter 3 Myrdal's Modernization Theory Revisited

3.1 Introduction

In the previous chapter, Myrdal's critique of the neoclassical school was outlined and juxtaposed against some of the trends in economics unfolding since the 1970s. This third chapter follows the same organizational structure, and compares, and contrasts Myrdal's social science concepts against the mainstream modernization approach of his predecessors and contemporaries. His views are then juxtaposed against some of the major subsequent movements including the *Dependencia* School, the role of indigenous knowledge, the social capital model, and the postmodernist critiques on modernization. This is done in order to address Research Question 1 and to provide a theoretical foundation for the empirical component in later chapters. Also like the previous chapter on economic issues, this chapter on development shows that Myrdal's modernization approach vigorously challenged the paradigm of his time and has subsequently been tested by conflicting schools and theoretical approaches. In conclusion, it is offered that Myrdal's view represents a moderate compromise between the hard edges of the American mid-century modernization theory, and the relativism associated with the post-modernists and post-development approaches. Whereas the preceding chapter which focused attention on Myrdal's influence on later indicator development, this chapter principally addresses the shifting views in the discourse on the role of values (universal, traditional, and local), and the rise and fall of the traditional-modernization dichotomy concept with regard to Myrdal's contributions.

3.2 Modernization Theory in the Context of the Cold-War

The emergent US modernization school in the social sciences paralleled the concurrent rise of the country's geopolitical power of the and a scientific self-confidence in its ability to reshape the world. From the US positivist perspective, it was assumed that the factors that caused the economic and social instability of the pre-War Era had, or were in the process of being identified, analyzed, and eventually solved. As shown in this chapter, American social scientists thought that the stability that emerged in the post-War American

society could not only be maintained domestically, but could be studied and exported as modernity globally. Writing from the 1970s when the assumptions were proving to be false, Tipps (1973 p. 209) wrote that when modernization theory was being developed,

“American society saw itself as, “fundamentally consensual, combining an unmatched economic prosperity and political stability within a democratic framework. Such social problems as might exist, moreover, were treated not as endemic but rather as aberrations, which could be resolved by normal political processes within existing institutions. After the bloody history of the first half of the 20th-century tranquility of prosperity and stability seemed no mean accomplishment. The future of modern society now seemed assured; only that of the ‘developing areas’ appeared problematic” (p. 209).

Modernization theory was at its most optimistic in the 1950s and 1960s when many of its leading academics assumed that the diffusion of capital and technology (Rostow, 1960); cultural values (Lerner, 1958); and political values (Higgott, 1980) would naturally and quickly transfer from the rich to poor countries (Higgott, Robison, Hewison, Rodan, 1985, p. 18).

With both moral confidence and strategic imperative, the United States launched a project of modernity to attempt to reconstruct the world in its image. Eisenstadt, a prominent modernization theorist, implored developing nations to embrace a modernity that mirrored the democratic and market-economic structures of American society and by doing so fused the modernity concept to US strategic imperatives of the Cold War. Unsurprisingly, connecting modernity to free markets and to democracy (or not Communism at minimum) was not coincidental. Much of the academic output was funded by the U.S. Social Science Research Council’s Committee on Comparative Politics, a government organization that encouraged (and financed) leading academics and institutions to articulate an alternative message of hope for the poor to challenge the Communist overtures in the “Third World” (Peet & Hartwick, 2009). Thus, there was something of a race to the right politically in the American modernization school, especially in the context of McCarthyism and the House Un-American Activities Committee hysteria of the 1950s. Cammack (2000, pp. 159 - 160) notes that American right-leaning social scientists including Almond, Coleman, Huntington, LaPalombara, and Pye accused other

social scientists as being an insufficiently robust intellectual barrier against Communism, and represented an ideological threat to the conservative hegemony of the political and capitalist class. Unlike the radical revolutionary message of overthrowing the existing political and economic structures propagated by the Communists, the American modernization approach stressed development as, “an evolutionary process in which human capacity increased in terms of initiating new structures, coping with problems, adapting to continuous change, and striving continuously to meet new goals. This approach defined modernization in economic, political and cultural terms” (Peet & Hartwick, 2009, p. 122).

3.3 Myrdal’s Modernization Values

Myrdal formulated an alternative and nuanced conception of modernity that differed from both the American dominated understanding of modernization and structural functionalists (Section 4.3.5) on the one hand, and the Communist revolutionary model on the other. In such a position, Myrdal’s critique on modernization was marginalized by the ideological polarization at the time. However, this thesis proposes that it is perhaps a useful time to dust off Myrdal’s unique take on modernization. Unlike his more holistic rejection of the core features of the neoclassical and emergent neoliberal school discussed in Chapter 2, Myrdal’s relationship with the mainstream modernization school he was critiquing is more nuanced.

Throughout *The Asian Drama*, Myrdal is simultaneously criticizing the existing modernization school for not contextualizing its assumptions into the socio-economic conditions to which they are being applied. However, at the same time, Myrdal’s work incorporates, wholeheartedly, many of the underlying features of the larger modernization approach especially the emphasis on the need for increased rationality (Section 3.3.3), and the importance of state-led planning to plan for social development (Chapter 6). Ironically, by the time of the book’s eventual publication in 1968, the modernization approach that Myrdal sought to reform was itself losing its theoretical dominance in developmental discourse to other competing and more radical approaches. From the political left, scholars like David Harvey (1982) were re-examining Classical Marxism, in addition to the neoliberal

and neoconservative challengers from the right as discussed in Chapter 2. From this reformist, but not revolutionary position, Myrdal's modernization goals have been subsequently bundled together with many of the very modernization theories and theorists that he was critiquing.

3.3.1 The Need for Values in Economics (Myrdal)

Myrdal suggests that the role of values assumed in research and policymaking should be made explicit and not buried in self-serving ideological goals. From this position, he criticized both Western (Rostow especially) and Communists for just that. Instead Myrdal implored that, values, "should be chosen because they are both relevant, in that they reflect the actual valuations held by people who are concerned with the problems being studied, and significant, that that these people are influential in molding public policy" (Myrdal, 1968, p. 49). The values chosen should be as indigenous as possible to the values held within the study area rather values imposed from the outside. Moreover, Myrdal supposed that values should also reflect those by members of the society capable of making meaningful policy changes. Despite this relatively clear criteria in determining the goals by which to evaluate a society's level of development, Myrdal's selection of the modernization values are somewhat more problematic in practice.

First, Myrdal confesses that he himself had difficulty in discerning the ideals of the citizens themselves due to the lack of coherence of the values he encountered combined with a lack in the research of public opinion (Myrdal, 1968, p. 51). Similarly, the lack of related lack of even basic demographic data on social groups, their numbers and their social values and attitudes, or the degree to which these disparate groups themselves had "emotional cohesion" (Myrdal, 1968, p.51) was mostly unknown. Not only did Myrdal feel that these values more difficult to discern than more homogenous Western societies, he also felt that there was a wider range of attitudes as well, especially between ethnic groups in Southeast Asia. Because of these difficulties Myrdal readily admits, "It should be clear from the foregoing that considerable doubt remains whether the value premises chose are relevant and significant" (Myrdal 1968, p.54).

3.3.2 Towards a Scandinavian Social Democracy in Southern Asia

The ambiguity regarding the locality of the values determined is further compounded by the fact that the modernization values Myrdal distilled (Table 3.1) are ultimately variations of the Enlightenment values that had become internalized by a Western educated elite. This creates a revolving door situation in which Myrdal is simultaneously criticizing the Western conception of modernization (especially equilibrium theory, the structural functionalists, and neoclassical theory), and proposing his own understanding of modernization, and all the while claiming that the values chosen for the research were those held by leaders in the region itself. This resembles a value transmission reminiscent of the children's game of telephone, but one has to admire his effort and intellectual honesty in the process, however, unwieldy the results.

Throughout *Asian Drama*, Myrdal regularly (and rightly) chides American Modernization theorists for masking their own ideological and nationally self-serving values by cloaking them as “modernity” itself, and by extension setting the terms for development policies. Despite this criticism of unjustly imposing one's country's values as universal, the modernization goals Myrdal offers are also closely related to those of the Post-WWII Swedish Social Democratic state of which Myrdal himself played an important role as a politician and state planner. Thus, a post-modernist criticism that modernization theory is prone to equate their personal or cultural values with modernity itself retains at least a kernel of truth in this case. This, however, must be caveated by the fact that Sweden itself would had fairly little gain politically in the region in realist terms and perhaps among the most neutral countries during the Cold War between Western Nations. Moreover, Myrdal's insisted that that the modernization theories be more relevant to the Southern Asian social and political realities on-the-ground, rather than serving the ideological and geopolitical and economic imperatives of West. This view was also shared by other non-indigenous Southeast Asian scholars of the time, especially Lucian Pye and Clifford Geertz, who also saw that many of the problems facing the region stemmed from a disconnect between the modernization theories developed in Western universities and their lack of descriptive accuracy in describing change in the region (Berger, 2004).

Another complication in the modernization values Myrdal chose, as Dykema (1986) points out, is that his modernization goals are in large part the identical goals presented as indigenous to Southern Asia are the same that Myrdal himself long advocated in his own previous works, especially *Rich Lands and Poor* (Myrdal, 1957). This overlap between Myrdal's personal beliefs and those that he claims are native to the region makes it difficult for the reader to distinguish exactly where the line between the positivist description of the indigenous values, and Myrdal's own normative suggestions lies-- as they are in large part the identical. To some extent, however, the ambiguities between positive and normative statements on values, and the biases that they carry are largely mitigated by the genuine ideological connection Myrdal has with the leading planning theorists of the time. This was especially true for the view of development that he shared with the fathers of the Indian State. For example, Myrdal's vision for a shift in personal attitudes as part of modernization, as well as a need for nationalism are shared with the ideas of Jawaharlal Nehru, and his stress on the inequality that results in the caste system are similar to those of Ambedkar.

Despite these ambiguities in the selection method of the values, chosen and the bias towards own personal and societal values (whether intentional or unintentional), Myrdal does genuinely attempt to distill and incorporate indigenous value systems into his list of normative social ideals. By doing so, his goals differ considerably from the more ideological positions and universalist views of contemporaries. Looking at the values in Table 3.1 above, a few broad observations can be made. First, as mentioned in the previous chapter 2, surprisingly few of the modernization values above are associated with economic growth directly. Second, the issue of changing social attitudes is prominent in the goals as is the attention he gives to political cohesion at the state level as well as the importance of the state and developmental planning. Presently, each of these issues is explored to further weigh Myrdal's development values against those of his contemporaries.

Table 3.1 Abridged list of Myrdal's modernization values

A) Rationality
B) Development and Planning for Development
C) Rise of Productivity in terms of per capita output
D) Rise of Levels of Living
E) Social and Economic Equalization
F) Improved Institutions and Attitudes
a. Efficiency
b. Diligence
c. Orderliness
d. Punctuality
e. Frugality
f. Scrupulous Honesty
g. Rationality in decisions on actions
h. Preparedness for change
i. Alertness to opportunities as they arise in a changing world
j. Energetic enterprise
k. Integrity and self-reliance
l. Cooperativeness
m. Willing to take the long view
G) National Consolidation
H) National Independence
I) Political democracy
J) Democracy at the Grass Roots
K) Social Discipline versus Democratic Planning ('soft state')

Source: Summarized from Myrdal, 1968, pp. 57-66

3.3.3 Myrdal's Stress on Weberian Rationality

Myrdal's focus on rationality is his first modernization goal. His emphasis on encouraging rationality applies to both state-level developmental planning, and also to the individual level. This underscores the scope of his concern for rationalizing Southern Asian communities as the overarching goal of modernization. This fixation on rationality was not unique to Myrdal, and was a common cornerstone in modernization theory that he shared by many of his mid century modernization contemporaries, including Hall (1965), Rustow, (1967), and Schwartz (1972). This line of thinking derived from Weber's understanding of

modernization as the increased ability to control the physical and social environment due to scientific rationalism, and as the quintessential component in transitioning from traditional to modern thinking at the individual level.

In addition to the stress on a Weberian rationality, Myrdal's advocates the need for purposive changing of attitudes in other modernization goals. This is at its most explicit in the 6th modernization goal, which describes a host of values the Myrdal sees as needed to be encouraged including: improved institutions and attitudes, which included efficiency; diligence; orderliness; punctuality; frugality; scrupulous; honesty; rationality in decisions on actions; preparedness for change; alertness to opportunities as they arise in a changing world; energetic enterprise; integrity and self-reliance; cooperativeness; willing to take the long view (Myrdal, 1968, p.58). In the second half of this dissertation, Myrdal's stress rationality in both policy and social attitudes are discussed with relationship to the education sector that he saw as the essential vessel for disseminating the values above.

3.3.4 Myrdal's Use of the Traditional-Modern Dichotomy

Myrdal's emphasis on rationality also reflected his tacit adoption of the traditional / modern dichotomy employed by both Western and Communist modernization approaches. Doing so, Myrdal aligns himself with the one of the heaviest theoretical ballasts of the modernization school. In the quote below from Porter et al.'s (1999) obituary for the modernization school some of the pitfalls of putting too much emphasis on a traditional / modern dichotomy are discussed, as is a core argument of postmodernism.

"Modernist reason was not as inherently good as the 'enlightened' thinkers believed and has been used for a wide variety of purposes. Reason can be imperialist and racist (as in the making of the idea of 'the West'), taking a specific form of consciousness for a universal, a standard that all must aspire to reach. Reason was also a potent weapon in the production of social normativity during, 'The Enlightenment' driving people towards conformity with a dominant and centered "norm" of behavior (Doherty, 1993). Modernist reason was therefore dependent on the 'othering' of non-conformists, of cultures, of societies that were not informed by this reason and social norms, and were thus banished to lower echelons of humanity, defined as 'backward', 'undeveloped' or therefore bound up with these pressures to conform to particular notions of knowledge, reason, and progress" (p. 73).

Comparing the critique of modernization project to Myrdal's conception of the modernization values in Table 3.1, many of the points against the traditional / modern dichotomy made in the quote above do apply to Myrdal's vision, and by extension, weaken it. This is also evident in the use of his pejorative use of the term "backwash" effects of traditionalism, which resisted the modernization. To some degree, this is mitigated by Myrdal's "grafting" strategy discussed in the next subsection, but for the most part remains a strong and valid criticism of Myrdal's theoretical approach and weakens his modernization theory considerably.

Myrdal's encouragement of rationality in economic development and need to replace traditional values that conflicted with modernity was largely in line with his fellow modernization theorists. An initial line of enquiry in the modernization cannon came from those scholars who tried to identify the critical features in the West that made it able to develop first, and conversely, which features of traditional cultures kept them from developing as the West had. The thinking went that once the core features of Western development could be discerned they could be implemented in other communities. This led to an explosion of traditional / modern dichotomies. Along similar lines, Daniel Lerner (1958) contrasted the traditional and modern comparing attitudes in two Turkish cities, Balgat village and the capital city of Ankara to develop a Weberian ideal-type binary between the modern and the traditional. This very influential conception posited several juxtapositions that matched the larger modern / traditional binary; these included: the town and the village; enlightenment versus illiteracy; ambition versus resignation; and excitement versus piety (Peet & Hartwick, 2009, p.125). Alex Inkels & David Smith (1974) created similar personality axis between the traditional and the modern, against which Myrdal's modernization values are compared in the chart below.

In the Western school of modernization it was assumed a priori that such a transition was inherently progressive and would be eagerly welcomed by the newly independent countries, and that sponsoring such a modernization approach would have the side effect inoculating societies against the encroachment of Communism. An example of this was Eisenstaedt's suggestion that removing traditional elements of society and its socio-political structure was an essential feature in order to develop, qualitative

characteristics of modern societies as rationality, efficiency, and a predilection toward liberty. As proposed in the quote below, these traditional components need to be replaced by the political and social structure of Western societies, specifically market-based economics and the nation-state Peet & Hartwick (2009) quote Eisenstadt (1973):

“The development of a high extent of differentiation: the development of free resources which are not committed to any fixed, ascriptive (sic) groups; the development of wide non-traditional, ‘national,’ or even super-national group identifications; and the concomitant development, in all major institutional spheres, of specialized roles, and of special wider regulative or allocative (sic) mechanisms and organization, such as market mechanisms in economic life, voting and party activities in politics, and diverse bureaucratic organizations and mechanisms in most institutional spheres” (p. 23).

In the quote above the continued influence of Durkheim and Weber can be seen with the explicit stress on the importance of nationalist identification with, and political participation in, the nation state and the bureaucracy. Eisenstaedt’s stress on state construction in terms of national identifications; social cohesion within the state; and the extended participation of the general public into the political and economic planning of the state were also significant features of Myrdal’s understanding of modernization. These shared values are highlighted by their included in both the modernization values listed in Table 3.1 and in his conception of the role of the state in Chapter 6.

3.3.5 Criticisms of the Traditional-Modern Dichotomy

This is not to say that by the mid-1960s the ideal types of the traditional and the modern were not themselves questioned. At the time, the historicity of the ideal time of transition of the traditional / modern axis were also increasingly questioned. One of Myrdal’s contemporaries, the renowned historical sociologist Barrington Moore for one in *The Social Origins of Democracy and Dictatorship* (1966) showed that the West’s transition into modernity itself was not the uniform transition from traditional to modern that its proponents suggested. Instead, Moore offers that each country went through a varied and unique and particular process of development ranging from Britain’s bourgeois revolution, Germany’s revolution from the top, and Russia’s revolution from the bottom.

Table 3.2 Traditional and Modern Man compared to Myrdal's conception of modernization

Inkeles and Smith's Traditional Values	Inkeles and Smith's Modern Values	Myrdal's Modernization values
Not receptive to new ideas	Open to new experiences	Alertness to opportunities as they arise; willing to take the long view
Rooted in tradition	Changes oriented	Energetic and enterprising; preparedness for change
Interested in Immediate things	Interested in the outside world	Willing to take the long view
Uninterested in new information	Eager to seek out new information	Development planning based on rationality
Oriented toward the past	Punctual; oriented toward the present	Willing to take the long view; punctuality
Concerned with the short term	Values Planning	Values planning; Willing to take the long view
Distrustful of people beyond the family	Calculability; trusts people to meet obligations	Scrupulous honesty; Cooperative; Social discipline
Suspicious of technology	Values technical skills	Not included
Places high value on religion and the sacred	Places high value on education and science	Places high value on rationality and planning
Traditional patron-client relationships	Respects the dignity of others	Cooperative; Stress on national cohesion; Scrupulously honest
Particularistic	Universalistic	Particular to national conditions
Fatalistic	Optimistic	Rationality

Source: Inkeles & Smith, 1974 in Peet & Hartwick, 2009, p. 126 and Myrdal 1968, p. 59-64)

3.3.6 Myrdal, Religion, and Grafting of Modernization with Traditional Culture

Because of the unavoidable intersection between traditional and religious values, at this point in the discussion of Myrdal's version of modernity needs to be discussed in more detail. Unlike the atheist fundamentalism of Communist China, the USSR, or Vietnam at the time, Myrdal was not suggesting a binary between a religious traditional culture and modernity. Nor was he suggesting a Maoist eradication of traditional society as an indispensable part of a quantum jump towards modernity. In fact, Myrdal goes out of his way to suggest that the modernization does not necessarily require, nor should it even encourage, secularization as either a development strategy or goal as Marx, Weber, and

Durkheim suggested. Instead, he divides elements of traditional culture into “high” culture, which are potentially complementary to modernity and “specific” traditional attitudes related to religious doctrines that were in opposition to modernization. In this regard, his approach to the role of religion in development is similar to 19th and early 20th century Hindu reformers such as Gandhi and K.M. Panikkar who tried to elevate Hinduism into what they saw as the “higher” levels of faith and away from the mainly irrational practices of untouchability and the practice of magic.

Myrdal saw the “high” religious culture as a potential buttressing component to modernization, especially in sponsoring national consolidation. Moreover, Myrdal felt that retaining the indigenous history, architecture, literature, philosophy, music, drama, dance, fine crafts--and especially importantly religion, and culture were psychologically essential as part of a productive national consolidation project. Furthermore, he also saw these cultural roots as essential for creating integrated individual identities especially in the context of the culturally destructive and humiliating aftermath of the colonial period-- as long as such identifications did not interfere with the modernization project of the present (Myrdal, 1968 p. 74-75).

Furthermore, and perhaps more surprisingly, Myrdal does not dismiss outright the compatibility of the modernization goals with the Southern Asian idealized democratic and cooperative pre-colonial village society, the “higher” religious doctrines of Islam, Hinduism, and Buddhism (Myrdal, 1968 p. 78). In this section of his work, he cites several examples of successful integration between religious doctrine modernization including the Moslem façade to Pakistan’s First and Second Development Plans (Myrdal, 1968 p.70), and Buddhism and Islam’s commitment to social justice (Myrdal 1968, p. 80). However, the reader can see that Myrdal appears to have to do slightly more intellectual contortion to demonstrate Hinduism compatibility with modernity, especially considering the incomparability between his concern for equality and the religiously sanctioned social hierarchies of the caste system (Myrdal, 1968, p. 746).

In contrast to his suggestion that the higher forms of religious culture should be retained, lauded, and grafted onto the modernization goals, he at the same time sees many

particular aspects of religion as, “magic, mysticism and taboos” (Myrdal, 1968, p. 118). These superstitions he saw as being while often unarticulated, but conspired to create a significant obstacles to modernization is so far as they are illogical and irrational, and is therefore in opposition to his paramount modernization ideal of increased rationality (Myrdal, 1968, p. 118). On this point, he is more strident and at one point stating,

“Religion usually acts as a tremendous force for social inertia. The writer knows of no instance in present-day South Asia where religion has induced social change. Least of all does it fosters realization of the modernization ideals...cruder religious conceptions can be exploited to incite people to resistance or to demonstrations, riots, and lynching. From a planning point of view, this inertia is related to religion, like other obstacles must be overcome by policies for inducing changes formulated in a plan for development” (p. 103). More precisely, Myrdal saw religion as hindering development in several way including: “the opportunity costs in terms of time, energy, and resources dedicated to performing rituals; the irrational beliefs and intuitions; the sanctioning of social inequality and a lack of social mobility; and the leniency and deference given to religious institutions by planning administrators” (Myrdal, 1968 p.104).

In short, Myrdal feared that traditionalism was something to be escaped due to the threat it poses against the monopoly of rationality. In a telling quote Myrdal suggests that, “All the leaders in South Asia know that development requires fundamental changes in people’s attitudes towards life and work and the grip of traditionalism must be broken” (Myrdal, 1968 p. 718). Above all, Myrdal feared that an intellectualized traditionalism masked as tolerance and pluralism could easily be integrated into the planning ideology as a way for vested interests to maintain their social-economic and gender privileges (Myrdal, 1968 p.729). By anticipating the threat that an intellectualized traditionalism posed to the dominance of rationality, Myrdal foresaw and pre-empted the more recent arguments from the post- and anti- development theorists (Section 3.5.6). He exposed the unintended, but worrisome, traditional apologism inherent in the anti-development argument of Escobar (1985) and the post-development school as a whole. A second way Myrdal also predicted that a traditionalist challenge to the modernization project would come from conservative resistance to the implementation and execution of the modernizing ideas, which again highlighted the gap between the rhetoric of modernization and the weakness of its

implementation (Myrdal, 1968 p. 729). Finally, Myrdal also saw traditionalism as a major hindrance to improving the educational system, which are discussed in detail in Section 7.2.8.

Despite the need for a change in social values seen by many regional scholars and academics in the 1960s, Myrdal felt that there was little groundswell in Southern Asian societies to implement the sweeping reforms needed. The fear of confronting religious institutions among governments and the elite was so acute that Myrdal notes that, “even the Communists do not take a stand against religion in any South Asian country” (Myrdal, 1968 p.107-108). Similarly, other progressive rationalists in Southern Asia have avoided confrontation with religion in order to let sleeping dogs lie (Myrdal, 1968, p.109). Putting the strands of this subsection together, Myrdal’s characterization of the desired relationship between the traditional and modern is not a sharp normative binary, but a grafting of the best aspects of existing “high” culture with the fruits of modernization.

3.3.7 Myrdal and Modernization with Westernization

Before moving to the comparison between Myrdal’s modernization views and those of his contemporaries, it is instructive to highlight how Myrdal parsed the terms Westernization and Modernization. First, he saw a that wide differences in the “initial conditions” between Western culture as it modernized and those facing the newly decolonized world differed greatly. Because of these disparate conditions, Myrdal suggested that modernity in Southern Asia would unfold in a very different way than it did in the West, if it was to occur at all. This finding separates Myrdal from some of his modernization contemporaries who saw the transition from the traditional to the modern as a more uniform process of distinct stages based on Western experience (Rostow, 1954). However, Myrdal’s historic and institutional view of modernization instead allows multiple modernities to emerge, each rooted in the both local traditions and shaped by the circumstances facing different cultures and countries. By predicting these multiple modernities, Myrdal anticipates divergence of the, then, interchangeable terms Westernization and modernization.

3.4 Subsequent Developments in Modernization Theory

The underlying theoretical principles of both poles of traditional / modern spectrum were under criticism from both directions in the late-1960s and early 1970s. The ideal-type of modernity that suggested that sustained social equilibrium and stability could be maintained in perpetuity was clearly under assault. American and European societies were being torn apart from leftist and student movements mainly motivated by the gruesome real-life application of the modernization theory in the Third World—especially in the context of the widening wars in Southeast Asia. In particular, the real-world implications of Parsons and the Structural Functionalist suggestion that power structures and organizations should continuously enforce social cohesion by any means had manifested first in the repressive American South in the 1950s and later in the Democratic Convention in Chicago and the streets of Paris in 1968. In short, the social and political cleavages in both the West and the developing world took the shine off of the idealized vision of modernization that the West was pitching. The second half of the chapter traces some of the major trends in the social development discourse to assess how, and in what cases, Myrdal's understanding of the modernization remains relevant. Like the previous chapter, the following discussion is organized to discuss the trends thematically, but also chronologically.

3.4.1 Dependencia

The *Dependencia* school was an early challenge to the Western (and Soviet) dominated approach to modernization beginning the 1970s. Many of the specific arguments of the *Dependencia* approach on structure of international trade were addressed in detail in Myrdal's earlier work, *Rich Lands and Poor*, but are only tangential to his analysis on the *Asian Drama*, and as such, do not require an in-depth treatment here. What is notable here is that the *Dependencia* schools discourse and critique was largely in Spanish and conducted between Latin Americas themselves rather than by the established "Northern" developmental agencies. This represented a shift towards the rise of indigenous voices into the development discussion and a non-Western critique against the universalist claims of the dominant economic theories (Conway & Heynens, 2008). The *Dependencia* school's ability to articulate an alternative value system outside of the development

establishment and to make itself relevant in the West harkens back to Myrdal's suggestion for the localization of values, and an expanded development dialogue to include critical voices.

The *Dependencia* School and the works of Andre Gunder Frank (1967; 1979) in particular also brought the concept of "underdevelopment" into the mainstream. This term shared and incorporated many features of Myrdal's critique on the lack of social improvement in the post-colonial period despite the economic growth in the immediate post-war period. Myrdal and Frank's views do diverge, however, on the degree to which the newly independent countries had economic sovereignty and agency. For Myrdal, political freedom encouraged economic sovereignty, whereas, for Frank, the Global South was still being exploited structurally by the North. On this point, there is evidence of the state-centricity inherent in Myrdal's work and his relative inability to envision a more globalized world, even in terms of more open international trade.

3.4.2 Local Knowledge Movements

In the period directly following the publication of *Asian Drama* in the 1960s the trend towards traditional / modern poles subsided and there was a re-examination of the heretofore under appreciated value of local knowledge beginning with the publication of *IDS Bulletin* in 1979 (Howes, 1979). According to Biggs (2008, p. 107), the intellectual space for such a normative shift in the discourse occurred because socio-economic changes promised by the mid-century modernization model never materialized. The adoption of indigenous knowledge is particularly emphasized in the sustainable development discourse. This due largely to the sad history of environmental damage under decades of the more centralized modernization approach, and the necessity to tailor economic and social policies to fit the local physical surroundings in order, "to live in harmony with nature while still being able to make a living" (Briggs, 2008, p. 108).

At first glance, the local knowledge approach appears to be in contradiction to the central position that Myrdal gives to rationalization. If Myrdal's attempt to identify and incorporate what he saw as native values into the modernization agenda and away from claims to the universalization of Western values (Section 3.3), as well as his grafting of the

useful components of indigenous knowledge, the gulf between the two approaches is not insurmountable. At the same time, as the local knowledge school gradually pushed for a deeper integration of indigenous knowledge into the discussion and policy implementation at a more localized scale, this pushed against the primacy that Myrdal placed on both rationality and the nation-state. Briggs (2008) for one writes that,

“Proponents of local knowledge argue that the indigenous knowledge of those people resident in particular places can be of equal, or even greater value than more formal Western scientific knowledge. If this argument is followed through though, Western science loses its universal hegemonic position, a position of power, and becomes one of a range of competing and contested knowledge systems” (p. 109).

Richards (1985) questioned the degree to which the local knowledge is complementary to, or in conflict with formal rational science. Moreover, the loss of the primacy of rationalism and the scientific approach constitutes a powerful broadside against the modernization school as a whole. Agrawal (1995) argues that the if indigenous knowledge has indeed become an accepted part of discourse and practice of development, this would represent in essence a tectonic shift in development and the *coup d’grace* for the modernization approach writing, that the movement was, “a shift from the preoccupation with the centralized, technically oriented solutions of the past decades that failed to alter life prospects for the majority of the peasants and small farmers of the world” (p. 414).

Especially in the 1990s, there have been tentative signs that this shift towards incorporated indigenous knowledge and away from rationality in planning is happening. In the internal discussions in the World Bank, perhaps the most centralized and “pure” economics based developmental organization, there has been at least a half-hearted attempt to both acquire indigenous knowledge and integrate it into their strategies for developing countries as stipulated in its report on the subject, *Indigenous Knowledge for Development* (1998). However, it has been suggested that the World Bank has not integrated indigenous knowledge to the extent that doing so fundamentally alters the developmental paradigm, rather only to legitimize irrational traditional knowledge through the scientific methods (Briggs & Sharp, 2004 p.108). However, the World Bank’s reluctance to incorporate indigenous knowledge without fully embrace it, does put its position closer

to Myrdal's moderate position between sponsoring rationality and rooting development in local values.

Although campaigns for further acceptance of indigenous knowledge has certainly had its successes, the indigenous values movement is not without its critics. Again quoting Briggs (2008),

"if an overdependence on modernization approaches has failed to deliver significantly improved living standards for the bulk of the world's population since the mid-twentieth century, then an overdependence on indigenous knowledge as an alternative, at the other extreme, may also fail to deliver meaningful development results (p. 108)," and later that Western science is rational, controlled, rigorous and universal; indigenous knowledge is irrational, imbued with folklore and too place-specific to offer any meaningful solution to underdevelopment"(p. 108)

Ironically in their fight against claims against the universality of rationality those most in favor of indigenous knowledge in development have gone fully circle in claiming universally that indigenous knowledge be adopted wholesale and assuming, falsely, that,

"indigenous knowledge is static, unchanging, pristine, and untainted is very difficult to sustain; instead, it is fluid, dynamic and provisional. People will adapt and experiment with new ideas if they will improve their livelihoods, and so it may be that instead of the term indigenous knowledge, a better term might be local mediated knowledges, deliberately in the plural" (Briggs, 2005).

3.4.3 Anti-Development

If the inclusion of the traditional knowledge movement into the mainstream developmental discourse represents a leak in the modernization approach, the post-modern and anti-development movements opened the floodgates. True to its moniker, the anti-development broadside on modernization took a deliberately combative, often cynical, stance against the fundamental principles, goals and foundations of the modernization tradition. The following quote by Jeffery Sachs, is emblematic of the anti-Western, anti-scientific, anti-development discourse:

"Development is rejected because it is the 'new religion of the West'... it is the imposition of science as power... it does not work... it means cultural Westernization and

homogenization... and it brings environmental destruction. It is rejected not merely on account of its results, but of its intentions, its worldview, and its mindset. The economic mindset implies a reductionist view of existence. Thus according to Sachs, 'it is not the failure of development which has to be feared, but its success'" (Sachs 1992 p.3 in Pietrerse, 2000).

Another common refrain for the antidevelopment approach has strong echoes from the *dependencia*, world systems, and classical Marxism and Leninism, which sees the modernization as a repackaging of Western colonialism and exploitation, "Development... embodies a geopolitics, in that its origins are bound up with Western power and strategy for the Third World, enacted and implemented through local elites" (Slater, 1993), and again in (McEwan, 2008) "The Third World is integral to what "the West" refers to as 'modernity' and 'progress'. It contributes directly to the economic wealth of Western countries through its labor and economic exploitation (p 125). McEwan (2008) adds that post-colonialism, an offshoot of post-modernism,

"challenges the very meaning of development as rooted in colonial discourse depicting the North as advanced and progressive and the South as backward, degenerate and primitive," and by doing so, "attempts to overcome inequality by opening up spaces for the agency of non-Western peoples. However, poverty and a lack of technology make this increasingly difficult; non-Western academics, for example, rarely have the same access to books and technologies of communication as their Western counterparts." (p. 126)

3.4.4 Comparing Myrdal and the Post-Modernist Approach

Because of the many strands of post modernism described above, it is useful for the aims of this chapter to compare Myrdal's views on the development project to those of Arturo Escobar, perhaps the most influential (and bombastic) post-development theorists. Doing so makes it possible to see the few similarities and many differences between the two approaches. The similarities will be addressed first. Both Myrdal and the post-modernists had several things in common including: a distrust of the universalist claims of neoclassical economics; a desire to explicitly and deliberately consider the values and goals being advanced; consider who benefits from existing narratives; the need to localize and adapt the existing "high" cultural values and goals to the communities. Although Myrdal is often portrayed as a high modernist, there are actually quite a few key points that he shares

with the post modernists as the list of similarities above suggests. Both Myrdal and Escobar were distrustful of elites and were acutely aware of the social power they harnessed in society due to inequalities and the need to understand and address the empowerment of those at subordinated groups as a central task (Chapter 4) as well as the need to address real needs for radical and lasting change. In short, there is little friction between Myrdal's view and Escobar's suggestion that, "the remaking of development must start by examining local constructions, to the extent that they are the life and history of the people, that is, the conditions of and for change." (Escobar, 1995a, p. 98).

Secondly, Escobar, and Myrdal both see the need to address the institutions and mostly elite Western academics, charities, and foundations who author, fund, and disseminate the bulk of the developmental discourse and the indicators for it which are collected. For Myrdal, these problems translate into the prescription of inappropriate policy prescriptions based on the misconception that the conditions in Southern Asia were similar to those in the West during its pre-industrial period; but for Escobar the formalization of the development discourse is part of a process by which the poor are transformed from human beings with their own cultures into "docile bodies" and "normalized subjects". Furthermore both Escobar and Myrdal give great importance to contextualizing the intuitions and norms of the present into the historical developments that brought them into being as important to changing social attitudes. Both recognized the power that modern institutions have in shaping the mental landscape and norms (Escobar, 1984-84 from Boas & Bendicte, 2010).

While they would agree on the process of modernization their conclusions are quite different, whereas Myrdal sees these development as a worthy, if not outright moral cause, and in their best incarnation as bettering the "levels of living" of a truly massive number of people when applied correctly. These contrasts complete with Escobar who consider planning and the whole of the development project to be a mode of exploitation and dehumanizing. Showing his degree of disgust with the developmental approach in its entirety, Escobar thus suggests that cultures should embrace what cultural traditional norms have not been compromised by the developmental discourse as the basis of cultural resistance against the entirety of Development (which he deliberately capitalizes). Looking

at the cynicism in the anti modernization approaches of the 1980s and after, it is possible to see just how badly some see the modernization project as failing in part due to the aspects of the 'soft state' (Chapter 6). Moreover looking at Escobar's disgust and influence, not only has the implementation of modernization failed, but norms and motivations of the project itself can be portrayed as imperialist and domineering, a view that Myrdal did not share.

Although pessimistic to its prospects for success in Southern Asia, Myrdal conceived of development as primarily top-down affair with modernization values coming into conflict with irrational traditional values (Section 3.3), disseminating downward from the elites to the general public (Chapter 4) through state planning and implementation (Chapter 6). This is arguably the most fundamental theoretical deviation between Myrdal and the Post-modernists and anti-development theorists was centrality of rationality. For Myrdal rationality is defined by the use and application of Enlightenment derived scientific tools and thinking and superior to traditional supernatural values. Although Myrdal saw that modernization and development in the global South would have a different character than Western development patterns given historical differences, he still felt that rational thinking was the equally applicable, legitimate, and should the universally adapt as the highest ideal-- if not irreplaceable lynchpin—of development itself. Against Myrdal's position, more extreme postmodernists would knock rationality off of its pedestal and consider it as one of many competing, and equally valid value systems, essentially stretching Myrdal's suggestion that indigenous values be incorporated into the development process to its extreme. Simon (2008) suggests that, "Extreme postmodernism can become almost indistinguishable from anarchism, in that all forms of social or collective action become impossible, due to the inability to agree- or conceive of agreeing- on shared rationality or even basic rules of what is, and is not, acceptable behavior. Extreme relativism means that everyone's views are equally valid; without some decision making rules, any social action not gaining unanimity or consensus becomes impossible" (p. 122).

By abandoning the universalism of rationalism in favor of relativism and extreme pluralism, critics of postmodernism suggest that the postmodernist and anti-development discourses are inadvertently, but tactically kowtowing to conservative ideologies and

romanticizing, “long dead-traditions and heritages” (Simon, 2008, p. 121). This postmodern intellectualization of the irrational traditional values by the post-modernists essentially fulfilled Myrdal’s predication that such a movement would occur and weaken resolve for the modernization project as he envisioned it. Despite the vehemence of his charge, Escobar and most of the anti-development school do not offer specific alternatives to development, save the potential application of the Participatory Research Approach (PRA). Thus Escobar’s rhetorical charge, as powerful and full-throated as it is, is essentially reduced to rhetorical bomb throwing.

Finally, it should be added that the whole post- development approach was not as extreme as its most vocal opponents. While still concerned with the importance of power imbalances between the poor and rich countries, the less radical forms the post-modern and anti-development theoretical critique is narrower in its criticisms. In contrast to wholesale rejection of modernization others the post-modern and post-colonial approaches paint their criticisms of the modernization approach with a finer brush suggesting that Northern development agencies, charities, NGOs consultants often dominate the agendas not in small part due to their financial and political advantages (Jackson, 2005). Additionally, despite the inability to articulate an alternative to development, the anti-development moment did jostle the developmental establishment into a re-analysis of their value premises and practices.

3.4.5 Post-Post Development

While the criticism has had some impact on the reforming and humbling the modernization agenda and practices (especially in Western academia), the more radical anti-development voices has been effectively sidelined in the mainstream developmental discourse for several reasons. King (1995) suggests that much of the post-development critique, while loud, is ultimately irrelevant to development insofar as many people in the global South have not yet reached modernity and don’t have their basic needs met so the post-development discourse is more or less irrelevant until modernity has itself been met. Briggs (2008) has suggested that the post-modern critique on rationality may be more of a largely Western academic fad and intellectual indulgence than a sustained assault on the development project as a whole. Kiely (1999) and Curry (2003) have added that the post-

development discourse is not as large of a rejection of the development project as it presents itself to be. Rather, another it is simply another voice in the larger development discourse. Still others see the penchant for excessive theorizing and polemics in the post-development school, and an inability to translate theoretical development into practical alternatives or as being simply irrelevant academic dithering in light of very real basic human needs (Smith, 2000).

If the post-post- development critique is indeed correct, it is possible that a reformed modernization approach will resurface incorporating a deeper self-reflectiveness after having been tested by the post-modernists. If so, the combination of incorporating indigenous-values into developmental goals while retaining the centrality of rationality and science, as Myrdal formulated in *Asian Drama*, may indeed point to a reasonable compromise between the modernization school and the post-modern critique. Such a formulation would avoid extremism of the both crass claims of universality by post-war modernization theorists on the one hand, and the extreme relativism, nihilism, and excessive traditionalist posturing of the post-modern critique at the opposite end of the spectrum.

Finally, it should be noted that Myrdal largely anticipated the post-development discourse. First, Myrdal theorizes the tendency for romanticizing poverty and traditionalism for both indigenous scholars and for Western observers. Secondly, in his conception of the 'soft state' (Chapter 6), he argues that the failure of meaningful and competent planning and implementation of a rational modernization plan would lead to the type of articulate cynicism as to the prospects for development found in the post-development thesis, which would sap the confidence of modernization efforts in the development community itself.

3.5 Chapter Summary and Significance to Research Questions

Similar to the previous chapter, this chapter addressed the first Research Question on the relevance to Myrdal's theories in *Asian Drama* against his contemporaries and subsequent scholars. In this case, it was shown that Myrdal's modernization theory, as critical as it was towards the mainstream (mostly American) view of modernization and it's

lack of clearly stated values, retained many of the traditional-modern dichotomies of his modernization peers. This ballasts Myrdal as subsequent post-modern scholars pointed out. This in turn weakens Myrdal's view of development considerably.

Additionally in response to the relevance Myrdal's work to the subsequent scholarship on development, this chapter has also shown that Myrdal's vision of modernization also shares some theoretical characteristics with the more radical post-colonial and postmodern critiques. These criticisms include a distrust of universal truths, and the overriding importance of addressing inequality, but avoids the trap of absolute relativism of the more critical theories. In the subsequent spatial analysis (Chapters 9 – 13), it is shown that Myrdal's conception of the importance of regional socio-historical context, rather than universal truths, plays a crucial role in shaping the spatial distribution of educational issues within Southern Asian countries, especially in India.

Chapter 4 Myrdal's Critique on Inequality in Development Revisited

4.1 Introduction

This chapter reexamines Myrdal's emphasis for Southern Asian planners to address social and economic inequality as central pillars of a larger modernization project. The analysis begins by summarizing Myrdal's conception of inequality followed by a comparison of his views to those of his contemporaries and then against some of the subsequent developmental trends on inequality. Specifically, this chapter shows that the centrality that Myrdal places on inequality as a cornerstone of development separated him from both his Structural Functionalist predecessors and from contemporary modernization theorists. Here, it is shown that Myrdal's notion of the need to address social and economic equality helped to change the discourse away from the naked elitism of the Structural Functionalists and towards the Equality with Growth Movements in the 1970s and beyond. Throughout the chapter, Myrdal's warnings of leaving equality unaddressed were justified to the point to which inequality is again among the most widely discussed topics in economics. Finally, at the end of this chapter a brief discussion is given on the similarities between Myrdal's view of inequality and that of fellow Nobel Prize in Economics winner Amartya Sen's. In particular, this subsection compares Sen's recent portrayal of the consequences of social and economic inequality in *An Uncertain Glory* (2013) to Myrdal's predictions in *Asian Drama* (1968).

4.2 Inequality Discourse in the Immediate Post-War Period

The geopolitical and ideological divisions of the Cold War conspired to minimize the discussion of income inequality within Western societies in the immediate Post-WWII period. Besides the international context, income inequality was seldom addressed partly because, in the United States the wealth gap was at historic lows between the 1950s and 1970s. As Kuznets (1955) had reassuringly demonstrated to the economic community, what narrow gap there was between rich and poor in developed countries was likely continue to lessen into the future in what he described as an inverted U, later called the Kuznet's Curve. In such a reassuring context, there was relatively little discussion of

economic inequalities in the mainstream Western literature at the time. Conversely, the importance of equality (in ideology if not in practice) was a major selling point if not, *raison d'être*, for competing Communist and Socialist ideologies –especially the more Maoist iterations-- in their overtures to the masses of disenchanting poor in the newly independent states of Southern Asia and beyond.

As in the issues of economics and modernization theory described in previous chapters, in this polarized discourse, Myrdal's attention to the economic and social dimensions of inequality were mostly lost in the fray. As a Swedish Minister of Parliament and chairman of the Economic Planning Commission, Myrdal and his wife Alva were influential architects of the Swedish Social Democratic state and, as such, one might think that Myrdal's constant attention to the issue of equality in *Asian Drama* is a projection of Myrdal's own opinions on the subject and is unreflective of the indigenous values of Southern Asia. However, as this chapter shows, Myrdal was not merely imposing his own personal attitudes, political beliefs, and values onto Southern Asian society. The goal of addressing inequality was a central feature of the Southern Asian development ideology as espoused by nearly all the founding fathers of Southern Asian society.

Addressing inequality was a major feature of Myrdal's understanding of modernization further differentiated Myrdal from both the neoclassical economists and the Structural Functionalists. His insistence on the need for the state and the larger international developmental community to address not only poverty and deprivation, but also the socio-economic inequalities in society as a foundational goal of the modernization project. This stands in strong contrast against both the deafening silence on the issue from the market-driven neoclassical and neoliberal schools (Chapter 1) and also anathema to the rhetoric of the American modernization school (Section 3.2) from which the idea that poor states should actively address socio-economic inequality was seen as unacceptably close to the Communism they were desperate to thwart.

4.3 Myrdal's Emphasis on Inequality

Myrdal's persistent insistence on the importance of encouraging equality enhancing institutions can be seen as a common thread throughout his works in different contexts. In

Rich Lands and Poor (Myrdal, 1957) his scope is much more international in scale and focuses on dynamics of trade and the divergence of economic inequalities between the rich and poor countries. At times, the book theoretically approaches a proto-*dependencia* or World Systems Model, whereas in his other works he moves further away from economics and closer to the inequalities in the social sciences. In *American Dilemma* (Myrdal, 1944) he applies a similar methodology in examining the position of African-Americans in the United States. In *Asian Drama*, his focus on inequality is directed more towards social inequalities within communities, and the interrelated negative impacts that inequality has on the development prospects of those societies. Myrdal's constant focus on addressing inequality is underscored in the content of his Nobel acceptance speech which he devoted the entirety to, "The Equality Issue in World Development" the title of the lecture (Myrdal, 1974).

4.3.1 Importance of "Initial Conditions" and Inequality

Myrdal offers that a radical conception of equality was central to the independence movements in Southern Asia and had become intertwined into the collective self-identity and ideology of those states. For scholars such as Krishnamachari (1961, p. 251), securing political independence was a means to bring social justice and equality to the people of India that was lacking during the colonial period, a view which Myrdal agreed wholeheartedly:

During the struggle for independence, India valued political independence not so much for its own sake but because it would make social and economic development possible. The central ideas were always – the raising of standards of 'living of the many millions in the country and social justice, i.e. reducing large inequalities in society — inequalities which have increased in the decades from the end of the last century" (Myrdal, 1968, p.752).

Myrdal saw the difference in degree of social inequality as a major difference between the so-called 'initial conditions' between Southern Asia in the 1960s and the West during its pre-industrial period. According to Myrdal, this rhetorical desire for equality in Southern Asia (in the broadest social, political, and economic aspects) was an integral aspect to the planning ideology even before large-scale development was initiated and was far more ideologically radical than the Western Social Democratic model that it was inspired by (Myrdal, 1968 p. 741). Myrdal notes that the prioritization of addressing

inequalities were directly included into the Indian Constitution and in the “directive principles” attached to them (Myrdal, 1968 p. 741), as well as a being an integral component of the national *Swaraj* ideology and regularly reiterated in national politics (Myrdal, 1968 p. 742).

Although he felt that India had the furthest to go in terms of achieving equality, The doctrine of equality was not unique to Indian ideology and Myrdal notes that similar statements and declarations had been included into the official ideologies of Pakistan, Indonesia, and Burma (especially in the *Pyidawtha* ideology (Myrdal, 1968, p. 751). In Thailand, Malaya, and the Philippines he notes that doctrine of inequality was less central to official state ideology (Myrdal, 1968 p.742).

4.3.2 Weakness of the Government Planning to Address Inequality

Myrdal saw a genuinely indigenous desire for equality and identified certain sectors of society and in the economic structure where state attention to minimize existing inequalities was possible. In addition to increased income equality, and the related issue of land reform and redistribution, Myrdal singled out social areas including, “the equality of women, the abolition of untouchability, and the right to elementary schooling” in India (Myrdal, 1968, p.742). Despite the universal acceptance of the rhetoric for inequality in the region, Myrdal saw that there was a dearth of policies to address the issues raised Regarding India’s lack of progress on the issue he wrote,

“[India’s] Second and Third [Five-year] Plans were prefaced by strong statements in support of egalitarian ideals, [but] the plans themselves did not seriously attempt to show how economic development should be guided in order to create greater equality” (Myrdal, 1968 p. 757). “There is a paradox in the South Asian situation: although greater equality has been proclaimed as an immediate practical goal for planning and policy, marked inequality exists everywhere. The disparity is the more striking because, despite more or less successful attempts at planning, economic inequalities have increased” (Myrdal, 1968 p.756)

Where specific plans were proposed, Myrdal saw that they were not aimed at addressing the needs of those at the bottom writing,

“Many of the supposedly egalitarian measures actually favor the middle- and upper-class groups and discriminate against the masses...Measures specifically designed to aid the

lowest strata in the population have ordinarily been poorly enforced if at all" (Myrdal, 1968 p. 763) and later, "In public discussion, it is commonly argued that greater consideration for 'the middle class' would forward the cause of equality. The truth is, of course that in the Indian setting, this 'middle class' is definitely upper class. It is the lower classes that need to be aided if there is to be a real advance in equality" (Myrdal, 1968 p. 766).

Furthermore, and more central to the second half of this dissertation, the state's role in the educational sector did not develop into the equalizing force that the proponents of universal education hoped that it would have.

"In the long run, efforts to raise standards of health and elementary education should have equalizing effects. But even in this area, only a minor part of the government's expenditure is earmarked for the neediest, and ... the school system in particular, is very heavily biased against the lower strata" (Myrdal, 1968 p. 763).

4.3.3 Myrdal on Religion, Traditionalism and Inequality

Although Myrdal saw India as the forerunner in the rhetoric of state intervention in addressing inequalities, he felt that Hindu India had less of an equality doctrine compared to the other religions in the region, "both the Moslem religion and Buddhism provide better bases for the assertion of egalitarian ideals than does Hinduism" (Myrdal, 1968, p. 753). However, he does not see any of the regional religions as likely conduits for transmitting the equality ideology. Instead, he concluded that they were more likely to be a barrier to addressing social inequality:

"In sum, religion has offered, in South Asia, as elsewhere, few barriers to the spread of the egalitarian ideology, but neither has it contributed much to it. Inequality is a tradition and as such has often acquired religious sanction, while strivings for greater equality represent a break with tradition" (Myrdal, 1968 p. 753).

Myrdal's understanding of the relationship between his modernization views and their relationship to existing religious traditions was nuanced. That said, he was particularly incensed with the caste system, which in particular he saw as a major impediment to equality in India, which he felt,

"warps and stultifies ordinary human feelings of brotherhood and compassion. The habits of thought molded by the caste system and the confined and frustrated relations to which it

gives rise afflict not only those well down in the social hierarchy but also those in its upper reaches, including business executives, administrative officials, and university personnel” (Myrdal, 1968 p. 746).

Later, he writes that,

“Despite the elite view that caste rigidity was weakening due to state policies against the institution of ‘untouchability’, “These opinions however are not confirmed by the findings of sociologists or even by everyday observation. For one thing, the measures taken to eradicate untouchability have been generally ineffective. The attempts of some educated and relatively prosperous untouchables to get the anti-untouchability laws enforced have almost invariably been vigorously opposed by caste Hindus,” (Myrdal, 1968, p. 764)

and still more bluntly, “for the most part the caste system has not been directly attacked” (Mrydal, 1968 p. 764)

4.3.4 Myrdal’s Expanding Definitions of Inequality

Recognizing the depth of inequality in the study region, Myrdal suggests that tackling inequality should be a higher state priority than industrialization. This suggestion put him at odds with both Western modernization theorists (see Lerner, 1958), as well as the Stalinist version that encouraged of building up heavy industry by Soviet Communism. Specifically, Myrdal added the need to address existing inequalities as the fifth of his modernization values (see Table 3.1). As is consistent with his recommendations for the scope development and modernization be expanded from the “purely” economic factors to include social indicators (Chapter 1), Myrdal’s focus on the need to address inequality similarly aims to not only tackle income inequality, but also to more robustly encourage social equality. This expanded definition of equality included expanding access to health and educational services as well as changing the attitudes of people themselves. On the issue, he states,

“There is a tendency in South[ern] Asia to regard equality mainly as an ‘economic’ problem. The plans embody Western economic concepts and theories that are stated in financial and fiscal terms; even public discussions about planning are largely restricted to ‘economic’ issues. The effect is to exclude from close and continuous scrutiny the intuitions and attitudes responsible for social inequality. Relegated to obscurity, they are not likely targets for more intensive reform activity” (Myrdal, 1968 p. 763).

4.3.5 Myrdal on Inequality and Deprivation

Myrdal's discussion on inequality goes farther than the basic needs approach in that it implores not only improvement from the bottom-up but also proposes limiting the privilege of the elites. He adds that the planning documents in India contain statements which state that, "The planners clearly foresee that implementation of the equalization ideals will require sacrifices by the higher strata," Myrdal agrees with this restricting of the power of the elites as well writing,

"It is the essence of a planned approach that all these [policy] measures should be harmonized and brought to a focus in a manner that would ensure an enlargement of incomes and opportunities at the lower end and a reduction of wealth and privilege at the upper end" (Second Five year Plan, p. 33, Myrdal, 1968. p. 472).

Later, with regards to the simultaneous need to change elite attitudes towards equality and the need for elite sacrifice to expand equality, Myrdal writes,

"The rich, the high-caste and the powerful must show a greater sensitivity towards the condition of their unfortunate brethren and be prepared to make the necessary sacrifices.... But there is no strong organized pressure supporting a moral crusade. Moral fervor alone cannot eliminate the traditional inequalities" (Myrdal, 1968 p.766).

This presents an all-together different conception of both the meaning and scope of development economics than the more narrow definitions, indicators, and metric of the neoclassical model especially the focus on economic growth and per capita income.

4.3.6 The Role of Elites in Structural Functionalism

In order to contextualize the Myrdal's modernization goals into the context of the time of their writing, it is useful to compare and contrast them with Structural Functionalism, a doctrine that dominated the modernization in the period before Myrdal penned *Asian Drama*. More than any other school of social science, Myrdal was particularly opposed to the Structural Functionalist School and the related Parsonian Synthesis. The Structural Functionalists School concerned itself with the question of what keeps modern societies cohesive despite their lack of a shared religious or ethnic backgrounds (Peet & Hartwick, 2009, p. 113). An early answer came from the social scientist Emile Durkheim (1858-1917) who opined that the individual's specialization in economic occupations

created an 'organic solidarity' in society out of which mutual dependence arose (Peet & Hartwick, 2009, p.113). However, such specialization eventually allows space for the emergence of the individual consciousness, conflict with the greater society, and finally a breakdown in norms and institutions (Peet & Hartwick, 2009, p.114). From this finding Durkheim recommends that solidarity-enforcing institutions seek to control individualist urges through education and solidarity in order to curb alienation (Peet & Hartwick, 2009, p. 114). Writing slightly later, Ferdinand Tonnies (1855-1936) also proposed a similar dichotomous relationship between the *Gemeinschaft* societies built on feelings of togetherness, and *Gesellschaft* societies in which participants are using the societies in order to achieve their individualistic goals (Peet & Hartwick, 2009, p.114).

Building upon these foundational writers, the Structural Functionalist school that dominated American social sciences in immediate Post-WWII and early Cold War era suggested that a society's norms, institutions, and organizations were essential to spread and propagate existing symbols and values which kept societies stable (Peet & Hartwick, 2009, p.114). Failure to enforce existing norms, it was argued, would lead to social chaos and eventually community decline.

Later, Talcott Parsons would synthesize the Structural Functionalist and naturalist strands of modernization into his complicated, but briefly highly influential, synthesis. From the Naturalist branch of modernization approach, he suggested that societies were in competition with one another for resources, and that if a community failed to maintain its norms and social control, other, more organized, societies would prevail over them. In such an arrangement, it was seen as essential to maintain existing divisions of labor and class equilibrium was seen as a social imperative: "societies had to maintain internal discipline, maintain social order, or, again, they lost out in the struggle for existence. The logic of the Structural Functionalism sociology implores societies to rigorously socialize their people through common symbols, beliefs, and values, and even emotional structures in the urgent context of presumed inter-society struggles for survival" (Peet & Hartwick, 2009, p.115). For Parsons, elite control of institutions and, by extension, culture control were especially important in managing "adaptive upgrading" as society transitioned from one phase to another until it equilibrium was restored (Peet & Hartwick, 2009, p. 118).

Unlike the neoclassical economists, Structural Functionalism brings people and societies back into the discussion of development. However, it is extremely politically conservative in its justifications for individual repression and a dogged maintenance of the status quo (Peet & Hartwick, 2009 p. 121). Moreover, Peet & Hartwick (2009) add that it advocates a powerful role to elites in enforcing social repression in times of change.

Despite its ascendancy in the social sciences in the early post-war period, the Structural Functionalist School was not without its critics. Among them Gouldner (1970) was among the strongest critics of the Structural Functionalist paradigm. He proposed that the theories were simply there to legitimize inequalities, and by always siding with the group against the individual, Parsons neglected the legitimacy of resistance, power imbalances, and exploitation (p.240, from Peet & Hartwick, 2009 p.119). More Tipps (1973) also criticized Parsons as an “ethnographic” update of 19th Century conceptions as understood by Maine, Tonnies, and Durkheim by employing a similar evolutionary mechanism.

For his part, Myrdal deeply rejected many of the salient features of the Structural Functionalist model. However, before outlining critics of the approach, and discussing his alternate conception of the cumulative causation model (Chapter 5), it is worth examining those features of Structural Functionalism that Myrdal does have in common. First, similar to Parsons, Myrdal’s adheres to a primarily top-down development, and his conception of the spread effects of modernization as emanating from urban elites outward (Section 5.2). Like the Structural Functionalists, Myrdal’s view grants a great deal of agency to the social elites over the rest of society as an essential component to deliver development and usher change.

While they disagreed as to the normative implications, both approaches agreed that elites were often predisposed to want to maintain and extend their already powerful influence on society, a theme returned to in Section 6.4 where the ‘soft state’ concept is contrasted against the developmental state. In a similar way, both Myrdal and the Structural Functionalists suggest that transitions from one socio-economic paradigm to another should be consciously and rationally controlled from the top (for Parsons by the

elites and for Myrdal though state planning), rather than through more revolutionary change from below as proposed by Marxists and the later bottom-up conceptions of development favored by the community participation models.

A second common feature between the Structural Functionalist model and Myrdal's understanding was the necessity to expand and reinforce values that transcended traditional, communitarian, religious, and ethnic lines and reinforced national cohesion. However, despite this surface-level similarity the underlying rationale for doing so is quite different. For Myrdal, cultural cohesion was important insofar as it furthered ideals of egalitarianism, economic nationalism, and wider participation in the planning and developmental project with the ultimate goal of raising the "levels of living" of the general population. In contrast, the Structural Functionalists saw the purpose of socializing attitudes as a way to consolidate national power and state control largely for its own sake and in order to withstand conflicting power from other competing societies, a view which Myrdal did not share.

4.3.7 Differences between Myrdal and the Structural Functionalists

Despite these similarities, Myrdal was highly dismissive of many of the Structural Functionalist assumptions. First, unlike Parsons and the Structural Functionalist School Myrdal explicitly called for the rejection of the social and institutions that justified traditional social inequalities that he saw as weakening the transformational potential of the modernization project. As previously stated, this was not however a call for a Maoist overthrow of society's pre-modern organizations, but rather a suite of bold, coordinated, and rational reform plans of those institutions to remove them of superstition. It was to make them rational and more aligned to the state's modernization project. Myrdal felt this strategy to be particularly relevant to institutional reform of religious institutions. In addition, unlike the Structural Functionalists, there is little in *Asian Drama*, which discusses the subordination of the individual to the greater community as an essential part of modernization. If anything, Myrdal's persistent stress was on the need for social and national cohesion (modernization values "G" and "H" in Table 3.1), in both political and economically dimensions, rather than on the importance of the individual or of individual

liberties is in contrast to the binary *Gemeinschaft - Gesellschaft* understanding of modernization as process of individualization.

The discussion of Myrdal's relationship to the Structural Functionalist schools of the Parsonian synthesis may seem to the reader to be far from the issue of educational reform in Southern Asia. However Chapter 7 shows that the policy conflict between the Structural Functionalist interested maintaining a socially stratified society and Myrdal's conception of using state power to minimize traditional hierarchies has been at the heart of the educational planning issues in Southern Asia.

4.4 Subsequent Inequality Discourse

4.4.1 Inequality Discourse in the 1970s

Immediately after the publication of *Asian Drama*, the topic social and economic inequality in society gained some stature in the development discourse most notably with the World Bank backed Hollis-Chenery report *Redistribution with Growth* (1974). Another major and enduring work on the topic of inequality in the 1970s came from John Rawls whose *Theory of Justice* (1971). Rawl's approached the philosophical question of inequality from a moral and rights based perspective rather than the more common economic perspective and formulated the difference principle which allows for inequalities in the distribution of goods only if those inequalities benefit the worst off members of a society. Social and economic inequalities are to be arranged so that

- (a) They are to be of the greatest benefit to the least-advantaged members of society, consistent with the just savings principle (*the difference principle*).
- (b) Offices and positions must be open to everyone under conditions of *fair equality of opportunity* (p. 47)

4.4.2 The Equality Discourse Re-emergent: 1990s and 2000s

The fall of the command economies of the Soviet Union and pre-reform China created an opening for a geographically extended neoliberalism, but the breakup also opened a policy window for a return to the growth with equity arguments of the 1970s that

Myrdal helped to pioneer in *Asian Drama*. As capitalism expanded, economic inequalities appeared to be widening both within and between countries and the fear of class struggle in which Communism seemed to be waning.

Empirical evidence for rising inequality generated by neoliberal SAPs in Africa and Latin America also raised awareness of inequality in the development discourse (Shorrocks & Van Der Hoven, 2004). The widening inequalities in these countries stood in stark contrast to the growth with equity outcomes from the developmental states in Northern Asia. According to Pieterse (2010), the reemergence of the importance of equality was taken up in earnest with the 1995 World Summit for Social Development in Copenhagen. The summit concluded that with the statement that, “economic growth and social development impinge on each other, i.e. broadly effective social progress is not possible without a socially oriented economic and finance policy” (Pieterse, 2010, p. 125). This strongly echoes Myrdal's earlier views described in Chapter 2. His assumptions were further verified by Persson and Tabellini's (1996) assessment of sixty-seven national economies, which found that inequality economic growth in terms of gross domestic product at the national level was negatively correlated.

Samuel Bowles has recently opined (2012) that the rebirth of the equality issue in the 2000s in the economic literature has been furthered moved by two major findings. The first, is that there is growing evidence from behavioral economics that the rationalist characteristics assumed of *homo economicus* have been largely debunked and that people broadly share and have a strong desire to punish those who treat others unfairly (Bowles & Gintis, 2011). The second was the assumption that inequality was the trade-off for growth had been found to be false based in part on the work conducted on the economic theory of contracts (Stiglitz, 1987; Laffont, 2000) which Bowles cleverly calls breaking the Adam Smith's invisible hand.

4.4.3 Subsequent Inequality and the State

Myrdal's prescription that policy needs to improve living standards in the 1960s is widely vindicated by Bowel's (2012) assessment of the fruits of strong institutions and government attention to addressing inequality and with the benefit of hindsight:

“Socialism, racial democracy, social democracy, and other egalitarian movements have flourished where they successfully crafted the demands of distributive justice into an economic strategy capable of addressing the problem of scarcity, and thereby promised to improve living standards on the average. Redistributing land to the tiller, social insurance, egalitarian wage policies, central planning, and providing adequate health care and schooling for all have been attractive when they promise to link a more just distribution of economic reward to enhanced performance of the economic system as a whole” (p. 1)

Looking closely at the quote above, the importance of multivariate goals relative to the single-minded focus on economic growth and more importantly, many of the same factors which Myrdal propagated in *Asian Drama* are evident. One difference between Myrdal’s view and that of Bowles’ view above is the weight that Myrdal gives not only to the existence of a policy “on the books”, but the degree to which these policies are implemented in practice.

Bowles and Myrdal also shared the view that governance and especially the responsibility of elites are essential areas that shape the nature and degree of inequality,

“The relationship between inequality and how productively a society uses its resources is thus mediated by the structure of economic governance. Governance structures also critically influence the degree of inequality...Governance structures may endure because they are favored by powerful groups for whom they secure a larger slice of a given pie, not because these structures foster the growth of the pie itself,” and even more directly, “Under favorable institutional circumstances, policies to promote greater inequality are not incompatible with the rapid growth of productivity and other valued macroeconomic outcomes,” (p.21)

and finally,

“Solving economic problems requires a state empowered to intervene effectively in the economy. But an activist state is capable of using its power not only to improve economic efficiency, but also to redistribute income in response to populist pressures. For this reason economic elites may prefer an ineffective state in an inefficient economy to a strong state in an efficient economy,” (Bowles, 2012, p. 9).

Thus, the relationship that Myrdal hypothesized on interrelated features of inequality, economic growth, and governance with particular attention on the role of the position of elites mainly stands intact forty years on.

4.4.4 Addressing Inequality as a Prerequisite for Development

A second issue that Myrdal had raised which has resurfaced is the importance of the social and economic equality in a society being addressed before the project of economic development began. This theme was picked up by the World Bank's Copenhagen Summit (1995). Unsurprisingly, the importance of income inequality has been, by far, the most frequently referenced topic. Looking particularly at the question of the relationship between inequality, economic growth, and poverty alleviation Kandur (2004) concludes that despite other differences in the debate, a degree of consensus has emerged that lower levels of initial income inequality make it more likely that economic growth will reduce poverty.

Ravallion (1998) for one has offered that high initial income inequality hurts the prospects for poor favoring economic growth lowers growth elasticity of poverty. The discourse of inequality in the 2000s also expanded considerably due to the explosion of interest in understanding the nature of and likely trajectories of globalization. Armed with new statistical tool and the computing power to calculate them, it was seen as essential to be able to measure and graph the inequalities emerging between countries,

“Inequalities tended to widen as the economy grew and became more industrialized... Increasingly, the rich and powerful in the countries of the South were able to enjoy the lifestyle and consumption patterns of the developed countries of the North. However, large segments of the population experienced no significant improvement in their standard of living, while being about the growth in affluence of the few” (South Commission, 1990, p. 38).

4.4.5 Globalization and Spatial Aspects of Inequality

In the extensive discourse on globalization, the issue of whether or not the forces of globalization expand or contract inequality has been a major component of the conversation, especially on the political left. Sadly, much of the argument is restricted to discussions of per capita GDP or in the GINI coefficient that is also ultimately tied to

income-- both issues. This fixation on GDP as the indicator by which inequality is measured was a methodological mistake that Myrdal warned against (Chapter 1).

In addition to the discussion on the relationship between inequality and globalization, the globalization debate has renewed interest in the connection between economic growth and spatial inequality in particular. Although the debate continues to rage, there are some signs of an emerging consensus that the forces of globalization have thus far led to some income convergence between countries, but has exacerbated economic inequalities within countries, a view held by Koenig-Archibugi (2003). McGrew (2002) writes that,

“Even within OECD states and sub-Saharan African states many elites are in the vanguard of globalization while others find themselves excluded. As a highly asymmetrical process of globalization exhibits a distinctive geography of inclusion and exclusion resulting in clear winners and losers not just between countries but within and across them” (p. 23).

This issues is expanded upon in much greater detail in the subsequent chapter.

4.4.6 Neoliberal Silence on Inequality

At the opposite of the spectrum, the neoliberals placed little if any emphasis on the topic of inequality assuming that a policy that pushed for economic growth and markets would help the poor. The neoliberal's inattention to inequality was later theoretically bolstered by the findings of World Bank Economist Kanbur (1998). These built upon earlier neoclassical models (Kaldor, 1967) to show that there was empirical evidence at the national level that there was trade-off between sponsoring economic growth and policies that pushed for income equality (Shorrocks & Van Der Hoven, 2004). Additionally, many of Myrdal's assumptions on the of role government, human capital, and importance of equality for growth were contradicted in an influential paper on the relationship between economic growth, poverty alleviation, and inequality in the era of globalization conducted by Dollar and Kraay (2002). The study included data from 92 countries over forty years and found that that the incomes of the poorest quintile rose proportionately with the average income, and thus concluded that, “distributional neutral growth is the norm” (Shorrocks & Van Der Hoven, 2004, p. 5). The same article also found support that inflation

stabilization and reducing the size of government, favored Neoliberal policies; increased economic growth both increased the share of income going to the poor. Furthermore, the study also found that public financing for health and education services (policies which neoliberals do not like) did little to improve the position of the bottom fifth of the population relative to the norm. These findings, of course, throw into question many of Myrdal's assumptions that economic growth would expand inequality. However as shown below, there has been a great deal of push back against Dollar and Kraay's findings which do, to some extent both vindicate Myrdal's positions and also show that the schism between Myrdal and von Hayek's positions has continued into the present.

In response to Dollar and Kraay's findings, Heltburg (2004) suggests that income inequality makes poverty alleviation more difficult and that the discussion on growth versus distribution misses the point insofar as growth and inequality are interchangeable. For their part, Gundlach, Navarro de Pablo, & Weisert (2004) have also pushed back on the Dollar and Kraay's finding that education has a limited role in improving incomes in for the poor relative to the average. They do this by using a more robust collection of indicators instead of the single indicator proxy (years of primary education) used in the original study, that was used in the original study. Instead, Gundlach et al. use the index of quality schooling developed by Hanushek and Kimko (2000) as well as the educational GINI coefficient developed by Barro and Lee (1997). Doing so, they build a strong case against Dollar and Kraay's findings that education was distribution neutral with regards to the poor.

More recently, the well received work *Capital in the Twenty-first Century* by Thomas Piketty (2014) has re-visited Kuznets's work armed with a much larger dataset from a wider number of Western countries stretching from 1700 to 2010. Looking at this larger data set based on tax returns, Piketty found that while Kuznet's methodology was basically sound, the panel data Kuznets's derived his conclusions from (1913 – 1948) was essentially an anomaly in the historical record and was an exception rather than the rule. The narrowness of the income gap in Kuznet's data set was, as Piketty shows, due to the economic chaos that resulted from the two World Wars, Great Depression, and other social and political upheavals of the time that wiped out a high percentage of the elites wealth.

Instead, and more worrying, Piketty's larger dataset shows that, rather than following an inverted U-shape, the forces of divergence are usually far strong than those of convergence and inequalities in capitalist societies tend to widen rather than shrink. In showing the expansiveness of inequality, Piketty upended many foundational beliefs in developmental economics, away from Kuznet's neoclassic model and towards Myrdal's.

Piketty's work also suggests that this economic inequality can, and should be, addressed through state-led policies of progressive taxation, inheritance taxes, and other state-led mechanisms. It has strong echoes of Myrdal's suggestions on the consequences of economic and social inequality on the social fabric and development of societies. Piketty's findings are primarily based on different political and geographical areas than Myrdal's *Asian Drama*, and are derived from income inequality rather than social inequality. Nonetheless, his finding that inequality has been an inherent feature of capitalism, and without government attention are likely to expand, is largely vindicate Myrdal's understanding of the importance of the issue. Lastly, the study also lends support to the Myrdal conception that state policy was the only actor capable of addressing the issue of inequality.

4.4.7 Myrdal and Amartya Sen on Equality and Development in India

Although not a central feature of Amartya Sen's earlier works on the capability approach to development, the dour consequences of inequality surfaced as a major theme in his most recent book, *An Uncertain Glory* (Druze & Sen, 2013). Like Myrdal before him, Sen suggests that inequality in India has held back development and that social stratification continues to favor the elites over the masses. Sen suggests that addressing inequality should be higher on India's economic agenda for independent, instrumental, and moral reasons and as such melds the ethical and economic justifications of addressing inequality as Myrdal had similarly recommended in *Asian Drama*.

Both Myrdal and Sen also saw that inequality in India was multidimensional with overlapping inequalities in caste, class, education, language, and access to social services to a degree that set India apart from other developing countries. Where as Myrdal used the term cumulative causation to describe the interlocking nature of social and economic

inequality, in the same way that Sen uses the term, “mutually reinforcing” to describe essentially the same phenomenon. These similarities between the analysis of the two Nobel Prize winners is clearest when Sen suggests that, “new or rising inequalities are also reinforcing the vicious cycle of disempowerment and deprivation” (Druze & Sen, 2013).

Sen also echo’s Myrdal’s suggestion that the usual economic measures of inequality are inadequate in explaining the degree of inequality in India relative to inequality in other societies. For both the importance is not simply the spread of the wealth, but the extreme deprivation of basic necessities for those at the bottom which are not necessarily apparent in the quantitative data:

“In assessing the nature of contemporary India, it is essential to take note not only of the pervasive reach of inequality, but also of its rather special nature. Even though income inequalities are large in India, this is not the only – or perhaps even the primary – element in the disparities that characterize the country. In fact, judged by the standard measures of economic inequality (such as the Gini coefficient of the income distribution), India does not look significantly different from, say, China or Brazil. However, this comparison misses out two major issues. ..., When the income levels of the poor are so low that they cannot afford even very basic necessities, the gulf between their lives and those of the more prosperous has intensity – indeed outrageousness – that aggregate inequality indicators cannot capture. Second, measures of private incomes miss the role of public services, in such fields as education, health care, social facilities and environmental support, which can make a big difference in protecting people from deprivation and expanding their freedoms” (Druze & Sen, 2013).

Other features of the quote above are also worth noting for its similarities with Myrdal. First, the general tone of quote and the “outrageousness” of Indian inequality is reminiscent of the shock of the degree of deprivation that Myrdal saw in his observations on the level of deprivation for the very poor in India. Secondly, the quote above highlights the inadequacy of purely economic indicators to measure both the nature of and degree of inequality and the related need for social factors to be included into the discussion. Third, the quote suggests that the means of escaping poverty are primarily through the government provision of social services including education, rather than the extension of markets or other neoliberal solutions.

Another similarity between Myrdal and Sen's appraisal of Indian inequality is the complacency of Indian elite combined with the timidity of the poor, in addressing the issue with the urgency that it deserves:

"There has been extraordinary tolerance of inequalities, stratification and caste divisions – accepted as allegedly necessary parts of social order. There has been tolerance also of the gross inequities of the colonial Raj, assumed to be what backward India needed to put its house in order. There has been debilitating patience with economic stagnation, accepted as the only available option for slow-rhythm India. There has been the silent resignation of Indian women to the lack of freedom imposed on them on the alleged grounds of biological or social necessity. There has been patient endurance of the lack of accountability and the proliferation of corruption – taken to be unavoidable consequences of the cupidity of human nature. And – of course – there has been adaptive submission by the underdogs of society to continuing misery, exploitation and indignity, seen as inescapable accompaniments of a stable economic order" (Druze & Sen, 2013, Kindle sections 4956-62).

Again, it is worth closer examination of the quote above to parse the between Myrdal and Sen's understanding of the inequality. Sen echoes Myrdal's understanding of the "initial conditions" of inequality during the colonial period as having repercussions on the current acceptance of inequality². Secondly the acquiescence of both the elite and the poor to accept inequality (and corruption) as an unavoidable force of nature are key components of Myrdal's conception of the 'soft state' which weakens the social zeal needed for mass mobilization for development that Myrdal saw as essential for meaningful change (issues returned to in Chapter 6).

4.4.8 Gender Inequality

Gender inequality and the male bias inherent in modernization theory is a major tenant of post-developmental theories. Post-modernists such as Bosep (1989) have suggested that economic industrialization, and the associated urbanization, has marginalized the economic and social standing of rural women and restricted their share of the benefits of modernization (Willis, 2005). Myrdal was largely mute on the topic of gender inequality, and the gender biases inherent to the modernization project. However,

² Despite their similarities, Myrdal's discussions on the "initial conditions" that led to the inequalities in Indian society go farther into India's pre-colonial history than in Sen's work, *The Argumentative Indian* in particular.

while Myrdal did not address gender issues in particular, his overall approach and commitment to addressing other forms of inequality suggest that the addition of gender issues supports and compliments Myrdal's larger thesis rather than undermining it.

4.5 Chapter Summary and Significance to Research Questions

This chapter answered Research Question 1 on Myrdal's contribution to the development literature. In particular, it was showed that his emphasis on the need to address social and economic inequality was in stark contrast to both the Structural Functionalists that preceded him and to the disinterest in the topic from the neoliberals. This chapter also showed that a recent revival on the importance of inequality reflects many of the contours of Myrdal's understanding of the nature of inequality and the need for it to be addressed in development theory. The theoretical outline of Myrdal's understanding of social inequality given in this chapter is further expanded in the following chapter on Myrdal's concept of circular causation in which in a geographic component of inequality is included in the discussion.

Chapter 5 Circular Causation and Spatial Inequality in Development Revisited

5.1 Introduction

This brief chapter outlines Myrdal's view of circular and cumulative causation against the theories of his contemporaries and against subsequent views, and like, Chapters 2 through 4, this is done to answer Research Question 1. In this chapter, theoretical aspects of inequality from the previous chapter are expanded upon to include geographic features of Myrdal's circular and cumulative causation model. By doing so a theoretical rationality for the spatial analysis methodologies used in Chapters 8 -12 is presented. In particular this chapter contrasts Myrdal's circular and cumulative causation thesis to that of Rostow's "take off" model and also of the spatial nature of change in development especially as it relates to Southern Asia quoting Chakravorty's recent scholarship in particular. Given the breath of the topic, this chapter is not meant to be as comprehensive as the previous chapter or the following on the soft state and is instead included primarily as background.

5.2 Circular and Cumulative Causation

As has been discussed, the fundamental differences between Myrdal and his neoclassical and structural functionalist contemporaries, was Myrdal's' understanding of the terms circular and cumulative causation. The term was not Myrdal's original coinage and was first proposed by labor and manufacturing economists Young (1928), Vedoorn (1949), and by Myrdal's contemporary Kaldor (1972). He also expands and borrows Walter Krause's (1961) phrase, "cycle process of circular causation," in which interrelated economic, cultural, attitudinal, health, and other factors have not only an instrumental value of their own, but also reinforced one another to the point to which advancement in one condition would logically encourage growth in another factors of development (Myrdal, 1968, p. p.710).

As stipulated in Appendix Seven of *Asian Drama*, Myrdal's circular and cumulative causation offers that the macro-level issues which he explored (listed in Table 5.1 below)

are, “are causally interrelated, in that a change in one will cause changes in the others” (Myrdal. p. 1860).

Table 5.1 Myrdal's components of the social system

1) Outputs and incomes;
2) Conditions of production;
3) Levels of living;
4) Attitudes towards life and work;
5) Institutions;
6) Policies

Source: Myrdal Appendix VII paraphrased

The list of the components of the social system tightly match his modernization goals listed in Table 3.1. With regards to the nature of the interactions between the different aspects of the social system, Myrdal assumed that,

“a change of a condition in the direction of greater desirability from the development point of view will be called a change “upwards” and one in the opposite direction will be called a change “downwards”. To begin with, we shall assume uni-directional causal relationships between the various conditions: a change in one condition will be assumed to tend to change the others in the same direction, upwards or downwards,’ (Myrdal, 1968, p. 1860).

and later,

“Over a period of time a change in any one of the conditions will tend to change other conditions... Each one of the secondary changes will then in turn exert a tertiary influence on other conditions, including the condition that had experienced the primary change and so on. If initially the system were in balance, the circular interdependence of the conditions in the social system would thus give rise to a cumulative process of change of that entire system, proceeding in the same direction as the primary change and affecting most or all the conditions in the system... This causal interdependence would seem to indicate a highly unstable social system. It is, of course, conceivable that at a particular point in time the various conditions should have attained precisely such levels as to represent a balance between the forces. This would imply a perpetuation of prevailing conditions from that point of time to the next” (Myrdal, 1968 p. 1870).

Throughout the description of the cumulative causation model, Myrdal describes, in some detail the nature of the interactions between the six components of the social system, emphasizing the mutually interlocking character of the circular and cumulative causation

model. However, consistent with his desire not to crystalize his analysis in *Asian Drama* as a model he goes out of his way not to solidify his theory of development as a full-fledged theory instead calling it an “approach” (Myrdal, 1968, 1861).

The movement towards a normatively better situation in any, and by extension all of, the components in Table 3.1 Myrdal referred to as the ‘spread effects’ or simply as “development” in general (Myrdal, 1968 p. 1868). For Myrdal these reinforcing and desired spread effects were dynamic and could quickly usher in holistic social and economic societal changes that if fully implemented could become self-sustaining leading to a social transition towards his modernization values. Albert Hirschman, a contemporary of Myrdal, is often credited for coining the term growth pole, a concept nearly identical to Myrdal’s spread effects. However Hirschman’s (1969) term has remained the dominant term in the discourse for this concept. Myrdal’s spread effect mechanism is somewhat similar to Rostow’s understanding of economic take-off (1960) insofar as it involves a multivariate process capable of sweeping economic and social change. However, unlike Rostow’s conception of a “take-off” from traditionalism into high consumption, modernity, in Myrdal’s circular and cumulative causation saw that the spread effects were only half of story and far less likely to occur than in Rostow’s more optimistic suggestions.

Myrdal differentiated himself from his contemporaries by suggesting that the reinforcing positive change of the spread effects was only one side of the story. For Myrdal, negative performance or stagnation in any of his modernization goals, would, in turn, lead to negative developments in other areas. This concept is shared with Ragnar Nurkse (1953) concept as ‘poverty traps’, or Winslow’s ‘vicious circles’ of poverty (1951, p. 9). For his part, Myrdal used the term ‘backwash effects’ to describe cases when the modernization goals were challenged or blocked by irrational decision making, corruption, unproductive attitudes, or a host of he saw as unwanted conditions. One example of this, Myrdal identified, are the corrosive effects of corruption, which he saw as slowing down economic growth due to the creation of Byzantine layers of red tape that slow project implementation. This in turn lowered productivity, which lowered nutritional values, which weakened faith in development, and on and on in an unfortunately mutually reinforcing cycle. Contrary to the dynamism of change Myrdal associated with the spread

effects, his backwash effects were much less perceptible as discernable events as they resembled the status quo, and were more akin to slow internal rot of social economic and institutional decline than to any dramatic social collapse. As such, the backwash effects gave the illusion of being stabilizing forces within a society. Myrdal also suggests that the backwash effects were not necessarily competing rational ideologies (like Communism), but instead were as “obstacles” to the modernization goals most often deeply rooted in the conservative features in South Asian society.

This was an important contrast between Myrdal’s theory and the Structural Functionalists’ conception of the trajectory of societal change. For their part, the Structural Functionalists (Sections 4.3.5 and 4.3.6) envisioned a unidirectional evolutionary change from traditionalism to modernity while maintaining existing class structure (i.e. the permanent dominance of the elite). In contrast, Myrdal’s circular and cumulative causation saw societies as constantly in a dynamic state as the interactions between innumerable factors influenced one another constant and in unfathomably complex ways writing:

“The notion of stable equilibrium is normally a false analogy to choose when constructing a theory to explain the changes in a social system. What is wrong with the stable equilibrium assumption as applied to social reality is the very idea that a social process follows a direction – though it might move towards it in a circuitous way – towards a position which in some sense or other can be described as a state of equilibrium between forces. Behind this idea is another and still more basic assumption, namely that a change will regularly call forth a reaction in the system in the form of changes which on the whole go in the opposite direction to the first change. The idea I want to expound in this book is that, on the contrary, in the normal case there is no such a tendency towards automatic self-stabilization in the social system. The system is by itself not moving towards any sort of balance between forces, but is constantly on the move away from such a situation. In the normal case a change does not call forth countervailing changes but, instead, supporting changes, which move the system in the same direction as the first change but much further. Because of such circular causation as a social process tends to become cumulative and often gather speed at an accelerating rate” (Myrdal, 1957, pp. 12–13).

5.2.1 Myrdal on the Stages of Development Approach

Myrdal took great umbrage with the Rostow’s takeoff concept on several levels writing,

“take-off into self-sustained development is what the articulate elites of all underdeveloped countries want their own societies to achieve and what we all hope they will achieve with the least possible sacrifice. The incorporation of this concept into a teleological doctrine of states of development makes that prospect seem not only possible but probable, even inevitable” (Myrdal, 1968 p.1853).

In contrast, Myrdal’s cumulative causation model is far more pessimistic. As he documents expansively throughout *Asian Drama*, and in the quote below, for the most part in Southern Asia, Myrdal witnessed that the momentum at the time appeared to favor the backwash over the spread effects. Thus, the cumulative causation model held a glimpse for hope for those states that genuinely strove for development, for those that did not have the commitment and took a more *laissez-faire* approach there was a very high chance for failure:

“The hypothesis of circular causation, which tends to be the doctrine of despair for the poorer countries as long as they leave things to take their natural course, holds out glittering prizes for a policy of purposive interferences. Applied to a goal-directed national endeavor it promises results much bigger than the efforts—if the efforts succeed in starting a cumulative process upward” (Myrdal, 1957, p. 8).

Perhaps the most important of Myrdal’s criticisms of Rostow was his assumptions that Europe went through recognizable and delineated stages of development that could be identified and they were universally applicable and would apply with little modification to non-Western states in similar stages. Myrdal saw this view as naive and, at its core, simply bad social science on four points. First stages of development models are often generated to justify political motivations, though this is concealed in the teleological reasoning of this approach suggesting inevitability, similarity, and powerful historical forces against which “non-historical” action is futile. Second, he sees, that there is bias in the direction of *laissez-faire* policies that, he saw as favoring rich countries. Third, the stages of development models were simply unable to explain that which did not fit the characteristics the models proposed. Fourth, Myrdal, the examples and selections chosen as supporting evidence by stage builders are “grossly arbitrary” (Myrdal, 1968 p. 1850) chosen to justify the philosophy or ideology that the builder is himself trying to prove. In place of abstracted models, Myrdal instead favors the historical approach to be more honest. However despite

his contempt for the model builders of his time, Myrdal does praise the early stage of development theorists Marx and List as, “great geniuses [and] accomplished craftsmen working on historical material” (Myrdal, 1968 p.1850) whose models Myrdal sees as sound sociological insights built upon firm empirical evidence.

By deliberately choosing not to model his approach using econometrics, and by relegating the theoretical discussion of the approach to the margins of the study, Myrdal further commits himself to the historical and qualitative approach. According to Paul Krugman (1992), Myrdal’s unwillingness to model the approach using the increasingly available statistical tools minimized his potential impact on the field of economics. As such the *Asian Drama* was somewhat caught in the middle of economic trends. On the one hand, he avidly avoids the grand theory of earlier modernization theorists (Rostow, Lerner, Marx), and on the other rejects the increasingly quantitative and abstract models, which came to dominate the field of economics. As such, his work is stranded between two fundamentally different poles of development economics.

5.2.2 Testing Circular and Cumulative Causation

Myrdal’s insistence on not building generalized theories or quantitative models, makes it much for difficult to test his policy prescriptions. This is especially true of the difficulty of Myrdal methodically testing the cumulative causation model as all of the factors are considered to be mutually reinforcing. As such, a methodology of selecting representative indicators for each of the six factors in Table 5.1 or the even more numerous modernization values from Figure 3.1 becomes unmanageable. As conceived isolating an independent variable and testing it against dependent variables would inherently violate the very features of dynamism and complexity that Myrdal attaches to the “curricular” nature of development replete with the irreducible forces of cultural, political, and historical change. Furthermore, employing such a methodology would attach, from Myrdal’s perspective, a degree of certitude and significance to the indicators themselves, which would not likely be warranted. This difficulty in modeling the theory was referenced in a contemporary review of Myrdal’s scholarship in *Asian Drama* who came to Myrdal’s defense that the “model-ability” of the circular and cumulative causation theories was a sword cuts two ways writing,

“Political and social variables [as Myrdal incorporates] are often difficult to quantify, and an approach which includes them can scarcely yield as a testable hypothesis as a purely economic model. But the economic approach has a reverse set of defects, achieving testability at the cost of unmarked realism” (Reynolds, 1974, p. 489).

5.2.3 Geographic Features of the Cumulative and Circular Causation Model

Both the “spread” and “backwash” terms that Myrdal brought to the cumulative causation model imply an inherent geographic component in the model. As Myrdal saw it, modern institutions in Southern Asia during the colonial period and into the independence era had been concentrated into small enclaves of wealth and power. If left unaddressed by state planning would continue to absorb the country’s economic and cultural wealth:

“If things were left to market forces unhampered by any policy interferences, industrial production, commerce, banking, insurance, shipping and, indeed, almost all those economic activities which in a developing economy tend to give a bigger than average return-- and, in addition, science, art, literature, education and high culture generally-- would cluster in certain localities and regions, leaving the rest of the country more or less in backwater” (Myrdal, 1957).

Thus development as Myrdal conceived of it was the expansion of the modernization values and institutions away from a concentrated center into the periphery geographically, and downwards socially from the educated elites to the public. Therefore, success in the modernization process as Myrdal perceived it would not be defined by the success of the elites or the accumulation or even high levels of per capita (Myrdal, 1968 p. 1868).

Many of Myrdal’s contemporaries also included geographic components into their modernization theories, and the differences are worth examining. First, many of the geographers of the modernization school examined the concept from an international perspective, rather than at the domestic perspective dominate in *Asian Drama*. Myrdal had himself looked at geographies of development in his earlier work, *Rich Lands and Poor* (1957). Torsten Hagerstrand (1952) saw modernization as radiating out geographically from those countries nearest to the industrialized core, and like the weakening power of a wave, losing power relative to the distance from the core (Peet & Hartwick, 2009 p.129).

Reflecting the Eurocentric view of the age, this conception both assumed that there were no corresponding waves of value diffusion going in the opposite direction, from the periphery to the core in the same way that Myrdal envisioned the backwash effects. Moreover, Hagerstrand assumed that the waves of modernization were welcome by those “on the shore”, and that they were needed to address isolated, parochial, and technically primitive subsistence economies where disease, hunger, and malnutrition were daily problems in the developing world (Peet & Hartwick, 2009, p. 130). In this regard, the modernization project would extend from the core to the periphery and shorten the distance both through the expansion of more transportation that is advanced and communication technology. A host of other geographic contributions to the modernization model were included after the publication of *Asian Drama*, and are considered in Section 5.3.

5.3 Subsequent Impact of the Circular and Cumulative Causation Model

By the 1970s hopes for the type takeoff that Rostow’s anticipated had, for the vast majority of people, not occurred. Myrdal’s CCC conception competed with other theories to explain why it had not occurred and to suggest alternatives. Levy (1972) among others retained some of Rostow’s optimism. Levy suggested that the newly independent countries, despite stumbling after achieving independence, retained a latecomers advantage and would ‘catch-up’ to the developed West quickly. He based this conclusion on the logic that the developing world could identify and avoid the missteps of industrialization in the West, and could adopt the policies that “worked”. With regards to Southeast Asian development in particular, Higgott and Robison (1985, p. 18), wrote that the modernization project in Southeast Asia had mostly failed, stating in the mid-1980s, “Quite clearly the process of diffusion was producing neither the takeoff, nor a flourishing indigenous bourgeoisie and, most glaringly, political systems were becoming increasingly authoritarian rather than democratic” (p.18). Even considering the booming economic development in the region and a degree of increased democratization in the so-called Third Wave of Democratization, most of which has subsequently been largely rolled back, the development process in the region has, for most people, been consumed by vicious rather than virtuous circles.

5.3.1 Globalization and Geographic Inequality

We mention in Chapter 6 on the ‘soft state’ that Myrdal’s theories did not take into account or predict the forces of the globalization. In the globalization discourse spatial inequality has been a major, if not the most, discussed issue, especially on the political left. Much of the argument reflects the continuing of economics as the arbitrator in the debate. As such the primary tool being used to evaluate income divergence or convergence has been by measuring changes in GDP, either concentrating on per-capita GDP or in the GINI coefficient— both ultimately tied to income (Chapter 2).

On the issue of convergence of convergence or divergence because of globalization, the Barro and Sala-i-Martin model has held a position of dominance suggesting that there is a trend toward convergence between advanced and less-developed regions. This is built on a similar logic of Myrdal’s spread effects mechanism. Namely, due to returns to scale and in pursuit of cheaper labor and land, capital will naturally spread from an urban core into the periphery. Chakravorty suggests that had globalization has not lowered boundaries to transportation costs and capital flows; domestic capital may have followed this pattern of domestic convergence. However, because of globalization capital is instead is attracted to low-cost labor areas with higher educations and transportation links to other countries thus exacerbating the domestic divergence between more and less-developed regions within a country. Accordingly, although the process described by Chakravorty differs from that of Myrdal, the outcome is the same: concentration of education and development (what Myrdal considered modernization) in one area and backwash and stagnation in the periphery.

Another influential and controversial study which posits that convergence is more likely between countries was conducted by David Dollar & Kraay (2002) which pressed the neoliberal argument that market integration and trade openness has led to poverty reduction, and that increasing inequality within countries does not represent the dominant trend. This finding has been argued vociferously in the literature, and as been part of a longer neoclassical argument for convergences (Borts Stein, 1964; Richardson, 1973; North, 1990). In a more nuanced opinion, others have offered that convergence or

divergence occurs depending on the growth rates. Harvey (1982), Dunfor and Smith (2000), and Storper (1991) have suggested that regional inequality would increase during low growth periods, but would be divergent during high-growth periods. This is clearly the opposite of Perroux's aforementioned view but has a more complicated relationship with Myrdal's CCC. Insofar as Harvey's is specifically referring to economic growth in particular absent the intervention of the state, Harvey's theory is consistent with Myrdal's conception of a concentration of development in an increasingly concentrated core. In the early 1990s, Krugman's New Institutional Economics (1991) and the explosive rise in globalization as a field of study brought back some of the geographic components of Myrdal's CCC. Krugman's work echoed a slightly earlier 1988 work by the French Economist François Perroux (1988) who ostensibly re-brands Myrdal's spread effect concept by suggesting that a growth poles strategy should be consciously employed to spread development. According to Perroux's theory, core concentrations of innovation and technological progress should be deliberately established with the understanding that the surrounding peripheral areas would benefit from the trickle out into the periphery. However, largely as Myrdal's CCC theory anticipated this spread from the core into the interior did not occur as intended. An assessment of Perroux's strategy by McGee Kumssa (2001, p. 5) concludes that it "failed to lift the depressed regions out of poverty, and uneven development became the major problem of many developing countries". More recently still, and to a considerable degree emanating from the 2008 Financial Crisis, the importance of spatial inequality in late-capitalism has emerged as a vibrant topic in the discourse. According to Parnwell (2008),

"uneven development both between and within countries is claimed in part, to be a by-product of an orthodox capitalist development process which places emphasis on rapid and efficient economic growth, privileges the industrial center and urban areas, and tends to support the first foremost" (p. 111)

Compared to those above that suggested geographical convergence was taking place with globalization the far more convincing evidence is towards globalization exacerbating regional inequality. Looking at GINI data, Milanovic (2006) found in contrast to Dollar's research that "global inequality remains extremely high today 62 – 66 measured in terms of the GINI Index [however] its direction remains unclear" (p. 3) and that the source

of inequality at the global scale is between nations rather than within nations (Chakravorty, 2006). Wade's research is similarly ambivalent in suggesting that the process of globalization itself and the increased ability for people in distant areas to become aware of one another's status has increased attention and the level of disparity between peoples in unprecedented ways. In the same collection of articles on the topic of globalization and regional inequality, Pogge (2007) is more cynical on the role of globalization and shares Myrdal's earlier fears of laissez-faire capitalism concluding that not only does globalization favors the wealthy, but that like Myrdal before him, criticized intellectuals and academics for being coopted by the dominant power structures. This is clear in the content and tone in the quote below:

"The predominant intellectual and academic responses to global institutions serve the career goals of those who recommend development policies, such as the WTO and the World Bank, perpetuates its own existence and a certain ideology (neoliberal convictions) without adequately delivering to the poor. Overall, global institutions and their rules as well as dominant paradigms contribute to the persistence of inequality" (p. 16).

Lant Pritchett (1997) is even more adamant suggesting that the story of development in the 20th century is "divergence, big time" (Chakravorty, 2006, p. 167). Others such as Milanovic (2006) are more ambivalent and have suggested that while global inequality is currently wide, the future trajectory remains unclear though the debate continues to rage, there are some signs of an emerging consensus that the forces of globalization have thus far led to some income convergence between countries, but has exacerbated economic inequalities within countries, a view similarly held by Koenig-Archibugi (2003).

In an important assessment conducted by the World Bank, the 2009 Development Report Rigg et al. (2009) examined the macro-trends of unequal growth suggested that looking forward it was likely that, "economic growth will be unbalanced, but development still can be inclusive," (p.1) and later that the fields of geography and political economy hadn't been adequately integrated. Again, much more could be written on the complexity of the interaction between globalization and spatial inequality, but in many ways the jury is still out on the topic.

5.3.2 Chakravorty and Myrdal on Spatial Inequality in India

It is worth comparing more closely Myrdal's findings on the nature and importance of spatial inequality to those of Chakravorty's (2006) *Fragments of Inequality* given its specific discussion on the topic of spatial inequality and its attention to the unique consideration of spatial inequality in South and Southeast Asia. Chakravorty, like Myrdal (Chapter 3) prefers the historical approach rather than an econometric approach in assessing the degree and nature of inequality in different states writing, "Nations vary in their specific combinations of social and spatial inequality (which arises from spatial fragmentation or heterogeneity)" (2006, p. 3). Also like Myrdal and unlike the previously mentioned Perroux, Chakravorty suggests that spatial inequality is something to be avoided rather than encouraged, that clustering of modern institutions is the norm, and that the role of the state is paramount in affecting the degree and nature of a country's spatial inequality as is shown in the following quote:

"State ideology (expropriation, redistribution, or reinvestment) is able to significantly influence the spatial distribution of economic activity, and market processes usually reinforce the tendency toward geographical clustering of more productive activity... The last two hundred years have featured significant geographical divergence, especially in developing nations. This tendency toward income concentration in leading regions or interregional divergence is manifested at all spatial scales, and is especially pronounced when smaller geographical units are compared... A remarkable aspect of the current period of globalization (post-1980) is the universal tendency towards increasing spatial inequality, including in the developed nations where, during the middle third of the last century spatial inequalities had declined substantially" (Chakravorty, 2006, p. 12).

In the quote below, Chakravorty suggests that when measuring spatial inequality, the sub-national scale is preferred at the more localized level the better. In the subsequent chapters of this research on spatial inequality in India, data at the district scale is used for the reasons he describes below:

"Geographers have long argued that the appropriate scale of social analysis is something much smaller than the nation. Geographer's distrust of larger scales is best expressed in the "econological fallacy" principle, where by associations and causal connections that are observed at one scale cannot be presumed to be true at larger scales or smaller scales. What

is true for nations cannot be assumed to be true for its constituent regions; what is true for regions may not be true for the groups that make up the regions; what is true for groups cannot be assumed to apply to individuals in the group” (Chakravorty, 2006, p. 114).

Looking at Southern Asia, and India in particular, Chakravorty (2006) echoes many of Myrdal’s conclusions on the nature of spatial inequality in the region. First, both agree on the importance of initial conditions in the region that would shape the subsequent nature of inequality going forward. Chakravorty suggests that a great deal of inequalities existed in the pre-colonial period as the ruling Zamindar and talukdars monopolized the higher status work as well as educational opportunities (Chakravorty, 2006 p. 147). They also agree that the colonial period exacerbated inequality (Chakravorty, 2006 p. 149), and that by the time of independence the new countries were burdened with intertwined challenges including, “overpopulation, illiteracy, linguistic chauvinism, religious bigotry, unemployment, chronic food shortages, the threat of red revolution, and inequality” (Chakravorty, 2006 p. 150). Myrdal also addressed a nearly identical list as those issues as those most limiting of to Indian development. Also similar to Myrdal’s conception of backwash effects, Chakravorty agrees with prior research on spatial poverty traps (see Jalan and Ravallion 1997) and Myrdal, that backwash effects may have more lasting impacts on those regions that are not themselves at the center of global trade than those that are (Chakravorty, 2006).

5.3.3 Spatial Inequality in Southern Asia

In addition to his theoretical insights on the centrality of regional inequality, Chakravorty’s work is also an important source of analysis on the nature of spatial inequality in India, Indonesia and Thailand states also included into Myrdal’s *Asian Drama*. As such, it is worth quoting here in some detail for comparison in subsequent chapters. For the sake of brevity, and at the cost of his insightful analysis his findings and those in his review of the literature are given below.

“Several studies of regional inequality in India have been made. Most cover the recent period from about 1980 to 1990 onward, generally known as the reform period (structural reforms were instituted formally in 1991 and informally in 1985). Older data show that the regional inequality may have been declining from the late 1960s to the late 1970s, not so much because of superior growth in lagging states but because the leading state in 1960 (West

Bengal) has goes into a precipitous decline (Chakravorty 2000). ... After the reforms there is little doubt that regional inequality has increased substantially. Noorbakhsh (2003) shows that the Gini of per capita net state domestic product increased from 28.1 in 1981-82 through 33.7 to 1991-92 to 43.3 in 1997-98. Polarization measures have also increased over the same period; the Estaban-Ray measure increased from 0.169 in 1981-82 through 0.271 in 1991-92 to 0.341 in 1997-98; the Wolfson index increased for the same years from 0.034 through 0.102 to 0.142. The Kanbur-Zhang measures shows very significant polarization increases in literacy, poverty, and urbanization. According to Milanovic (2004) the ratio of average incomes in the richest and poorest states have increased to 4.4. Sachs, Bajpai, and Ramiah, Stand, and Kalirajan (1999) have shown absolute and conditional divergence between 1965 and 1998, with increasing divergence in the 19990s, led by the location of private investment. Almost identical conclusions are drawn by Ghosh, Marjit, and Negogi (1998), with data from 1965 to 1995. Singh et al. (2002) agree with these findings but suggest that divergence on other measures (such as human-development indices) is not bad as the income data show. we should keep in mind that these substantial regional differences have taken place during a period when income-inequality levels at the national or state level have hardly changed” (p. 189).

5.3.4 Flying Geese Theory

Myrdal’s conception of mechanisms that drive the spread effect also bears a resemblance to flying geese model originally proposed in the 1930s by Japanese Professor Akamasu, and later popularized in the 1970s. The flying geese model and the cumulative causation model both see the spread of industrialization occurring moving from an industrialized core seeking new markets and cheaper labor pushing farther and farther into the periphery. However, in the flying geese theory of Asian development there are lower economic walls between countries, and thus the spread effects are seen not as a domestic affair as Myrdal had predicted, but instead an international movement of capital and development. Specifically the theory sees modernization in Asia emanating from Japan, into Korea and Taiwan; and later into ASEAN and South Asia as states, “moved up the developmental ladder” and needed both markets and labor to sustain their own economic development (Ozawa, 2009).

In addition to this fundamental similarity, the flying geese model and Myrdal’s cumulative causation model both encourage an active role of state in creating the

conditions for developing particular industries. However, the flying geese theorists were more detailed than Myrdal's vague policy suggestions and explicitly encouraged the establishment of textile production for exportation as a first step in sparking growth. More generally, the flying geese theorist, like the neoliberals, promoted the creation of special economic zones (SEZ) exempt from the ordinary taxation and administrative red-tape of the state to create a less risky environment for Foreign Direct Investment (FDI) inflows. These inflows, it was thought, would jump start development by developing modern economic infrastructure, encouraging capital accumulation, skills training, and jobs for the unskilled. While the SEZs (arguably) provided a geographic kick-start to the spread effects, they did little for poverty alleviation and because they were untaxed shelters for industrialization, and state gained little through taxes for their creation.

5.4 Chapter Summary and Significance to Research Questions

In this chapter, Myrdal's conception of the cumulative and circular model was explored first against his contemporaries and then against subsequent theoretical developments. This discussion concentrated on two specific areas, the geographic component of spread and backwash effects, and more specifically on the discussion of whether or not globalization has led to greater convergence or divergence in relation to Myrdal's model. Staying in the studies regional boundaries, it was shown that the regional findings of Chakravorty appear to validate Myrdal's prediction that convergence was more likely than divergence.

In the subsequent empirical Chapters 8 through 12 Myrdal's cumulative and circular causation models are test with regards to the educational sector. Testing these models use the the Getis-Ord G_i^* hotspot tools to identify areas of "spread" and "backwash" in primary education. By overlaying these hotspot maps of spread and backwash areas Myrdal's circular causation theory can be tested to see if improvements in one area have strong relationship to consistent improvements in another in order to answer Research Questions 2 and 3. It is also possible to see whether education equality also tends to cluster into higher and lower levels as Myrdal foresaw. Unfortunately given the lack of reliable time series data at the district level in the most important educational factor (student

outcomes), this research cannot to test the temporal components in the cumulative causation model, however this is increasingly possible for future studies with the increased availability of district data.

Chapter 6 The 'Soft State' Revisited

6.1 Introduction

The purpose of this chapter is primarily to address Research Question 1 with regards to Myrdal's conception of the 'soft state' with relationship to his peers and subsequent developments in the related discourse. Myrdal's conception of the normative role of the developmental centrality of the state is outlined with particular reference to his positivist view of the 'soft state'. Specifically, the nexus between Myrdal's prescriptive role of the South Asian state as the catalyzing agent of development is discussed. Against this idealized role, Myrdal's view of the soft state is presented in several areas that include: the view that Southern Asian elites have failed change agents; the weakness of the development plans themselves; and the resistance to those plans by the general population. After outlining and analyzing Myrdal's conceptions, they are juxtaposed against some of the larger changes in the discourse on the "proper" role of state planning in development. This section includes a comparative reference against subsequent conceptions of the role of the state excluding: the Northeast Asian developmental state; the neoliberal state; the good governance concept; public-private partnerships; globalization; and the rise of NGOs. Taken together, Myrdal's pre-supposition that the state must be the primary actor in development has subsequently been challenged by a host of other competing actors. The relative decline of the state in the face of competing actors, in part due to globalization, should be seen as one of the most glaring omissions in Myrdal's analysis on Southern Asia's development. Finally, this chapter highlights the role that the 'soft state' has played in allowing for the rise of NGOs, which in some ways have supplanted the role of the state as Myrdal envisioned it in *Asian Drama*. It should also be added before continuing that in many ways the state in Southern Asia expanded its powers against rival institutions. This is especially true in the security sector, though again this has been uneven across regions. This chapter does not push against this general trend, except to note that in the development sector, the state did not retain a monopoly on development policy as Myrdal suggested that it should.

6.2 Myrdal on the Primacy of the State in Development

Throughout *Asian Drama*, Myrdal discusses a host of obstacles facing development in Southern Asia at different scales ranging from the individual to the village. To address these interlocking problems, he grants overwhelming primacy to the agency of the central nation-state. The rule of the state as the primary actor, in both the positive and normative sense as the bearer of development, was to a large extent a reflection of the post-independence nationalist exuberance as well as the post-Westphalia reality into which the newly free Southern Asian states emerged. Bucking the Cold War trend to divide the independent Southern Asian countries by their allegiances as either the Communist or non-Communist, Myrdal had the insight to see that at their root, the problems facing the new states were often more similar than they were different. Regardless of the ideology in any given country, he saw the state dominated both economics and politics, and as such had much to do with the success or failure of the modernization project as he envisioned it. This role granted to the state is a continuation of his earlier work, *Rich Lands and Poor*, in which Myrdal suggests that the biggest prize earned (or given) by decolonization was the sovereignty granted for state-led nationalistic economic planning geared to improving economic standards (Myrdal, 1957). In the following quote, one can see the state's role in modernization and the major obstacles to that goal remains clear in *Asian Drama*:

“The practical problems in South[ern] Asia are: how to consolidate and strengthen the newly created states brought into existence by the collapse of the colonial power system under the onslaught of nationalism; how, at the same time, to make governments in those new, not very advanced, states stable and effective; and how to do all this in the turmoil of nationalism with some degree of democracy from the beginning and attempts at what we have called democracy at the grass roots” (Myrdal, 1968 p. 119).

6.2.1 Nationalism and the Modernization Values

Reflecting this primacy of the state, Myrdal's modernization goals (Table 3.1) include national independence and sponsorship of national cohesion (Myrdal, 1968 p. 63-66). Although Myrdal also includes grassroots democracy (Myrdal, 1968, pp. 65-66) as a modernization value and development goal, the term in which he frames the issue is more similar to the contemporary use of the term decentralization or federalization. At any rate,

the actual policy stipulated in the book ultimately puts the onus of policy construction and implementation to the national level in an overtly state-centric politics.

6.2.2 Emotional Attachment to the State for Development

According to Myrdal's view, the first goal for the Southern Asian after achieving independence was to maintain the nationalist exuberance at the dawn of independence and harness into a constructive nationalism. Myrdal writes that the status of sovereignty alone did not bring with it allegiance to the state writing, "All of the new states had to face the fact that independence did not automatically bring about a condition of national consolidation. Instead, each new state faced the immediate task of asserting its authority over its territorial inheritance" (Myrdal, 1971, p. 28). On this point, Myrdal saw that after twenty years of sovereignty Southern Asian citizens in the late 1960s still lacked the emotional integration as a whole and the unwillingness for citizens to sublimate their personal interests and values to those of the newly independent states (Myrdal, 1968, p. 53).

In his conception of national independence, Myrdal is not only referring to the ability of the state to delineate and defend its borders and to perform essential tasks of "regality", but also to consolidate loyalty to the state in the hearts and minds of the newly minted citizens. A part of which was to strengthen their new nations emotionally and, by doing so, attempt to inoculate them against the threats that traditionalist communalism posed in weakening those nations. Thus, Myrdal's inclusion of nationalism as a modernization goal to provide the emotional counterweight to the traditional views that he saw as competing for the psychic attention and allegiances of Southern Asians. In congruence with his larger cumulative causation thesis, Myrdal felt that the state's success in bringing about modernization and development would, in turn, increase the emotional attachment to the country promoting further sense of purpose and motivation needed for the scale of social change he advocated. This is seen in the following quote, "the role for development planners is to channel the emotional ties of nationalism into inclusive and constructive vision of national consolidation combined with economic productivity; the degree to which this is successful is an essential aspect of the *Asian Drama* " (Myrdal, 1968 p. 122). In this conception of patriotism and the division between the "planners" and those

upon whom the plan is imposed upon highlights the top-down nature of Myrdal's development conception.

However, Myrdal predicts that as the new nationalism would dissipate outwards as one goes moves from the elite into the general population, "the secular modernism that characterizes new nationalism among the elites will merge and be diluted by the irrational and communitarian views that hinder modernization, even in regard to its primary function of keeping the new nation-state united" (Myrdal, 1968 p. 119). This creates a situation, as he saw it, in which secular modernization becomes diluted by the conservative forces of a traditionalist-nationalism and narrow communalism.

With regards to democracy, Myrdal differed from the larger modernization school which equated modernization with increased democratization. On this point, he had much in common with the structural functionalists, in that he had little faith that democracy would be an essential component of the developmental project. This is unexpected considering Myrdal's persistent insistence on tackling inequality. This revelation that democracy may not have a central place in Southern Asian modernization profoundly disturbed him (Myrdal, 1968, p. 791). He also pessimistically that in Southern Asia, democracy would not be an effective vehicle for economic and social change but only a means for the protection of the inequalities and stagnation and maintenance of the status quo (Mahalonobis, 1969, p. 437; Myrdal, 1968, p. 791).

6.2.3 Centrality of State Planning

Even when compared to other modernization theorists, the degree of emphasis that Myrdal puts on state-led planning is exceptional. He saw that a social movement towards rationality depended on state planning, and to the extent to which, "planning becomes the intellectual matrix of the entire modernization ideology" (Myrdal, 1968 p. 711). Myrdal saw that the state needed to plan rationally and forcefully implement policies to reverse the backwash effects created or exacerbated by the colonial period. The state was charged with an enormous range of activities that included addressing social inequality through education, poverty alleviation, and land redistribution among other policies. According to Myrdal, the developmental mission that the Southern Asian state had taken on for itself

was vast in scale. It had granted itself a mandate to change the economic and social fabric of life well beyond mainstream development proposals:

“...policy action extend over the entire field of social relations. These encompass not only programs for investment in physical facilities and for mobilizing resources through savings, taxation, and foreign loans and grant, but also policies directed toward population control, health, education, vocational and professional training, general civic culture, improvement in administration and self-government, intensification of voluntary cooperation in various fields, higher levels of social security and social conditions generally, protection and uplift of the depressed classes, and so on. This inclusiveness in the general layout of planning stands in rather sharp contrast to the tendency to end up by laying the main stress in both research and planning on the economic factors, conceived in terms of the Western concepts of markets and prices, employment, savings investment and output” (Myrdal, 1968, p. 43).

In another full-throated normative suggestion for the role of the state, he suggests that state intervention into the society should,

“improve a host of social that he referred to as the levels of living including improving levels of nutrition, housing, education, and general culture; to break up the rigidities of social stratification; to equalize opportunities and increase social mobility; to make local and sectional community organization more effective; to extend and intensify participation more by the people in such communities as well as the national community; and to base that participation on more rational considerations of their true interest” (Myrdal, 1968 p. 711).

In addition to suggesting a considerable scope of the plan, Myrdal is adamant that the project should be pushed as quickly as possible. This he saw as necessary due primarily to rapid population growth, to avoid cynicism and social resistance to the plan (Myrdal, 1968, p. 1899).

When reading the scale of change that Myrdal proposes and the positivist description of the planning he saw as being attempted, it's hard to see clear boundaries between Myrdal's descriptions of the Southern Asian states planning efforts, and his own normative suggestions. This is another example of the difficulty in determining the “indigenous” and externally derived modernization values as described in Table 3. At any rate, Myrdal observed that massive active government-led planning was seen as the only

viable option for South Asian leaders for several reasons. First, at the dawn of independence Southern Asia, as Myrdal saw,

“the administrative bureaucracy had more capable and admired politicians, organizers, and government administrators than it had entrepreneurs and industrialists, especially in the former British colonies. Secondly, what businessmen there were associated with colonialism, imperialism, exploitation, and opportunism as well as Chinese or Indian immigrants-- whereas government administrators were seen to represent a more indigenous nationalist spirit. He also saw that the central state alone had the resources and legitimacy needed in order to coordinate the infrastructure and investment necessary to attract modern industry including efficient transportation networks, power plants and irrigation” (Myrdal, 1968, 717).

Additionally Myrdal observed that South Asia lacked an entrepreneurial middle-class capable of pushing for widespread economic growth that occurred in the Western industrialization experience.

6.2.4 Myrdal on Private Capital and Markets

A Myrdal felt that the interjection of the state into the economy as the main actor of planning, and that the poor needed to be the primary benefactors of the state’s intervention.

“The basic idea of planning is that the state shall take an active role in the economy: by its own acts of enterprise and investment and by its various controls-inducements and restrictions over the private sector, the state shall initiate, spur and steer economic development. These public policy measures shall be rationally coordinated and the coordination on be made explicit in an over-all plan for a specific number of years ahead... All of those in South[ern] Asia who urge state economic planning agree, in principle, that it should benefit the common people, concentrate on raising the level of living for the poorest strata in the nation, and express the will of the nation as a whole” (Myrdal, 1968 p. 709).

By looking at verbs Myrdal uses to suggest what the state should be doing: initiate, spur, steer and coordinate it is clear that Myrdal is advocating a strong, even domineering role for the state over the market, but not promoting a command economy along the lines of the USSR. Instead of using the state as alternative to capitalism for development as demonstrated by the Communist model, Myrdal suggests that the proper role of the state in

the developing world is to lay the institutional and investment foundations upon which a better-functioning market based capitalism can be erected. In doing so, he puts Marxism on its head by explicitly suggesting that state socialism be used as a means to foster capitalism:

“in the early stage of development, larger elements of socialism, larger even than in the nationally highly integrated and industrialized countries...Capitalism ... modified in a fundamental fashion as a result of a reorganized and under collective, public, quasi-public, and private influence and containing substantial elements of socialism has today perhaps a greater momentum than ever. In most of the underdeveloped countries, however Capitalism and private enterprise are weak and show only the feeblest tendencies to develop by themselves... Only as a result, and within the general framework, of state planning and large-scale state promotional activity from the very beginning is there any hope for eventually fostering some kind of capitalism and private enterprise in these countries (Myrdal, 1956, p. 211).

Not only was Myrdal skeptical of capitalism in Southern Asia, he was similarly distrustful of the Southern Asian capitalists themselves. Myrdal is suspicious of the big business and sees them as a threat to modernization in so far as they distort markets and take advantage of their market share for private gain over a wider social interest. He suggests that there is, “a disinclination of most of those who are wealthy to risk their funds in productive investment and their preference for speculation, quick profit, and conspicuous consumption and investment; and finally, the tendency in underdeveloped countries for any larger-scale enterprises to acquire an extraordinary degree of monopoly or oligopoly (Myrdal, 1968, p. 717). In other passages, he suggests that businesses are not burdened by the on-paper tax rates due to the loopholes in the laws (Myrdal, 1968, p. 738). Given this the weakness of an existing entrepreneurial class, Myrdal felt that the central state was the only institution that is potentially capable of creating and implementing a developmental plan large and comprehensive enough to counteract the pervasive backwash effects and create the institutions and conditions necessary for releasing the spread effects. In the *Rich Lands and Poor* (1957) Myrdal is guardedly optimistic that the underdeveloped states would be able to carry out such an endeavor, but after 10 years of

closer observation in *Asian Drama*, his optimism has soured considerably into his view of the 'soft state'.

6.3 Features of the 'Soft State'

Despite his full support for the need for radical state-driven development, one of Myrdal's most significant findings is the persistent weakness in the capacity and commitment of the state to enact the development and modernization it was attempting. In *Rich Lands and Poor*, he concludes that planning in the developed states was often unsuccessful even with its more advanced administrative institutions, but that underdeveloped countries were attempting a version of "superplanning" for development and were doing so with far weaker state institutions and illiterate and quickly growing populations (Myrdal, 1957, p. 8). It became apparent to Myrdal that while the leaders of the newly independent states understood the need for planning and reform,

"the likelihood of success for the grand mission of modernization vis-a-vis the power and authority of the state were well beyond its actual capacity. A number of serious and closely related [in terms of his circular causation model] obstacles stand in the way: deficiencies in government, and administration; social and economic inequalities; and in general, vested interests in the status quo, and the traditions of a stagnant society" (Myrdal, 1968, p. 66).

In his 1969 review of *Asian Drama*, Ashburn (1969) offered that, Myrdal's analysis of the situation was that, "Not only do the underdeveloped countries in South Asia have too many eggs in one basket, the basket itself may be unsuited for accelerated growth" (p. 286). This gap between the ideology of planning and the reality of its implementation Myrdal referred to as, the 'soft state' and the subject of this chapter. Myrdal offers that there are several components of the 'soft state' concept which include, the failure of the elites, the weakness of the plans themselves, and the resistance of the programs by the general public these are addressed in the following subsections

6.3.1 Failure of the Elites

A vital feature of the 'soft state' that Myrdal observed was the failure of the elites in South Asian societies. Throughout the text, Myrdal admits that interchangeably uses the

terms “elites, planners, and educated to refer to the politicians, planners, administrators, professionals, industrialists and businessmen” (Myrdal, 1968, 721). These indigenous elite, as he saw, it had a great deal of power in shaping the fates of their societies although they made up a minuscule percentage of the total population writing,

“Independence was in the end brought about by members of the small, articulate elite groups within the educated class—educated in the special sense the term has in South Asia—comprising only a small percentage of the total population. These elite groups now have the responsibility of consolidating the new nation-states. Among them, however, there were differing degrees of cohesion and internal unity behind the drive for consolidation.” (Myrdal, 1968, p. 23)

For Myrdal, despite their lack of motivation for development, Southern Asian elite held the kernel of the modernization ideals, mostly because of their Western (or Westernized) education. The elites both held the seed of modernism and a belief in planning, but were also highly conscious of retaining their high position in the traditional order of society. Myrdal suggests that the reader must always bear in mind, the intellectual elite who, on the one hand, are the vehicles for modernization ideals, on the other hand, largely belong and/or have numerous ties to the privileged groups that have vested interests in the intuitional status quo (Myrdal, 1968 p. 116). This creates contradiction in motivations in the elite who cannot be trusted to wholeheartedly implement the radical social reforms needed as doing so would directly weaken elites existing social status and social dominance (Myrdal, 1968 p. 732).

6.3.2 Weakness of the Plans

The self-preserving nature of the planning elite mixed uncomfortably with their Westernized training. This led to, what Myrdal saw, as a lack of genuine commitment to rapid modernization. For Myrdal, these value inconsistencies were reflected in the plans they concocted for development. Myrdal notes that,

“the planning elite were taught administrative techniques and practices based on the realities of the Western world, thus when they tried to apply them to the very different social and economic realities of Southern Asia, there is often a wistful note of make-believe to the

public discussion of domestic problems and the whole intellectual debate” (Myrdal, 1968 p. 721).

One example Myrdal gives of this, “is the combination of the elites’ Western education and planning skewed towards benefiting the traditional elites is the lack of focus in the plans for development from the bottom-up being philosophically covered up by using the neoclassical model for restricting consumption in order to stimulate investment for future growth” (Myrdal, 1968 p.721). However, despite the incomplete and insufficient implementation of the plan, especially in India and Pakistan, Ewing notes that Myrdal offers no argument for turning back and returning to more laissez-faire policies (Ewing, 1969, p. 168).

The quote below is emblematic of this aspect of the ‘soft state’: there is a known desire to change the status quo by the elites, an understanding as to who will usher in that change, but nonetheless there is reluctance to carry it out wholeheartedly. Thus, time, resources, and effort go into a well-meaning project with very little return on investment in terms of plugging backwash effects or sponsoring spread effects.

“On a general and non-committal level they [elites] are freely and almost passionately proclaim the need for radical social and economic change, whereas in planning their policies they tread most warily in order not to disrupt the traditional social order. And when they do legislate radical institutional reforms- for instance in taxation or in regard to property rights in the villages- they permit the laws to contain loopholes of all sorts and even let them remain unenforced. This contradiction is intellectualized in two opposing views, simultaneously held, on what planning and development really requires in the way of social change. On the one hand, it is propounded that social change must be radical and go very deep. On the other hand, it is stressed that it must proceed with the utmost caution, upsetting the inherited traditional social settings as little as possible” (Myrdal, 1968, p. 117).

6.3.3 Resistance to the Plans by the Masses

A Myrdal also expresses concern that what plans there are being pushed onto the reluctant and passive public that does not itself actively advocate for social change. “The masses are led to expect or demand that the government do more for them, without showing greater readiness to change their own ways. This does not help the cause of development, as planning in a stagnant and poor society aims at getting people to

rationalize their attitudes and in particular, to work harder and more purposively to improve their own lot" (Myrdal, 1968 p. 730).

The resistance or passivity to radical change among the masses, according to Myrdal was partly due to the experience during the colonial period in which the public was wholly removed from decision-making and the planning process. This passivity was an obstacle to local, national community development, and grassroots democracy, two of Myrdal's modernization ideals. As such, Myrdal rejects the mythology that the masses are ceaselessly yearning and striving to better their life to expand their pocketbooks. He also dismissed the appropriateness of the phrase, "revolution of rising expectations" common at the time. Myrdal felt that this phrase was a completely inaccurate reading of the social reality of the general population in a stagnant society (Myrdal, 1968, p. 730). This revelation that the masses themselves were not striving to emancipate themselves from their poor conditions must have been quite a shock to Myrdal. In his earlier works, especially *Rich Lands and Poor*, he is much more optimistic of the general public's adoption of the modernization ideals and himself repeatedly uses the phrase Great Awakening to describe the same essentially the same process. Sadly he states, there were, initial high hopes attached, both in South Asia and in the West, to the effects of community development and other effort to change rapidly and radically the villagers' whole outlook and their way of living and working. As experience shows these expectations were exaggerated (Myrdal, 1968, p. 730).

6.4 Subsequent Discourse on the State's Role in Development

Now that the major features of Myrdal's 'soft state' have been outlined it is now possible to test his conceptions against the subsequent literature on the issue. In this extensive look on the topic a comparison between the soft and developmental state is given.

6.4.1 Soft and Developmental States

Myrdal's concept of the appropriate role of the state in development has much in common to what would eventually come to be known as the Developmental State. Whereas Myrdal saw failure of super-planning in Southern Asia; the Developmental State theorists

saw success stories in state planning in North East Asia. As defined by Meredith Woo-Cumings a scholar and advocate of the developmental state both as a positive theory and a practical political arrangement,

“the ‘Developmental state’ is a shorthand for the seamless web of political, bureaucratic, and moneyed influences that structures economic life in Northeast Asia,” which proposed a role for the state somewhere between the planned economies of the Soviet Union, and the conception of a free market state, “but rather something different: the plan-rational capitalist developmental state conjoining private ownership with state guidance” (Woo-Cumings, 1999, pp. 1-2).

The term developmental state is accredited to the American Chalmers Johnson’s book (1982) *MITI and the Japanese Miracle* that posits that the importance of state-business partnerships in fostering developing in the Post WWII reconstruction and rise of Japan.

6.4.2 Comparing and Contrasting Myrdal’s State-led Planning and the Developmental State

Both Myrdal and Johnson conceptualized development as primarily being conducted from the top-down by elites ostensibly removed from public opinion. Yet whereas Myrdal saw little evidence of elite commitment to implementing modernization goals and institution building in Southern Asia (Chapter 3), Johnson viewed the Japanese elite in the post-WII rise of Japanese industry as both nationalist and highly committed to fostering goal-oriented institutions in the state and in the economy. Another similarity between Myrdal’s conception or perception of the Southern Asian state and Johnson’s developmental state was the need for an active role for the state in fostering economic development. Neither was optimistic towards the prospects of a continuation of *laissez-faire* economic policies as likely to lead to self-sustaining economic growth. For his part, Johnson saw that the Japanese state should actively create the conditions conducive to rapid economic growth that would allow the creation of large economically strategic industries that, when mature, would be able to compete with Europe and the West (Johnson, 1982). By contrast, Myrdal as noted above, had considerably less faith in the existing business houses (especially in India) and warned that using the state to foster their

interests would not lead to a wider development but increased concentration of existing wealth and power.

Another point of difference between the types of planning Myrdal advocated and that of the development state theorists was the scope of the plans themselves. Rather than the massively socially transformative state-led planning that Myrdal advocated, the role of the state as envisioned by the developmental state theorists is much more limited. Instead of a behemoth state, Developmental State theorists saw that a small number of bureaucrats in MITI and the heads of industrial firms coordinated the business and government planning to make particular industries more internationally competitive. Despite differences in the size of the activist state envisioned, there is an element of a similar type of economic nationalism and a sense of shared sacrifice in both Myrdal's modernization values and in the developmental state model. However, there was nothing in the plans that attempted to address or challenge social conditions or mass attitudes. Furthermore, unlike Myrdal's acute attention on the need for the state to address inequality, the developmental state is at its core favors the interests of the established elite and is not concerned even remotely in addressing social or economic inequality in Japan. Ironically as the quote below shows, a significant byproduct of the developmental state was, in fact, the "miracle" result of high growth and low-income inequality:

According to Woo-Cumings,

"The developmental state in East Asia has always been a paradise for big business, and unlike the northern European "welfare states," the protective gaze in Northeast Asia has never been downward, toward the downtrodden, but rather up-ward, toward the privileged, to help big business compete more vigorously in the global marketplace—with its legitimacy resting in the eternal invocation of nationalism. The developmental state has provided a far greater trickle-down effect than any Reaganite ever imagined, yielding an egalitarian payoff at the end of the developmental tunnel" (Woo-Cumings, 1999, p. 30).

Compared to its popularity in the 1980s in describing the rise of Japan, aspects of the Developmental State paradigm had become out of fashion in developmental studies in part due to Japan's slide into economic stagnation in the early late 1980s and early 1990s. However, the strength of the developmental state strategy as a useful model for catch-up

development has reemerged due to both decline in appeal of the Anglo-American brand of neoliberalism and laissez-faire economic policies in part due to the 2008 Financial Crisis on the one hand, and successful integration of state-led capitalism in Mainland China and to some extent in the economic activism of the state in Singapore, Malaysia, and Thailand. Furthermore, a comparison between the Southern Asian 'soft state' and the northeast Asian developmental states are somewhat dubious given the difference in the initial conditions. Post-war Japanese had already undergone a rapid social and attitudinal transformation in their society beginning with the Meiji revolution which of which the type of social change that Myrdal advocates in Southern Asian had already occurred.

In summary, there are aspects of the developmental state that represent a success story to the planning ideology that Myrdal advocated, but the differences in the scale and policy goals between the specific type of developmental state policies advocated by Myrdal and those of Johnson and Woo-Cummings to some extent weaken the connection. The success of developmental state in Northeast Asia, especially its later incarnations in South Korea and Taiwan, also shows that while the gigantic superplanning that Myrdal saw and encouraged in Southern Asia would likely lead to failure due to its overreach through the mechanism of the 'soft state', a substantial but much more limited role of the state in fostering development was indeed possible. It should be noted before moving on, that both Myrdal and the developmental states saw the improvement of educational outcomes and fostering of nationalist and productive values among the entirety of the society explicitly led by the state as an essential ingredient in the development project.

6.4.3 The Neoliberal State

A second conception of the role of the state in development since the publication of the *Asian Drama* has been the rise of the gutted neoliberal state. Neoliberal state (and to a lesser extent the New Institutional Economic envisioned state) is even further conceptually from Myrdal normative views. As opposed to Myrdal's view of the role of the state to jumpstart economic development by investing in human development and the developmental states use of state power to coordinate strategic industrialization, the neoliberal school strips the state of its neoclassical role of a non-market actor. Instead, the neoliberal state sells off state assets to the private sector in the name of increased

efficiency and cost-effectiveness. According to Osborne and Gaebler's *Reinventing Government*, there are ten areas that governments should hope to achieve according to the neoliberal vision: "the government should be competitive, mission driven, results oriented, consumer driven, enterprising, anticipatory, decentralized and market-oriented (Osborne & Gaebler, 1992).

With the exception of the goal of decentralization, which roughly equates with Myrdal's grassroots democracy, there is no overlap between the goals of the neoliberal state and Myrdal's modernization ideals. With the exception of the ability of the neoliberal state to protect private property there is little room for state sovereignty in the neoliberal state, and even less attention paid to the role of the state in addressing social and inequalities with the exception of a faith-based assumption in the trickle-down of wealth Woo-Cumming alluded to in the previous subsection. Moreover, trust in the market supplants the role of the state in economic planning, the core of Myrdal's vision to the point to which Hette (2008):

"It is not much of an exaggeration to say that, whereas a five-year plan was previously a must for a developing country expecting international assistance, after the counter-revolution [of neoliberalism] it would have disqualified that country from receiving aid" (p.9). The quote above also underscores the degree to which by the 1990s the so-called Washington Consensus had adopted neoliberal principles and the omnipresent importance of external aid in development.

6.4.4 Good Governance

Although related to the rise of the neoliberal state, the Good Governance (GG) approach had much in common with Myrdal's reformist vision. The good governance approach, according to Rob Jenkins (2008) seeks to, "restructure state bureaucracies, reform legal systems, support democratic decentralization and create accountability enhancing civil societies" (p.516). This echoes Myrdal's earlier cry to reform, rather than expand, the inherited colonial bureaucratic institutions, the education system in particular. Furthermore, the GG approach as well as the general need to focus on the policy implementation of state agencies rather than on the policies themselves or the role of

markets. However, at this point the similarities between Myrdal's view and that of the GG approach largely break down. Again according to Jenkins's (2008), the GG approach was less an indigenous grassroots movement but was instead heavily influenced by the rise in the international development industrial complex and from outside aid donors. Moreover, the GG approach was also associated with the neoliberal school in that it has encouraged government service marketization and public-private partnerships.

6.4.5 Public Private Partnerships

Under PPP policies, government monopolies on utilities and basic services including electricity, health, water, and especially important to the second half of this paper, education were transferred in whole, or in part to the private sector. Although it is anathema to the role of the state as envisioned by Myrdal, the popularity of PPPs should be seen as a reaction to the soft state's inability to adequately provide these services. The connection between the soft state and PPP concept can be seen in the following assessment by Alex Loftus (2008) on the context in which the PPP approach was able to make headway,

"Perhaps the central argument of PPPs in the Global South lies in the real or perceived inadequacies of the state sector. States, it is sometimes argued, are under-resourced, bureaucratic, inefficient and simply unable to deliver the services expected of them. In contrast, partnerships will bring together the finance, efficiencies and dynamism of the private sector with the assumed accountability of government agencies. In the context of state failure, it is argued that utilizing the private sector is the only possible response to the vast needs of low-income citizens" (p. 544).

In the same assessment on the rise of PPPs, Loftus quotes Stiglitz's (2002) finding that "privatization has often served as willing handmaiden to 'briberization'" (p.545). Perhaps more worrying still is Harvey's (2005) assessment that by putting faith in the markets and in PPPs, the neoliberal state by-passes both the state and democratic pressures to the point that,

"an attempt has been made to integrate state decision-making into the dynamics of capital accumulation and networks of class power. Capital thereby acquires a much stronger role in

writing legislation, determining public policies and setting regulatory frameworks (Harvey, 2005, pp. 76-8).

In both quotes one can see that PPP weakens the sovereignty of the state in policy making, increases the likelihood and possibilities for corruption (addressed in Myrdal, 1968, Chapter 20), and strengthens elite power in all areas that Myrdal specifically warned were major obstacles to improving the levels of living in Chapter 12 of *Asian Drama*.

6.4.6 Globalization

Globalization as has been shown has come to have many meanings and many intersections with Myrdal's analysis. McGrew (2006) considers the following definitions to be emblematic of the globalization concept:

- The intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa” (Giddens, 1990, p. 21);
- “The integration of the world economy’ (Gilpin, 2001, p. 364);
- “De-territorialization- or the growth of supranational relations between people” (Scholte, 2000, p. 46);
- Others also have the term is associated with the weakening of the degree of a nation-state’s sovereignty (Scholte, 2000; Ohmae, 1995)

Looking at the definitions above, one can see very little in common with either Myrdal’s state-centric view of the international system; and the need for a historically rooted, heterodox development based on the specific issues and contexts of different local communities. This somewhat longer subsection explores more thoroughly Myrdal’s conception of progress against that of globalization. By doing so, it is posited that the rise of globalization was very much unanticipated and antithetical to Myrdal’s conception of the international system. However, it is also shown that it is possible that more recently the enthusiasm and mechanisms which favored globalization in the 1980s through 2001 may be reversing. By doing so, the belief in the favoring of markets over the state may be

eroding, thereby leading to a potential return to the primacy of the nation-state in some of the ways as Myrdal had envisioned.

The rise of the globalization concept is closely related to the rise of neoliberalism and its emphasis on free trade and antipathy toward the state. Myrdal, as previously shown, was diametrically opposed to this movement therefore it comes as no surprise that the rise of globalization was a glaring omission in Myrdal's analysis which (as discussed in Section 6.3 above) was wholeheartedly focused on the role of the state in engineering social and economic planning. This is not to say that Myrdal was alone among his contemporary scholars in this misdiagnosis. According to Schuurman (2008), the modernization theorists, Neo-Marxists, and Marxists alike were concentrated on the primacy of the nation-state and were all equally blindsided by the eroding factors including a loss of economic sovereignty and political decentralization.

6.4.7 Proponents of Globalization

For globalization proponents lowered barriers between countries have theoretically leveled the playing field for millions if not billions of people once excluded from participating fully in the markets. This, according to its supporters, has allowed for a brighter economic future for well administered, determined, and educated countries to develop quickly and, at least on the national level move toward convergence with developed North America, Europe and Japan (Zakaria, 2011).

Channeling a neo-Kantian understanding of the relationship between increased trade and peace, advocates of globalization have posited that increased amount of trade, and especially integrated global supply chains tightly link economies together. According to Thomas Friedman (1999) this economic integration forced governments to wear a "golden straightjacket" which weakened the economic, fiscal, and military adventurism of states, and but also forces them through markets mechanism more efficient governance.

6.4.8 Threats to State from Globalization

In addition to its threat to the economic sovereignty of the state, the forces associated with globalization have also intruded on other aspects of state sovereignty. First, globalization has led to a quantitative and qualitative increase in the number of other

transnational actors other than the state ranging from Transnational Corporations, NGOs, religious organizations, as well as powerful criminal organizations (Keohane & Nye, 1977). This rise in the number and power of the panoply of actors pressing their interests, in turn, adds to the complexity of the interactions between these actors in shaping politics (Mansbach, Ferguson, & Lampert, 1976). Compared to Myrdal and much of the modernization school's simplistic state centrality, this much more complicated international arrangement weakens both the primacy and authority of the state. Myrdal's state-centric approach is further weakened by the fact that many, if not all, of the newly empowered actors' interests are often opposed to those of the developmental state either by pressing specific communitarian, individual, industrial, or labor interests.

In addition to the increasing range and power of new actors in competition with the state, many scholars, again mostly inspired by the potential damage of state-sponsored war, have looked for alternatives to the state altogether. The World Order Models Project (WOMP) for example, has advocated research on alternatives to the state system focusing primarily on the role of the individual at the global level (Mendlovitz, 1975; Falk, 1995). This view has much in common with those that envision a 'New Medievalism' of competing and rearranging layers of local, national, and regional governance. The coherence of the state and holistic state planning for development, as in Korean or Japanese has also been challenged by the so-called disaggregated state. Here, the state's different ministries or departments collaborate with a wider range of actors including their counterpart bureaucracies in other countries, NGOs, and international agencies, rather than in coordination with other departments in the same government (Slaughter, 2004).

6.4.9 Challenges to the State and Nationalism

Partly due to the issues above, globalization has undoubtedly weakened the monopoly of state power. It is also worth looking at positive and normative views of globalization in relationship to Myrdal's modernization goals (Table 3.1) on the need to foster nationalism above competing (especially communalist) allegiances among the population especially with regards to mobilizing for transformative development. Subsequently, the discourse on globalization (especially in the more developed West) have both positively recognized and normatively advocated for a transition away from

nationalism towards an identity towards a cosmopolitan “world society” (Burton, 1972) or for the “glocalism’ popularized by Roland Robertson where the individual is encouraged to “think globally and act locally” where thinking nationally is conspicuously absent. Linklater (1998), has noted that loyalties and personal identifications with different and occasionally competing communities are increasingly conditional and often fluid, overlapping, and shifting (Waller & Linklater, 2003). Pushing Linklater's view further, Brown (1992) has even theorized alternative forms of citizenship to the current state monopoly.

The issue of divided loyalties due to the forces of globalization may be particularly pronounced among the economic and social elite in the developing world who, though small in number, may increasingly associate themselves with the norms, behavior, and internationalism associated with transnational capital (Samuel Huntington's (1997) Davos Values), then to their countries of origin. This divided loyalty among the elite between nationalism and internationalism adds a facet to Myrdal’s conception of the failure of the elite as a contributor to the ‘soft state’. It also stands in contrast to the nationalistic development goals pursued by both the founding fathers of the post-colonial state, and to likelihood of repeating the successful example of the elite led modernization in the Developmental States of nationalist Northeast Asia states.

6.4.10 The Reemergence of the State Sovereignty for Development

S In contrast to these eulogies for state sovereignty, state planning, and nationalism, a counter current has offered that rumors of the end of the state have been greatly exaggerated. Krasner (1999) and Gilpin (2001) found that although there are more actors and threats to the state due to globalization, the state should remain at the center of the analysis. In contrast to the claim that market forces are unstoppable, Hirst and Thompson (1999) have proposed that states have too quickly relinquished their tools to regulate their economies against an overly hyped “myth” of global economic forces; and with regards to the Neo-Medievalism, the respected international relations scholar Hedley Bull (1977) has worked against the normative push for overlapping actors in favor of a reinvigorating focus on the nation- state. Earlier, An important contribution of nationalism was made by Benedict Anderson (1983) who argued that literacies (both literary and symbolic) created a pantheon of symbols and created and reinforced shared national narratives to create

“imagined communities” among otherwise disparate strangers with potentially different interests in modern states. He argues that both education and communications technologies were needed to disseminate the message, all issues that Myrdal was strongly in favor. This line of reasoning is also similar to Ernest Gellner’s (1983) work on the interrelationship between industrialization and the creation of national languages and cultures. All of these approaches offer that globalization may be more of an interlude between periods of state-centric development than an endless acceleration into a radically different international order.

Like the rise of the neoliberal state, and PPP described above and as shown in the discussion of the NGOs, one way of looking at the rise of globalization is through the lens of Myrdal’s ‘soft state’. Had Southern Asian countries been more capable of delivering the type of modernization they had sold rhetorically, it is possible to envision a more robust pushback against globalization pressures and pried open markets. Again, a comparison between Southern Asian and the more successful Developmental State in Northeastern Asian states provide a useful contrast. By having stronger states, bureaucracies, and more nationally focused elites, Northeastern Asian states were far more able than Southern Asian states to dictate the terms of both of how and in what sectors would be exposed or protected from the forces of globalization. They were also more willing and capable of spreading the benefits of globalization more equitably throughout the country either in terms of taxation or infrastructural development. In contrast, the Southern Asian state with its weak institutions and more fractured politics, were more prostrate to the forces of globalization. Moreover, they have not been able to distribute the gains equitably through social policy or build the infrastructure necessary to distribute more equitably distribute the spoils of growth. Instead, as Myrdal had predicted, there has been a widening gap between the rich and poor, and increase in corruption and elite rent seeking.

6.4.11 The Lasting Hold of Traditionalism

The rise of globalization brought with it many of the forces that Myrdal warned would emerge as threats to the modernization project. The most obvious of which was the rise of religious extremism and terrorism that has many common features to Myrdal’s

traditionalist obstructionism that include: irrationality, a lack of tolerance, rejection of the nation-state, male domination, a disrespect or fear of modern education, etc.

The rise of religious sectarianism in Asia in particular also made visible the states inability or unwillingness to tackle its most extreme traditionalist opponents to assert its authority—all aspects of the ‘soft state’ as Myrdal envisioned in his modernization goal K on social discipline. This perhaps is most clearly the case in Pakistan’s frightening inability to confront Islamism within its borders (most blatantly by harboring Osama bin Laden). In other instances, such as the Muslim insurgencies against the nation state in Southern Thailand and in Mindanao in the Philippines; in the Timor independence struggle; and elsewhere, many Southern Asian states have gone to incredibly bloody lengths to exert their power. However in all of these cases, above the state’s themselves were overtly aligned with the sectarian religious interests of a rival group themselves, thus the ideal type binary Myrdal proposed of a rational non-partisan state against traditionalist rebels is inappropriate.

6.4.12 Rise of the NGO

In addition to not anticipating the rise of globalization, Myrdal also failed to predict the rise of the NGO as an essential actor in development. Just as in the previous subsection on globalization, a comprehensive discussion of the subject of the rise of the NGOs is beyond the scope of this dissertation, however by tracing some of the most important features of NGOs against Myrdal’s understanding of the development agenda it is possible to continue to answer the Research Question 1.

We previously suggested that the characteristics of the ‘soft state’ effectively opened a window through which increased privatization and erosion of the state was possible. The same can also be said of the rise of the NGO. According to Parnwell (2008), the current NGOs emerged from charitable and religious organizations in the global north which, “targeted particular development problems, such as destitution, persecution, hunger, homelessness, and disaster” (p.114). Thus despite the frequent association of indigenous values with the formation of NGOs, the origins of NGOs is a Western derived. This is not to say that the roles that NGOs play are not rooted to the locales in which they operate, but

they are not an organization conceived of in the Global South. That NGOs are associated, allied, and funded by Northern-based organizations and foundations also shows that the same quest which Myrdal undertook in trying to find indigenous Southern Asian developmental goals and institutions remain elusive. It should also be noted again for the sake of emphasis, that although the NGOs have origins in the global North, by the 1980s Parnwell sees that a political space had opened for native NGOs to root themselves and thrive in the Global South.

The rise of the NGOs is associated with a decline or opposition to the state itself. Again with relation to the *Asian Drama*, NGO opposition to the state in some ways represents both features of, and reactions to Myrdal's conception of the 'soft state' which are examined in turn. Parnwell suggests that by the 1980s, "The NGOs of the South have come to predominate [relative to Northern NGOs], and in some cases are so numerous, diverse, and effective that they are challenging the state's historical prominence and legitimacy" (Parnwell, 2008 p.114). Given the fact that many NGOs (using the term as broadly as possible) represent communitarian or religious institutions and interests, they are occasionally recent iterations of the traditionalist conservative obstacle to development, wrapped in the jargon and administrative development and are aspects of the 'soft state'. Often NGOs use antipathy to the state as a recruiting device in a similar way that *Swaraj* in its various national guises was used against the colonial state. An early typology of the different orientations of NGOs to different types of political regimes was offered by Tandon (1991) who reported that at their worst NGOs can be little more than convenient and weakly regulated money laundering organizations, terrorism or drug fronts, or solely used for private benefit.

This view of the NGO as an illegitimate or annoying threat to the legitimacy of the Southern Asian state was highlighted in the Asian Values debates which followed the fall of the command economies. Malaysia and Singapore have been particularly wary of allowing a larger role for NGOs on several grounds. First, they were seen as vectors through which subversive "alien" values of human rights, "deviant" social values, "permissiveness" and all social ills were spread into an otherwise pure and tranquil culture loyal to the state.

A second and more persuasive way of viewing the rise of NGOs and their relationship with the 'soft state' is to see the rise of the NGOs, as a natural reaction to fill the vacuum created by unmet social and economic needs (or "levels of living" in Myrdal-ian terminology). In this way NGOs pressed for issues that went unaddressed or were ignored by the state due to different combinations of the 'soft state' itself or the neoliberal sell-off of the state services. Desai comes close to this view in his summary of the role of NGOs in development writing, that,

"As service delivery agents, NGOs provide welfare, technical, legal, and financial services to the poor, or work with the community organizations in essential services and infrastructure provision. This is frequently a matter of filling the gaps left by the partial service delivery of governments withdrawing from involvement in provision, "and later, "In the past governments of developing countries were seen as spearheading the development process. However, such paternalism reached its limits when it became clear that governments did not have the financial resources to pay for the essential services of the poor and lacked the organizational expertise to be effective" (Desai, 2008. p.526).

A third relationship between NGOs and Myrdal's 'soft state' should also be posited: that the overreach of state planning into every facet of social and economic development, which Myrdal simultaneously (and confusingly) both advocated for and was pessimistic about, was always a bridge too far. Because of this overreach the structure and flexibility of the NGO was a better means by which to address the myriad problems that Myrdal witnessed. In comparing Southern NGOs to the states in which they operate, Parnwell concludes that,

"NGOs have many theoretical advantages over the cumbersome and amorphous institutions of the state in terms of delivering development at the grass-roots level. They are seen to be more flexible, adaptable, and nimble, have shallower decision-making hierarchies and shorter lines of communication, are largely autonomous, and are typically less costly to run because of a high contribution to voluntary inputs into their activities Their philosophy centers around altruism, democracy, popular participation (learning together rather than the simple transfer of knowledge), empowerment, concretization, contextual groundedness, responsiveness rather than prescriptiveness, and the promotion of self-reliance" (Parnwell, 2008, p. 114).

Myrdal would likely approve of the issues that NGOs have put their efforts towards. The most respected NGOs either press for improved conditions for the poor or to check the abuses of the rich and powerful and as such are also closely in-line with the stress that Myrdal gives to the need to address inequality, and the need to provide a counterweight against an abusive or incompetent state. The pro-poor orientation of NGOs is also part of a larger bottom-up approach to development that is somewhat difficult to square with Myrdal's more top-down strategy, but at the same time concentrates on focusing resources on addressing the basic needs of those at the bottom.

6.4.13 Myrdal and NGOs

Despite hope for a responsive, locally rooted, and well-administered organizations for tackling social and political issues, there are also features that strongly differ between an NGO focused development and the Big Push strategy Myrdal suggested. First and foremost, the scale of social and economic change that Myrdal advocated state planners should attempt was well beyond the capacity that even a vast web of NGOs would be able to try, let alone achieve. Desai (2008) suggests that the sheer size and long-term planning of the health and education sectors in particular make them difficult if not impossible for NGOs to administer and as such should fall under the purview of the state. Secondly, an important feature of the 'soft state' in Myrdal's assessment was the ability of the state to impose policies and projects over the objections of the special interests even and populism. Given that NGOs are usually built around the principles of consensus building, grassroots planning and volunteerism, and donations, they are structurally unable to undertake unpopular tasks such as the construction of a dam to provide electricity at the expense of local populations. Furthermore, it has also been argued that NGOs are considerably better at addressing specific tangible issues than addressing structural issues, "such as the distribution of political power, economic and asset wealth or in gender relations are very difficult to wash away by the best intentions of grass-roots activists, and indeed may become reinforced by their activities" (Parnwell, 2008, p. 114). Furthermore, the rise of NGOs does little to foster, and often is against, the type of economic and social patriotism and shared sacrifice that Myrdal included in his modernization goals.

It may turn out that in time NGOs could be incorporated into a reformed state itself. If this were to occur, it would represent a reconstruction of the state and potentially evidence that the problems associated with the soft state as Myrdal had understood them had been “cleaned-up”. However, this is unlikely to happen for several reasons including the loss of legitimacy from the grassroots and a conflict of interests, problems associated with transparency and balance of powers and the larger view that the state and NGO sectors are better at doing different things, should occasionally be working in concert and occasionally in conflict depending on the context.

6.4.14 Community Participation

The community participation approach and the discussion of the rise of the NGOS before it highlight a bottom up approach to development that differs significantly to that Myrdal’s in key aspects. Although both are ostensibly committed to the primary directive of addressing basic needs, Myrdal’s conception, which he shared with the larger modernization school of his time, is essentially a top down heavy-handed approach meant to break up undesired features of traditional and colonial society. In this conception, a strong and committed state uses all its options, including using its sheer weight (and occasionally its monopoly of violence) to impose it will. In contrast, the community participation and NGO based strategies are more geared for a bottom up development and take a much more conciliatory approach to development which is also much more accommodating and likely to romanticize traditionalist interests than the heavy handed approach which Myrdal advocates. Another important difference between the two approaches is the attention to the speed of change. For Myrdal and the modernization theories of his time, especially the Marxists, there was little time or patience for the time consuming deliberations and consensus building exercises proposed by bottom up approach. In short, the difference between the bottom-up and top-down approaches are not simply in tactics on getting to the same place, but are radically different visions of what development is and what goals it should attempt.

6.5 Chapter Summary with Reference to Research Questions

In the discussion above, it was shown that Myrdal's normative vision of the state as the primary agent of modernization and development has subsequently been challenged by competitors from above including international development agencies and the pressures from a primarily neoliberal inspired globalization, and from below in the form of NGOs and decentralization. Furthermore, many of the same changes and threads in the development discourse have questioned the usefulness of the type of top-down development that Myrdal and other mid-century modernization theorists advocated. However, despite the challenges to the state as an actor in development, this chapter has also showed that it is not inconceivable for the state to regain its primacy as the leading agent of social development as Myrdal conceived. Compared to Myrdal's normative view of the state, Myrdal's positivist multidimensional conception of the 'soft state' in subsequent developments since the publication of *Asian Drama* in 1968 has retained more relevancy. In this chapter, this was done by comparing Myrdal's view of the 'soft state' to Chalmers Johnson's (1982) later conception of the developmental state. On this point there are important differences, but the developmental state as it manifested in Northeast Asia, for the most part, followed Myrdal's policy prescription for the state's role in fostering virtuous cycles for development. In addition to the independent value in answering Research Question 1 on the accuracy and legacy of Myrdal's understanding of the 'soft state', this chapter, like Chapters 2 - 5, has two instrumental values. First, it fleshes out the theoretical components of the 'soft state' so it is possible to see its effect on the educational sector in the following chapter. Secondly using the empirical evidence in the second half of the thesis it is possible to test the persistence of the soft state in the South Asian educational sector. Using a spatial analysis methodology it is possible to show that Myrdal's conception of the 'soft state' is applicable to the educational sector.

Chapter 7 Myrdal's Education Sector Reforms Revisited

7.1 Introduction

The purpose of this chapter is to describe some of the qualitative aspects of the education sector in Southern Asia that Myrdal addresses in his *Asian Drama* and its relationship to some of the major movements in the educational discourse. This chapter looks at those aspects that either the author couldn't find empirical data (i.e. teacher training quality at different training centers), or educational issues that do not have an inherent spatial component (i.e. curriculum reform). As such, unlike the following chapters, this chapter does not include a section the Getis-Ord * hotspots. The expanded discussion of Myrdal's view of the education system in this chapter more fully explains the ways in which the education system can stand as a proxy for the theoretical issues described in previous chapters *Asian Drama* including: the need for state planning; circular and cumulative causation; the 'soft state'; the importance of values and attitudes; and the need to encourage equality and spatial equality in the educational sector.

7.2 The Magnitude of Myrdal's Educational Reform Proposals

As with the other issues in the *Asian Drama*, Myrdal saw educational reform of the inherent colonial educational systems as an area that could only be realistically addressed by state-led planning. Also consistent with Myrdal's larger normative stance on most efficient way to encourage development, he suggested that minor adjustments to the inherited educational system, or simply quantitative expanding of the education system would not be sufficient to address its structural deficiencies. With regards to the degree of the changes needed, Myrdal stated clearly and emphatically, "One major conclusion from our study of education in South Asia is the need for a radical change in the entire educational system" (Myrdal, 1968 p. 1810). This he saw as a major component of his larger proposed shift in the sector, "the purpose of education must be to rationalize attitudes as well as to impart knowledge and skills" (Myrdal, 1968 p. 1621). The issue was also a sentiment that Nehru also shared in his 1948 address, "Great changes have taken

place in the country, and the educational system must keep pace with them. The entire basis of education must be revolutionized” (Myrdal, 1968, p. 1810, quoting Naik, 1964).

7.2.1 Components of Myrdal’s Proposed Educational Reform

The holistic changes that Myrdal proposed were means to address the twin goals of imparting both practical and basic educational skills (functional literacy), and as the vehicle through society could move towards rationality and productivity. In short, Myrdal felt that literacy was the only way to a development (as described in Chapter 3). To achieve this change Myrdal offered that there were five “avenues” from which the educational reform could be approached:

- 1) The use of mass media to disseminate knowledge and skills and influence attitudes of the population at larger and special groups;
- 2) Organized activities to raise the literacy rate and provide functional education for adults;
- 3) Formal schooling for children and youth;
- 4) The non-formalized transmission of skills through family, job, or religious instruction;
- 5) State action to change institutions and attitudes through exhortation, legislation, and administration (paraphrased from Myrdal, 1968, p. 1651).

In the list above, Myrdal envisioned a very different type of educational system from the inherited colonial education system. His encouragement of the use of mass media campaigns, and a policy focus which valued practical adult education campaigns over the Western and inherited educational system attest to the degree of radical and immediate change that Myrdal saw as essential to reform efforts of the educational system. It also attests to the stock that Myrdal puts into practical outcomes and functional literacy skills gained over the procedural tasks of taking tests and the collecting of degrees (Myrdal, 1968 p. 1647 and p. 1648). He stresses the need for large-scale government-led mass awareness campaigns as part of educational change. This is most clear in the fifth avenue above,

especially in his use of the word “exhortation” which belays Myrdal’s conception that the government has a mandate to impose its agenda against for education against a reluctant population.

The list of Myrdal’s avenues for education transmission at first appears seems to imply a top-down educational paradigm with the state in the driver seat as both planner and distributor, especially in the fifth point. However, a closer look shows that there is room for both other actors including the private sector, NGOs, religious institutions in the first three avenues, and explicitly so in the fourth avenue. The order that Myrdal lists the five avenues was also reflected in the organization of the chapters he wrote on the education system which begin by addressing the issue of adult education and literacy first, and then addresses the formal educational system.

7.2.2 Cumulative Causation in the Education Sector

Like the other issues that have already be explored in this dissertation, Myrdal did not believe that single-factor solutions were possible. As shown in the quote below taken from a recent UNESCO survey of education in Southern Asia, Myrdal's conception of a multifaceted and interlocking web of related issues has subsequently been internalized into the logic of the developmental community. The quote shows that inequality in access and quality education remains a priority in the educational reform agenda in India. In short—the same problems that Myrdal saw in 1968 continue to be many of the same problems facing the education sector in developing countries today.

“There are no universal recipes for improving [educational] quality; one approach is to define a minimum package of essentials. The evidence cited suggests that this package should include a commitment to provide a stated minimum of instructional time for each student, a safe and healthy place in which to learn, individual access to learning materials and teachers who are sufficiently trained and have mastery of content and pedagogy. An emphasis on minimum standards, however, should not preclude more innovative activities. Some suggested areas for policy included investment in teachers [recruitment practice, pay and conditions of service, in-service and school-based training]; structured child-centered teaching practices; appropriate language policies, regular assessments; and stronger school leadership. Knowledge creation and sharing are also instrumental in building a culture of quality. Good quality must further be synonymous with inclusion, recognizing the special

needs of children living with HIV/AIDS and disabilities, working children, and those from disadvantaged backgrounds” (UNESCO, 2004, p. 4).

Also, as Myrdal had feared and predicted under the spatial aspects of his cumulative causation model, the lack of government action has exacerbated regional inequalities in the poorest countries and that the poorest regions of those countries. These areas have the most untrained and undertrained teachers and generally lower quality. In a regional review of the Education for All (EFA) campaign it was found that in the poorest countries of Southeast Asia, Cambodia, Timor-Leste, and Laos, there was a lack of trained teachers, high rates of teacher absenteeism, and “lax professional standards in general”, attributed by the report to low teacher salaries relative to local standards (UNESCO, 2004, p. 3). National University of Educational Planning and Administration, New Delhi Researcher Govinda (2007) also suggested that the allocation of teachers between rural and urban areas and between schools was irrational” and a major issue in many states. Findings in the South Asia were similar but to a much higher degree in Bangladesh with more underdeveloped areas were found to have 66% untrained teachers (UNESCO, 2004).

7.2.3 Myrdal on State Control of the Educational Sector: Normative and Positive

Myrdal was in favor of South Asian states exerting a strong centralized control over the educational sector if meaningful reform was to be accomplished. Unequivocally he implored, “Effective reform of almost every kind must assume a firmer government control of the educational institutions. There is no point in devising any over-all plan for the development of the educational system unless the government exerts its authority to ensure realization of the plan” (Myrdal, 1968 p. 1820). With regards to the quote above, it is somewhat unclear whether Myrdal’s use of the term “government control” is referring to the central government in particular, or whether he would object to federalization of educational administration, as it exists in India. Despite his recommendation that the state take a firm position on reforming the system, Myrdal is pessimistic as to the governments’ ability to make effective changes as is consistent with his idea of the of the ‘soft state’. Myrdal was unimpressed with the existing state of the educational system in Southern Asia as a whole, and that quantitative expansion of the system was likely to make things worse, writing, “In the wider field of educational administration the inadequacy of the planning,

supervisory, and investigative personnel is a further handicap; with the growing number of schools and students the situation has become more serious” (Myrdal, 1968, p. 1821).

The in addition to a lack of a comprehensive plan for educational reform in the immediate post-independence period, there was little state involvement in the administration and implementation in areas where reforms plans did exist. Rather than an actively engaged central-state, Myrdal writes that the day-to-day operations in the schools themselves were largely autonomous:

“Very often [in Indian schools] they are not even aware of these [government plans] and of their policies and programs. South[ern] Asian countries are all ‘soft states’ and laws are only casually enforced; non-compliance with compulsory school attendance regulations is a case in point (Myrdal, 1968 p. 1821).

Given this perceived inability or unwillingness for the state to actively involve itself against the existing status quo to reform the educational system, Myrdal suggests that the Southern Asian countries may not be administratively prepared for requiring mandatory attendance for students:

“In general, it would seem that governments would be well advised to postpone compulsory schooling legislation until they are ready to provide facilities for all children. Laws could meanwhile be enacted to compel school attendance in those localities where the necessary facilities exist, but then the problem of enforcing the laws arises. Unfortunately, the South Asian countries—being soft state’s are not yet prepared to meet this problem. Many parents strongly resist the idea of education for their children” (Myrdal, 1968 p. 1703).

7.2.4 Lack of Government Planning, and Lack of Implementation

From his perspective in the late 1960s, Myrdal was disappointed in the lack of progress of meaningful planning in Southern Asia writing the following powerful assessment which highlights several aspects of the ‘soft state’ including, the inability to plan; the gap between rhetoric and practice; and the weak possibility that a laissez-faire approach to development would lead to meaningful change. All of which support the idea that the educational sector is well suited as a proxy for the development project as Myrdal conceived it as a whole:

“As late as the mid-1960s no South Asian country had done any really comprehensive planning of the goals of the national education system and of the consecutive steps required approaching these goals. Because the people have been following traditions dating from the struggle for liberation and have been preoccupied with studies and controversies on specific issues, the broad perspective has been lost; educational reform does not figure in what in India is called “perspective planning. Although Nehru and many other national leaders have insisted that the entire system of education be revolutionized, that system has on the whole been left as it was at the end of the colonial era. The same is true in other South[ern] Asian countries. One is tempted to say that in this field the governments have generally adhered to a conservative laissez-faire policy, letting a swelling stream of students take its course through the established channels without interfering other than by trying to enlarge these channels where the pressure was greatest. The main reforms of the system as it was inherited from colonial times, so urgently needed for development, remain largely unaccomplished” (Myrdal, 1968 p. 1659).

In the quote below, Myrdal outlines several more interrelated aspects of the ‘soft state’ that pays lip service to meaningful changes in the system, but fails to adequately or meaningfully confront the underlying problems in the educational system. This he suggests is due to the elite interest in maintaining social stratification and fits closely in with his larger conceptions of the effects of inequality as outlined in Chapter 4. Also evident in the quote below, is the gloomy tone of the book as a whole. Finally, the quote is also symbolic of the book's general lack of specific policy recommendations, or calling out by name the specific institutions, norms, and actors which he saw as having a vested interest in maintaining the status quo of a poor education system in the region:

“The existing educational establishments are part of a larger institutional system, which includes social stratification and this system is supported by people’s attitudes, which themselves have been molded by the institutions. In general, the reforms needed are both different in nature from and far more radical than those suggested by the popular social of increased ‘investment in education’... The South[ern] Asian peoples are not merely being insufficiently educated; they are being mis-educated at on a huge scale. And there are important vested interests, embedded in the whole attitudinal and institutional system, that resist or warp policies intended to overcome both deficiencies” (Myrdal, 1968 p. 1649).

7.2.5 Budget Dilemmas in the Education Sector

Myrdal was aware that the magnitude of change that he was advocating would inevitably face budgeting limitations and that each aspect of reform would increase the cost of the total reform (Myrdal, 1968 p. 1824). Moreover, he relates that state planners were reluctant to allocate larger percentages of the budget to the education sector in general relative to more immediate income generating projects associated with industrialization (Myrdal, 1968 p. 1824). With regards to the problem of educational funding, Myrdal addresses a difficult conundrum related to his understanding of the interlocking factors of negative cumulative causation facing the educational planners in the region concluding,

“in almost every respect, that a correlation exists between educational deficiencies and a low economic level: deficiencies are largest and most prevalent in poorer countries. Educational reform, which is generally costly, is most urgently needed in those countries that can least afford to pay for it” (Myrdal, 1968, p. 1826).

Given this inherent bind, he suggests that the quantitative expansion of the education system be delayed in favor of concentrating limited resources and planning activities on improving teacher training (Chapter 10). However, by doing so, he admits that even if the qualitative aspects could improve the core problem of spatial inequality in the education sector would remain,

“by adopting such a policy [of qualitative reform over quantitative expansion] the regional inequalities would be aggravated- the poorer rural districts, especially in those states that are lagging in educational development, would have to wait still longer to send their children to school. On the other hand, the economically better-off urban centers, and even those rural districts where school facilities are more common-for example, in the state of Kerala in India- would advance still further” (Myrdal, 1968 p. 1826).

This stated concern to use the education system to address social inequality was not matched in the planning and budgeting process, according to Myrdal for several reasons. First, educational priorities were not integrated into larger national development plan (Myrdal. p. 1813). Secondly, no plan or even a coherent vision as to what a fundamentally reformed educational system would look was offered. A conclusion that the India's Education Commission itself in came to in 1964 (Naik, 1964).

7.2.6 Lack of State or Theoretical Focus on Equality in Education

On a slightly more theoretical level, Myrdal takes umbrage with the term, “investment in man”, popular phrase to describe the role of education in developmental planning and in the budgeting discussion in particular in the 1960s. For Myrdal, equating capital investment with the fundamental problem of illiteracy and the poor qualitative state of the educational system was an affront on two grounds. First, equating education with capital in the planning process, he felt, subjected educational priorities to economic cost-benefit analysis thereby missing the political, social, and even moral imperative for education reforms (Myrdal, 1968 p. 1812). In this conception, he essentially is describing the human development approach to development, which was to come later. Second Myrdal also suggests that educational planning was concentrated educational institutions and bureaucracy divided into primary, secondary, and tertiary sectors. This, he felt, focused planners’ attention disproportionately on the secondary and tertiary sectors which mainly benefited the middle class and elites at the expense of adult education programs and the improvement of the primary sector which benefited the poor masses (Myrdal, 1968 p. 1813).

7.2.7 Equality and Universality in the Educational Sector

On the independent and instrumental importance of education for addressing social inequality, Myrdal is unequivocal. He observes that the educational system as it stood was exacerbating and buttressing existing social inequalities writing, “The school systems in the South Asian countries reflect, and in turn reinforce the inequalities of the social structures, especially where they are most extreme” (Myrdal, 1968 p. 1798). Moreover, the problem in inequality was swept under the rug, “We should not be surprised to discover that the crucial issue of equality is seldom mentioned in the literature on the problems of education.” (Myrdal, 1968 p. 1806) and later,

“that extreme social and economic inequality has roots other than poverty, is, of course, admitted. But in a broad way, it seems evident, not only that greater equality is required so as to speed up development, but also less plainly that poverty breeds inequality.... [there is] an important relationship between and inequality that is the specific fact that greater equality of educational opportunities is much more difficult to realize in a very poor country” (Myrdal, 1968 p. 1806ff).

As previously mentioned, Myrdal favored policies that addressed qualitative over quantitative reform. At the same time, he was adamant that the most logical and ethical strategy for improving the education system given the scarcity of resources was not to concentrate on expanding focus on secondary and tertiary schools. He felt that these institutions incubated a minority of educated elite to handle administration while leaving the masses illiterate as the British had done. Given the background inequalities, Myrdal suggested that improving elementary education was a better strategy. From an improved primary school system, the quality of the pool from which secondary and tertiary candidates could be drawn from would be improved (Myrdal, 1968 p. 1669). Doing so he concluded that it was, “important in order to bring about a development of the whole national community, rather than merely enclaves in a stagnant economy... there is a need for a massive effort to make the whole population literate; a marginal advance will not suffice” (Myrdal, 1968 p. 1669).

Another factor of equality and universality in the education sector is the issue of gender equality of access. Myrdal gives more time to gender in his discussion of the educational section in than in other chapters of *Asian Drama*. In particular, his discussion on gender differences in educational opportunities and skills is mentioned in the differences in enrollment data (Myrdal, 1968 p. 1720). He also questions the lack of, and obstacles for, female teachers in the country (Section 10.5.3). Myrdal also points to traditional gender attitudes towards women’s role in the home as a major hindrance to major reason why girl’s enrollment and retention rates in school were low in India (Myrdal, 1968 p. 1726).

7.2.8 Resistance to Educational Reform

As is consistent with the ‘soft state’ concept, the rhetoric of radical change Myrdal encouraged was not being matched by implementation. As he saw it, the state is careful not to threaten existing institutions. Myrdal via Niak, also suggested that the educational sector had worsened with independence due to many of the mechanisms of the ‘soft state’. The high reformist rhetoric of Nehru and others was met with,

“dogged conservatism that refuses to accept change and a tendency to prefer talk to action, so that all action gets bogged down in controversies which thrive on an endless stream of committees, seminars and conferences... In short while we have talked of ‘revolutionary changes,’ we have practiced only, ‘moderate reformism,’ thus providing one more illustration of the divorce between theory and practice that characterizes our life” (Myrdal, 1968 p. 1811).

In particular, Myrdal saw great resistance to qualitative reforms of the educational system, especially in primary schools, “Among the experts there is unanimity about the various reforms that are needed, but tradition and the vested interests of students, parents, and teachers raise formidable inhibitions and obstacles to any changes in these respects” (Myrdal, 1968 p. 1810). That the conservatism he saw came from not from elites, but from the less fortunate of society is telling and reflects his view that often the most radical reformers were elites in the center and that the more conservative and resistant elements to reform were those at the bottom of society. As such, Myrdal pulls few punches and does not excuse the public as victims, but instead includes their recalcitrant attitudes as part of the obstacles to development, a tone that differs considerably from much of the current tone of the development discourse. This chastising is, again apparent in the following quote:

“Indifference on the part of the parents who have had no school experience themselves is a more fundamental obstacle to changing the educational pattern. This negative motivation is especially prevalent in the rural and the poorer areas and poorer countries, and it is here that we find the greatest irregularities in school attendance... Parents should be made to see if their children are accepted in a school, they are obligated to keep them there for the duration of the course. Neither legislation nor more schools will achieve this goal. As in adult education, a popular movement is needed using rational attitudes, as well as idealistic appeals. Such a movement is especially needed in areas of low literacy levels and rates of school attendance,” (Myrdal, 1968 p. 1728)

and later,

“In South Asia, especially in the poorer countries and the rural areas, parents can find justifications for keeping their children out of school in many of the long-established traditions and circumstances of living. A major justification is economic. Children have

traditionally participated in work even at a tender age; they are regarded as a reserve pool of cheap manpower” (Myrdal, 1968 p. 1789).

Finally, Myrdal also suggests that the “romantic and traditionalist” myth of the illiterate peasant, who is wise in part because of his illiteracy, is dangerous insofar as it saps enthusiasm for adult literacy campaigns (Myrdal, 1968 p. 1668).

7.3 Subsequent Persistence of the ‘Soft State’ in the Southern Asian Educational Sector

7.3.1 Subsequent Developments in Curriculum Reform

Many of the problems that Myrdal saw in the education sector above remain at the forefront of the educational agenda today. According to UNESCO (2004), the curricula in the developing countries of Southern Asia remains unreformed, and is for the most part is still “imported or inherited” from developed countries. The report also adds that the curriculum remains either insensitive or irrelevant to learners in developing countries (p. 31). Looking at India, more recently, Banerjee & Duflo (2011) and Muralidharan & Zieleniak (2012) found that the curriculum itself moves too quickly for the pace of the learners and new topics are explored without students grasping the fundamentals. This, they suggested, is a relic of the colonial use of the educational system in India as a tool to identify students of particular promise for mid-level government posts, rather than for the modern purpose of providing a useful universal education to improve broad based productivity, as Myrdal suggested should be the focus. Unlike Myrdal’s suggestion for rapid and immediate change of the curriculum as a first step described in Section 11.1 above, Muralidharan (2012) has recommended that changes to the Indian curriculum are surely needed, but that shorter-term remedies such as increased attention to remedial and catch-up schemes should be implemented in light of India’s closing demographic window (p. 27). Here again there are echoes the omnipresent impact of population growth on the education system, as well as a narrowing of the scope of policy recommendations relative to the suite of Myrdal’s more sweeping recommendations

7.3.2 The Continuing 'soft state' in the Educational Sector

An underlying theme in Myrdal's *Asian Drama* was to realign developmental economics focus away from the myopic focus on applying the neoclassical models and towards examining the "relevant" problems facing the region. Largely this realignment of the research community has occurred. However, implementing these findings into the government policy in the region has largely not happened. Again referring to Muralidharan's influential 2012 policy recommendations for educational reform in India, he suggested that despite the recent expansion of better quality research being conducted on basic education policy in the 2000s the findings have not been translated into meaningful changes in educational planning and policies—which suggests the continuing softness of the state. However, if Muralidharan is correct and improvements are being made in the research on basic education in India, this would be an important improvement in policy reform as Myrdal envisioned.

Myrdal's understanding of the centrality of the government sponsored mass education policies in breaking the vicious cycle of poor teaching quality in Southern Asia has also been strongly internalized by the development community—at least in theory (UNESCO, 2004, p. 3). Govinda (2007) strikes an optimistic tone that genuine improvements have been made in the educational sector beginning with the 1986 National Policy on Education (NPE) and have continued to build momentum through the 1990s and 2000s as interest and activity in the educational sector increased at the national, state, district and non-state levels. Before the NPE was adopted, he saw that the educational system was weakly administered at the state level, but since the NPE the Government of India had inserted itself more boldly into the educational system launching a variety of programs that included,

"a massive infrastructure developing and teacher recruitment drive initiated under the Operation Blackboard Scheme; targeted investments were made in selected districts across the country under the District Primary Education Programme; brought additional resources for the sector through involvement of bilateral and multilateral donors; teacher support mechanisms were strengthened at district, block, and cluster levels" (p.2).

However, given the slow progress of improvement it is hard not to see these reforms as being drops in the bucket in comparison to the scale of sweeping reforms Myrdal suggested. Moreover, touting better donor relations as a major improvement does little to counter the perception of the weakness of the government itself in the education sector or an over involvement in the education sector by the international community relative to Myrdal's perception. Additionally, as shown in Section 11.4.7, the self-congratulation on the much ballyhooed blackboard scheme, implementation of the program has been both unevenly distributed within and between states, and appears to have only marginal (if any) relevance to improving student skills outcomes at the district level. Lastly, the improved teacher support mechanisms that Govinda mentions above largely comes in the form of an expanded administration (Chapter 10) more interested in building adding layers of bureaucracy and facilities (Chapter 11) rather than making the more politically difficult reformation of the existing bureaucracy. Taken as a whole, the improvements touted by Govinda above do little to address the fundamental problems facing the educational sector, at least as seen from Myrdal's point of view.

Just as they were in Myrdal's era, the plans and policies for educational reform are not currently seen as well adjusted to the realities facing the educational sector. Muralidharan, (2012) for example suggests four policy recommendations for the government:

- Making learning outcomes an explicit goal of primary education policy;
- Curricular reform to reflect differences in learning levels and to provide supplemental resources to disadvantaged children including early schooling and remedial attention;
- The use of locally hired-contract teachers especially for remedial instruction;
- Increased investment in governance especially in teacher performance measurement and management.

Looking at these goals, some issues can be raised. Similar to Myrdal's recommendations, Muralidharan's policy recommendations for reforming the Indian education system are largely aimed towards increasing attention on improving the quality

of the education and focusing on educational outcomes rather than process. Both also suggest a readjustment of the curriculum toward basic needs and increased attention to the role of the teacher. Particularly similar the Myrdal's earlier recommendation is Muralidharan's policy suggestion that teachers should be locally sourced echoes Myrdal's earlier suggestion that teachers be beacons in their communities (Chapter 9).

Also telling, is what Muralidharan does not advocate. For example, he does not call for a larger share of the government's budget be given to the educational sector, nor does he suggest that teacher training need to be improved as Myrdal had previously. Lastly, it is worth noting that unlike Muralidharan who was focused on policy suggestions, Myrdal had less to say regarding the educational plans themselves, but was more concerned with the lack of policy implementation with the existing plans, 'on the ground'.

7.3.3 Central vs. Decentralized Educational Systems

Since the publication of *Asian Drama*, an important and lengthy debate has unfolded between whether centralization or decentralization should be encouraged in the educational system. Unlike the East Asian economies that had a virtuous cycle between genuine public support and increased government attention toward basic education (ADB, 2001), Federal Indian governments have not been as able to match their grand public pronouncements with political pressure or effective policy implementation. Chandramohan (2002) recounts that although universal elementary education was featured in the Nehru's midnight speech of 1947 and the policy goal for universal education within 10 years was enshrined in the constitution, few "educationalists and parliamentarians" at either the local or national level have pressured government sufficiently to make the goal a reality (Chandramohan, 2002, p. 181). In a strong indictment on the weakness of Indian achievement in the basic needs areas of the educational sector, Chandramohan (2002) lays the blame squarely on the institutional weakness of the state, very much in line with Myrdal's understanding of the sector and the institutional conservatism in the 'soft state'. However, in his argument it is unclear whether he is referring to the federal or local state governments.

In order to build the more responsive and flexible system that he imagines, Muralidharan (2012) suggests moving planning closer to the state and district level. Part of his plan includes adding more state autonomy over budgets. Doing so, he suggests, would also allow for more experimentation at the state level where best practices could provide examples for the other states. More autonomy over the education system at the state-level would also give the national-level education administrators more of an advisory and research based role rather than the day-to-day administrator. In his suggestion however, he does not discuss the deep existing inequalities and inattentiveness of some states to the education sector. Nor does he address the potential for decentralization to be mismanaged and exacerbate social and educational inequalities, an entirely plausible outcome considering the attitudes of a nonplussed provincial elite in India. In the context of the 'soft state', increased decentralization are unlikely to necessarily result in more radical and effective reforms, as the central state is often reformist that the provincial governments.

7.3.4 Inequality, Planning, and Funding Allocation in Northeast and Southern Asia

Finally, in this chapter it is worth comparing the 'soft state' of education in Southern Asia to the much stronger state of education to the Northeast Asian developmental states with regards to educational financing. Because of the sheer number of pupils the bulk of the national educational budgets in every country are go to the primary sector. This education is usually free for families, or is highly subsidized by the state. This, the ADB suggests, is both out of government concerns for social equity, and because of higher rates of return on investment relative in primary education relative to higher education (ADB, 1994, p. 27). In contrast to the publicly financed primary education in Southern Asia, private sources were the norm for secondary and higher education in East Asia before 1994. This had the benefit keeping public expenditures lower, but had the downside of exacerbating inequality once basic education had been achieved, a concern partially mitigated though merit based scholarships for the underprivileged to higher education sponsored by the state (ADB, 1994, p. 28).

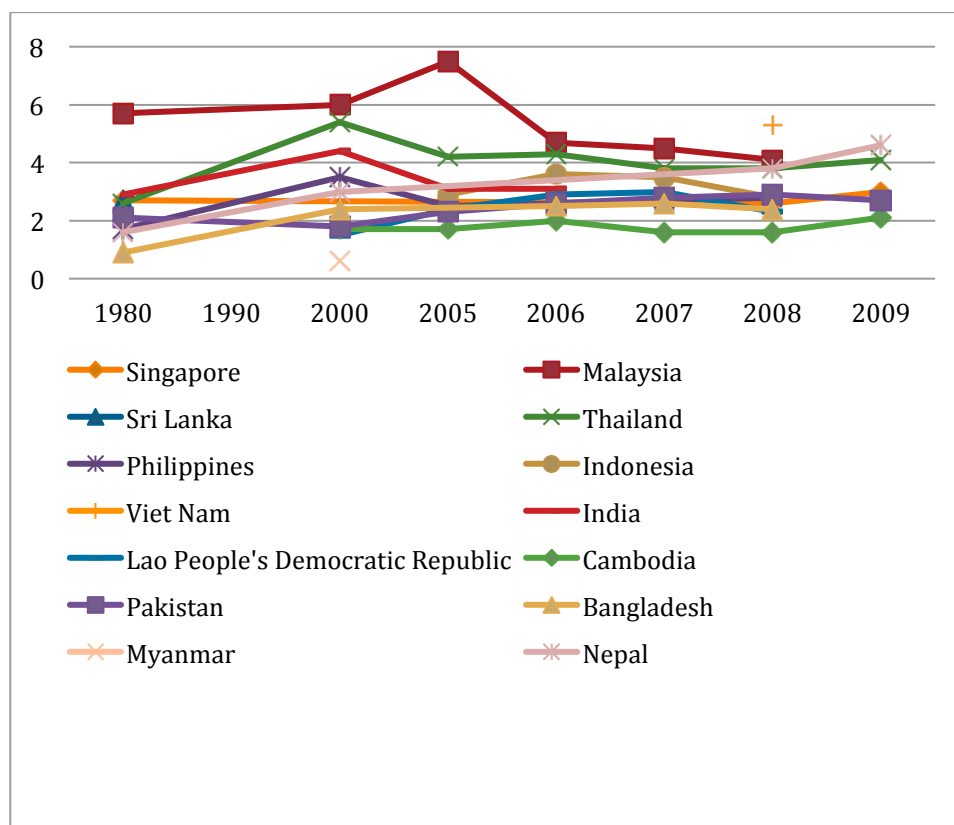
A large portion of the success of the East Asian economies was lauded on the effectiveness of state educational policies. To a large degree, the East Asian economies followed many of Myrdal's educational policy recommendations. Although outside the

geographic borders of this survey, these results offer an instructive counter example to the failure of many of the Southern Asian states within this papers research area. In 1994, an ADB theme paper analyzed human development budgeting among more developed countries of Asia (Japan, South Korea, and Taipei) to distill any lessons that could be helpful for developing members of the ADB. The paper concluded that relative to the other (mostly Western) members of the OECD, the developing countries of East Asian had lower budgets to GDP ratios, but had high proportions of their spending dedicated to social services especially in education and health. This, the Bank concluded was the result of avoiding social security systems, and by keeping military budgets in check.

The findings in the report very much validate many of Myrdal's policy suggested in the *Asian Drama*. First, the report found that the policies undertaken in both the health and educational sectors were generally built around egalitarian policies allocating resources towards basic education funded through a progressive tax code from the relatively rich (ADB, 1994, p. 5). By doing so, the East Asian governments were met in kind with popular support from the masses that backed the governments' educational polices with their political support. This is constant with Myrdal's repeated suggestions that primary schooling be the primary focus of the educational sector; that the equity should have the highest priority in the educational sector; and that if mass education policies were properly conceived and implemented they could stimulate genuine popular political support and snowball into a movement.

In stark contrast, the proportion of the national budget dedicated education relative to GNP has remained very low in Southern Asia. In India, Chandramohan (2002) found that share of the education budget to total national income was only 1 percent, rising to only 3.5 percent by 2002 see Figure 7.1. Despite the raise, the allocation remained woefully inadequate to meet the goal of universal education. This is reflected by the finding that India ranked 98th out of 166 developing countries in terms of percentage of GNP dedicated to education. He suggests that 8 percent would be a more appropriate allocation (p. 184), an estimate roughly consistent with earlier estimates by the Educational Commission (1960) and the National Policy on Education (1968 and 1986 and 1992) that education's allocation should be over 6 percent of the national income.

Figure 7.1 Public expenditure on education in Southern Asian Countries (as % of GDP)



Source: World Bank dataset, compiled by author

7.4 Chapter Summary and Reference to Research Questions

This transitional and supplementary chapter transitioned the direction of research from Myrdal's higher-level theoretical discussions towards their application in the Southern Asian educational sector itself. In Section 7.2, Myrdal's specific normative suggestions for a reformed education sector in the region were outlined. Doing so addresses Research Question two on whether or not Myrdal's theories and policy suggestions have been implemented in Southern Asia and the extent to which these suggestions have proved fruitful in retrospect. This chapter also included aspects of Myrdal's educational discussion which either do not have a spatial component (curriculum reform for example), or for which there is not data available at the district level.

Chapter 8 Literacy and the Spatial Clustering Distribution of Educational Indicators in India

8.1 Introduction

This chapter is the first in which the geography of basic education skills in India is empirically tested. As such, this chapter marks the movement away from answering Research Questions 1 and 2 and towards the more empirically minded Questions 3 and 4 (Section 1.4). It begins with a summary of Myrdal's view functional literacy (Section 8.2), with particular attention to his opinion that school enrollment indicators are an inadequate proxy for defining meaningful literacy rates in a society. Then, Myrdal's understanding of literacy is compared to the changes in the literacy discourse that occurred after the publication of the *Asian Drama*. Here, it is shown that Myrdal's conception of the term "literacy" closely resembles the current established definition of the term as understood by the dominant development paradigms-- but only after being critiqued by expanding definitions and postmodern challenges that attempted to redefine the term in the 1980s. After this discussion, in Section 8.3 the spatial distributions of three different indicators of basic literacy are mapped using the methodology articulated in Chapter 1 to test Myrdal's hypothesis. Specifically, literacy rates collected by the 2010 Indian Census are overlaid with ASER Centre collected student capabilities rates. The resultant maps are then compared to the absentee rates also collected by the ASER Center at the district level. After looking at the national scale, subsequent Sections 8.4-8.14 follow the same methodology but examine the degree of educational at the state level. By triangulating the spatial distribution of these indicators at a sub-national scale, the Research Question 2 is addressed. This chapter does not try to explain the spatial distribution of basic skills and is only concerned with a discussion of the spatial patterns and degree of geographic inequality of those basic skills at the state level in India. The maps generated in this chapter are used in subsequent chapters as a base-layer against which compare the spatial relationship of educational outcome clustering with the other exogenous and endogenous

educational issues that Myrdal considered to be valuable in assessing the competence of the educational system as stipulated in *Asian Drama*.

In conducting the spatial analysis above, this paper concludes that Myrdal's hypothesis was largely correct: literacy rates and school attendance are only weakly related in terms of their spatial clustering and that there are also wide differences between the 2010 Census reported literacy rates and ASER Center student capabilities rates. With regards to the role of the 'soft state' in the Indian education sector (Research Question 3.7), this chapter gives empirical evidence to Myrdal's understanding that there is a tight relationship between equity between districts within a state and higher primary student capabilities rates. In other words, there appears to be more spatial equality in higher achieving states. Thus, the degree of subnational state attention to addressing inequality in the education sector appears to be the determining factor in achieving better education outcomes. Finally, before continuing, the terms and map legends used in this chapter and subsequent chapters may be confusing at first, but are used consistently throughout this and the subsequent three chapters and a complete description is offered in methodology section 1.6.

8.2 Myrdal on Measuring Functional Literacy

Myrdal's normative understanding of the goals of a functional education system suitable for national development are consistent with his views on the need for equality (Chapter 4) and the lead that the government should take in fostering that equality (Chapter 6). Specifically with regards to education, Myrdal is primarily concerned not with the educational opportunities of the elites, accessibility, or curriculum in higher education, but on the expansion of basic literacy among the general public and the least well off in particular. Despite his adamant suggestion that universal functional literacy be the primary focus of both formal and non-formal education policy, Myrdal himself admits that he has difficulty defining exactly what is meant by the term "functional literacy". Only reluctantly, does he accept the 1961 UNESCO definition of a functional literate as, "a person who can with understanding both read and write a short simple statement on his everyday life," (UNESCO , 1961, p. 40; in Myrdal, 1968 p. 1670).

He is skeptical of the definition for several reasons. His first concern is that the ability to demonstrate such a simple task labels people with only the weakest skills as literate. Moreover, the ability to complete a given task does not necessarily mean that the individual can convert their literacy skills to improve their daily lives or occupational productivity (Myrdal, 1968 p. 1671). His second issue with the UNESCO definition of literacy concerns the standardization of the methodology used to differentiate into a binary, dividing the literate from the illiterate. Specifically, he questioned whether or not census takers actually tested the population's ability to complete the task or whether they just asked the respondent whether or not they were literate, and by doing so jeopardizing the methodological standardization of census data. A third and somewhat more minor issue that Myrdal had with the definition of the term literacy, was that a respondent may be able to read or pronounce a text without actually being able to comprehend its meaning, thus they would be mislabeled as literate when they, in fact were not. This he saw as being a distinct possibility for Muslims in particular who were able to pronounce Arabic characters and texts because of their religious training, but were unable to understand their meaning of what they were reading (Myrdal, 1968 p. 1670). This final definition also brings to the surface the question of the diversity of language in the countries of Southern Asia and the complications that such diversity brings in defining one as either literate or illiterate.

Owing of the issues above, Myrdal instead prefers the term “functional literates” rather than simply “literates” to refer to those able to apply reading and writing skills for a practical use. In addition to the ability to read literary texts, Myrdal's conceptualization of functional literacy also includes arithmetical literacy that includes the ability to add, subtract, multiply, and divide and to apply these skills in daily life as an integral component of the term (Myrdal 1968 p. 1682). Although the concept of the numeracy as the numeric equivalent of literacy was only coined a few years before Myrdal's *Asian Drama* in the 1959 Growler Report, he is dismayed at the lack of any statistics then gathered on arithmetical literacy, writing that “It is a serious deficiency in the discussion of literacy that the ability to use numbers meaningfully and effectively is ignored in the literature. No information has been collected on arithmetic skills” (Myrdal, 1968, p. 1682). The ASER center student

outcome data (Section 8.3.6 and other more stringent international tests (Section 12.2.2) that is used in this and subsequent chapters address this concern and collects both numeracy and textual literacy statistics.

Myrdal's emphasis on the use of literacy abilities to solve problems, increase productivity, and promote rational thinking, rather than the academic ability of reading and writing, is implicit in the term functional literacy, as Myrdal understood it. As is shown in Section 8.3.4 and 8.3.5, this view foreshadowed in no small part Amartya Sen's capability approach (1999) insofar as both scholars agree that only through a wider diffusion of functional literacy can other higher order skills and processes be improved up and decisions be made more scientifically by the public. As Myrdal sees it,

"better industrial workers [and] farmers who can perform simple computations and can read newspapers and pamphlets and... The various efforts to organize local planning and self-government and to make the cooperative movement effective are dependent for their success on a considerable diffusion of functional literacy. Modern technology in government and administration as well as in agriculture and technology is continually increasing the need for a high degree of literacy among the people. Generally speaking, literacy opens up avenues of communication that otherwise remain closed; it is a prerequisite for the acquisition of other skills and the development of more rational attitudes" (Myrdal, 1968 p. 1688).

In the quote above one can see that not only does Myrdal see basic functional literacy as having an instrumental in improving worker and agricultural productivity, but also that it is an essential element in increasing the political organization and power. Myrdal's views above also include the power that literacy has in bringing non-elites into the planning process—issues that were to become core features of Amartya Sen's capabilities approach discussed in Section 4.4.7. A similar view of the political impact of expanded literacy was also being adopted World Congress of Ministers of Education on the Eradication of Illiteracy held in Tehran in September 1965 whose revised definition of literacy offered that, "rather than an end in itself, literacy should be regarded as a way of preparing man [sic] for a social, civic and economic role that goes beyond the limits of rudimentary literacy training consisting merely in [sic] the teaching of reading and writing" (Fransman, 2006; Yousif, 2003).

8.2.1 Equating Functional Literacy with School Enrollment

Although Myrdal prefers the term, "functional literate" to "literate", the increased ambiguity of the latter term further complicates the already difficult definitional problem described earlier. As Myrdal recounts, the problem of estimating the number and percentage of functional literates was methodically sidestepped by UNESCO's assumption that after four years of formal schooling an individual should be considered functionally literate—without assessing the quality of education imparted in those four years (UNESCO, 1956 from Myrdal, 1968 p. 1682). Myrdal is keen to note that equating time in school with functional literacy was fraught with problems. First he notes the most glaring issue: that of the low quality of education taking place in underfunded and unreformed schools would inherently lengthen the amount of time needed for students to obtain the skills required to be considered as functionally literate (Myrdal 1968, p. 1682). In a related second critique, Myrdal adds that school attendance in Southern Asia was often irregular with students dropping out, repeating grades, and frequently absent and thereby weakening the theoretical link between years attended and skills learned (Myrdal, 1968 p. 1683).

Although Myrdal does not say so explicitly, equating school attendance with functional literacy has the additional problem equating functional literacy with formal education. This, in turn, crystallizes the existing inherited child focused school inherited from the colonial period and by doing so circumvents the possibility non-formal education strategies to impart functional literacy to adults. Before surveying some of the changes in the discourse on the development of educational indicators collected in the region, it is first worth noting Myrdal's caution on the use of indicators altogether when attempting to make meaningful measurements on educational attainment in a given society:

"[it is] difficult to define a relative level of education. Education takes many forms, and again there is no common denominator. One may attempt to determine the percentage of literates in South[ern] Asian countries. Similarly, one may seek to ascertain how many children in a certain age group attend schools of various types, how regularly they attend, for what period of time and with what results in terms of grades and examinations passed. Literacy and other skills may be imparted by means other than formal schooling. Important educational efforts, such as agricultural extension work and attempts to disseminate technical information to workers in industry, may be undertaken even though all or most of the

people taught are illiterate and remain so. In all forms of education, improving attitudes is at least as important as imparting skills. These observations are only meant to illustrate the diversity of factors that an analysis of education must take into account. There is a dearth of factual information in regard to all aspects of education in South[ern] Asia—even such simple items as literacy and school attendance are largely unknown – but even if such data were available they would not afford a basis for calculating a level of education or a change in such a level” (Myrdal. p. 1534- 1535).

8.3 Subsequent Review of Literacy Discourse

The discourse on the definition and meaning of literacy that took place immediately after the publication of *Asian Drama* differed dramatically from the direction that Myrdal had suggested in Section 8.2 above. Myrdal’s suggestion that the focus should be on teaching “usable” textual and numeric literacy expanded considerably to include altogether different types of literacy. Among others, Street (2003), Lankshear & Knobel (2003), Cope & Kalantzis (2000) have suggested an expansion of the term literacy in several directions listed in Table 8.1.

8.3.1 Shifting Definitions of Literacy

Related to the expansion of the types of literacy, the definitions of the textual literacy that Myrdal described as essential have also been refined. The refinements in the term literacy have often been more expansive than restrictive as they have gradually adopted alternative types of literacy into the definition based on the practices of non-Western social groups. Similar to the expansion of the meaning of textual literacy, the expansion of the definition of numeracy has also expanded. Evens (2000) offers that,

"provisional working definition for a reconstituted idea of numeracy as meaningful for social practice that includes the ability to process, interpret and communicate numerical, quantitative, spatial, statistical, even mathematical, information, in ways that are appropriate for a variety of contexts, and that will enable a typical member of the culture to participate effectively in activities that they value” (p. 236 from (Fransman, 2006).

Related to the expansion of the types of literacy, the definitions of the textual literacy that Myrdal used as essential have also been refined. The refinements in the term literacy have often been more expansive rather than restrictive as they adopt alternative types of

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Furthermore, Archer and Cottingham (1996) have called into question the need for a written arithmetic to be included at all based on the finding that some numerical illiterates have been found to be quite capable of doing mental arithmetic to a surprising degree. Of these two reconsiderations of numeracy, Evans's view is closer to Myrdal's, but includes higher-order skills than Myrdal suggested should be measured. In contrast, Archer and Cottingham's questioning of usefulness of numeracy altogether represents a threat to the conception literacy as a whole, and as such, is conceptually very far from Myrdal's view that universal literacy be the cornerstone for human development.

8.3.2 Focus on Literacy Rates of Disadvantaged Groups

Similar to the increased attention to higher order skills, the discourse on literacy and on numeracy in education primarily occurs in developed world and as such often turns away from a lower-order skills of the 1961 UNESCO definition described above. The discussion has moved towards a multi-cultural and gendered discussion of literacy, which also expanded deeply into the issue of special education for the disabled. This development is consistent with Myrdal's conception of the importance of addressing inequalities in society through education and literacy. However, the degree of academic focus on students with disabilities since the 1960s reflects a split between the developed and developing countries discourse on literacy and inequality. This change in the focus from expanding education of lower order basic skills to the unique disabled reflects the fact that in the developed world the lowest-hang fruit of universal literacy (as Myrdal understood the term) has largely been achieved. At the other end, the literacy discourse also adopted

higher-order skills in addition to textual and numeric literacy into the suite of “basic skills” as shown in table 8.1 below.

Table 8.1 Non-textual literacies

A) Information literacy
B) New Media Literacy
C) Digital/computer/ ICTs literacy
D) Visual Literacy
E) Environmental Literacy
F) Political / Civic/ Citizenship literacy
G) Cultural Literacy

Source: (Fransman, 2006)

Although the cognitive issues of language acquisition are fascinating, they are outside the scope of this thesis. However, it should be noted that Myrdal’s contention with the problem of falsely identifying those with very weak skills as literate has been frequently studied. Abadzi (2004; 2003), for example, found that of the newly literate, the speed with which words and sentences are read and comprehended has a great deal to do with the degree by which the meaning can be retained. From this one can see that Myrdal’s view of the difficulty in counting literates remains an unresolved issue, and that a methodological “solution” to counting literates remains elusive. Finally, Myrdal’s preference of functional literacy as opposed to “literary” literacy has developed into an important concept in the literature. Scribner and Cole (1978), for example, found that the types of texts used to define literacy are often reflective of school-based learning rather than of skills needed in more practical and less literary context of everyday life.

8.3.3 The Post-modern Critique of Literacy

The post-modern critique on literacy has focused on the inherent and underlying power components that are embedded into definitions of literacy, and from which warn against the social and power implications of literacy (ironically, in difficult to read texts!).

This branch of the debate does strongly echo Myrdal's overriding concern for examining and addressing the underlying structures that exacerbated social inequality, but have gone much farther and lapsed into a romantic vision of the illiterate as noble and untainted, with her illiteracy a form of resistance, rather than a tool of empowerment. This type of analysis did much to understand the nature of oppression and value-laden aspects of literacy (and especially the way that it is taught), but did little to expand it in the developing world. Moreover, the post-modern and anti-development discourse sapped intellectual confidence needed to organize literacy campaigns. In addition, the post-modern critique on maintaining and legitimizing power structures ironically provided ideological cover for elites reluctant to educate the masses, which expanded the social divide. It should also be noted that the discussion took place primarily in the most esteemed universities in the developed world and was, despite the radical nature of the discourse, primarily confined to academic discussion (Fransman, 2006).

8.3.4 Literacy as Empowerment

While the post-modernists stressed the problems and limitations of literacy in academia, those closer to the understanding of education's role in development saw literacy as an essential component of empowerment and emancipation. This view of functional literacy as a tool for the emancipation from poverty resurfaced in a very similar way that Myrdal and the modernization theorists had understood it in the 1960s. Even closer to Myrdal's conception, the New Literacy Studies (NLS) in the 1990s (Gee, 1999; Barton & Hamilton, 1999; Collins, 1995 from Street, 2004) were concerned with, "the everyday meanings and uses of literacy in specific cultural contexts and links directly to how we understand the work of literacy programmes, which themselves then become subject to ethnographic enquiry," (Fransman, 2006; Street, 2004).

This approach towards contextualizing literacy for practical needs in largely non-Western contexts, and the integration of such findings into the pedagogy of literacy teaching retains much of Myrdal's approach outlined in *Asian Drama* and fits into Myrdal's methodological concerns described in Chapter 3. However, in doing so, the focus on the locality of the studies has been seen as making monitoring measurement of literacy for comparisons more difficult (Wagner, 2005). The Brazilian education theorist and activist

Paulo Freire (1995) bridged the divide between the postmodernist critique on the inequality and Western biases in language by exploring and using the emancipatory potential of literacy against the structured and authoritative environment of the schooling system. Freire, like Myrdal, believed that gaining literacy skills could have a transformative and multifaceted impact on change social attitudes and conditions. Also like Myrdal, Freire was adamant that addressing adult illiteracy using new and practical methods, rather than focus on traditional children-in-school-based learning would pay higher and faster dividends in terms of social change and empowerment.

8.3.5 Literacy in the Human Development Approach

The Human Development Approach and related capacities approach differ markedly from the postmodern distrust of literacy and led to resurgence in the developmental community's moral and normative confidence in encouraging literacy. Specifically Sen conceptualizes illiteracy as an “unfreedom” (see Section 4.4.7), whereas literacy increases individual agency, “as a member of the public and as a participant in economic, social and political actions’ (Sen, 1999). Sen’s work on literacy has also done much to resituate the conception of literacy from an individual skill in favor of seeing it as a social practice in a similarly way as Myrdal had earlier.

Also like Myrdal’s view from 1968, the UN Development Group retained a conception of literacy only slightly modified from the UNESCO definition from Section 8.2. The quote below from the Expert Meeting on Literacy Assessment at UNESCO in Paris summarizes the organization’s current working definition of literacy that parallels’ Myrdal’s functional literacy concept:

“There is agreement in all the definitions and concepts we have reviewed on some core elements that are common denominators. Those elements include the whole range of communication skills, including reading, writing, and arithmetic. There is also a consensus in those definitions that literacy should originate from a demand that reflects the need of the learner or learners in a particular context. Whatever the demand may be, that demand cannot be isolated from other concerns in the life of the individual. For this act of learning, the learner and his community must be involved in the conceptualization and the design of what will be offered by way of literacy training. The learning environment should be

designed to empower the learner rather than reduce him to a silent powerless receiver of instructions” (Yousif, 2003 in Fransman, 2006).

In addition to the similarity in definition the same conference also retains the ambiguity behind the definition and the stresses the importance of policy and implementation of meaningful literacy programs is also similar to Myrdal’s early recommendations, “a water-tight compartment universal definition of literacy is neither possible nor desirable. What is desirable is a broad-based definition which can be used to plan, implement and assess literacy programs” (Yousif, 2003 from Fransman, 2006).

Summarizing the evolution of the literacy discourse, this chapter thus far has shown that despite the anti-development and post-modern critique, the currently accepted working definition used by the most influential development organizations have only undergone minor adjustments since the time of Myrdal’s *Asian Drama*. Moreover, with the exception of numeracy, the non-textual literacies, such as computer and symbolic literacies have not been deeply integrated into the current understanding of literacy as understood by the leading development institutions. Moreover the modifications in the meaning of the term that have adopted have, to a degree, incorporated the stress on practical and socially contextualized uses of literacy and on the importance of literacy as a means to address, and not exacerbate social inequalities as Myrdal suggested they should. In the next section, it is shown that in addition to the definitional return to Myrdal’s understanding of literacy the methodological collection of the literacy data has only recently addressed some of the issues Myrdal discussed in the beginning of this chapter in India.

8.3.6 Methodological Evolution in Literacy Data Collection

As described above, Myrdal disagreed on UNESCO’s early decision to equate functional literacy with grade completion. This equivocation has had a profound and lasting impact on the type of data collected and the policies pursued by international, national, subnational, and NGO educational development organizations. The focus on school enrollment as a proxy for educational skills is integrated into the many of the most influential indicators of educational achievement and measurement of socio-economic growth. As such, the most frequently calculated indicators collected by both national and

international education organizations are Gross and Net Enrollment Ratios (GER / NER) and the Average Years of Schooling (MYS) These relatively simple indicators are themselves integrated into more complex indicators and indexes. An important example of this is the Human Development Index, that incorporates the social factors of health and education with economic data. In this index, the average years of schooling is used as the sole indicator as a proxy for education. The same is also true of other educational indicators including the educational GINI coefficient developed by Barro and Lee (1993) which calculates the equity of education by the percentages of the population that have completed, or partially completed, different levels of education. In contrast to the dominance of school attendance derived indicators, the only educational skill measured and reported at the international level remains self-reported literacy as collected in national censuses. The dominance of enrollment-based indicators must be seen as rooted in their methodological simplicity of their calculation rather than their ability to precisely assess educational achievement. However, there is some movement away from these attendance and self-reported indicators as student participation and achievement in international tests such as the Trends in International Mathematics and Science Study (TIMSS) and The Progress in International Reading Literacy Study (PIRLS) tests are becoming more prevalent (see Section 12. 2.3).

The data used in this research was collected by the Annual Status of Education Report (ASER) which measures the ability for children aged 5-14 to complete basic textual and numerical tasks that include recognizing words, letters, and numbers, and the ability to read and do simple mathematic as well as survey the school attendance of children aged 3- in a standardized nationwide and transparent sampling methodology. Instead of the more comprehensive internationally administered tests which use scores as an output, the ASER data is recorded as a binary based on whether or not the respondent could complete, or could not complete a given skills test. As such, the output data is in terms of the district rate rather than a score. This makes the data more useful in assessing equality of basic skills in a given area. Because of this, the tool most closely aligned with the Myrdal's theoretical stress on educational outcomes and equality. Unfortunately, the data has only been

collected since 2006. This makes temporal discussions of change in regions through time limited.

A more detailed description of the methodology can be found on the ASER Centre's website. Though it should be noted that the simple fact that such a study is conducted countrywide testing seven lac children in 15,000 villages annually throughout in India and Pakistan is itself laudable. That its results are freely available to the public also suggests that the organization is making a serious effort to at least provide a comparable baseline understanding of literacy for India. Only with such data can the state begin to deal with qualitative issues and to be able to meaningfully track temporal and spatial changes in student outcomes between districts and states more systematically. The data also allows researchers and planners to identify and isolate those areas in India that have had more success (or failure) in teaching functional literacy. For these merits, the data is used extensively throughout the remainder of this and the subsequent chapters.

The lead organization conducting the ASER survey is an Indian NGO known as Parham in conjunction with 500 partner organizations and 25,000 to 30,000 volunteer surveyors. Reflecting the softness of the Indian government educational sector, ASER is an NGO rather than the government report. This suggests either the unwillingness or lack of initiative on the part of Indian government to test educational quality proactively. On the other hand, the fact that an NGO was able to conduct a survey at such a massive scale itself reflects on the expanded professionalization and capacity of the NGO sector.

8.4 National Level Spatial Distributions of ASER Achievement Outcomes

Before looking at the spatial distributions of skills, it is useful to first examine the statistical distributions of the educational outcomes of districts in India. As shown in Table 8.2 below, there is a significantly wider distribution in z-scores for the ASER capability rates than literacy rates or the absentee rates. Half of the districts in the ASER achievement average fall outside the ± 1.65 standard deviation threshold, compared to 41% in the literacy rate distribution, and 34% of districts in the absentee rates. Secondly, 20% of all districts in the average ASER capacities rates fell outside the most extreme ± 2.58

threshold, compared to a slightly lower 17% of districts in the literacy map, and only 9% of absentee rate maps.

Looking specifically at the lowest educationally performing areas (the cold spots), there are 14 (2%) more districts below the -2.58 std. dev. in the literacy indicator than in ASER capabilities rate. However, in total there are more districts with z-scores lower than the -1.65 std. dev. compared to the literacy rate and there are more than twice as many districts within the moderate -1.96 to -2.58 range. At the other end of the spectrum, in the

Table 8.2 District Z-score distribution count at the national level for ASER, Litrate and, Out of School Rate [percentage of total in brackets]

	ASER Avg. Cap. Rate Hotspots [%]	Lit. Rate Hotspots [%]	Out of Schools Hotspots [%]
STD. Dev. Less than -2.58	43 [8]	57 [10]	4 [1]
STD. Dev. From - 1.96 to -2.57	75 [13]	37 [6]	60 [11]
STD. Dev. From - 1.65 to -1.95	29 [5]	28 [5]	42 [8]
STD. Dev. From - 1.65 to 1.65	281 [50]	345 [59]	370 [66]
STD. Dev. From 1.65 to 1.96	20 [4]	27 [5]	14 [3]
STD. Dev. From 1.96 to 2.58	46 [8]	49 [8]	23 [4]
STD. Dev. More than 2.58	65 [12]	43 [7]	46 [8]

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Table 8.3 Ten-State tables of distributions of ASER capabilities statistics [rank]

	Mean	Range	STD	Count	CV
Andhra Pradesh	76.07 [1]	31.30 [2]	7.24 [2]	22	0.10 [1]
Karnataka	69.75 [2]	45.00 [8]	10.50 [8]	27	0.15 [4]

Maharashtra	65.32 [3]	37.85 [5]	9.95 [5]	33	0.15 [4]
Gujarat	59.04 [4]	39.03 [6]	8.27 [4]	25	0.14 [3]
Tamil Nadu	54.57 [5]	27.75 [1]	7.11 [1]	29	0.13 [2]
Odisha	53.81 [6]	58.80 [9]	16.08 [10]	30	0.30 [7]
Bihar	52.47 [7]	31.40 [3]	7.99 [3]	37	0.15 [4]
Rajasthan	51.11 [8]	36.38 [4]	10.04 [6]	31	0.20 [5]
Uttar Pradesh	49.69 [9]	43.48 [7]	10.05 [7]	67	0.20 [5]
Madhya Pradesh	49.30[10]	60.43 [10]	10.78 [9]	43	0.22 [6]

Source: Data from ASER, 2012 statistics generated by author

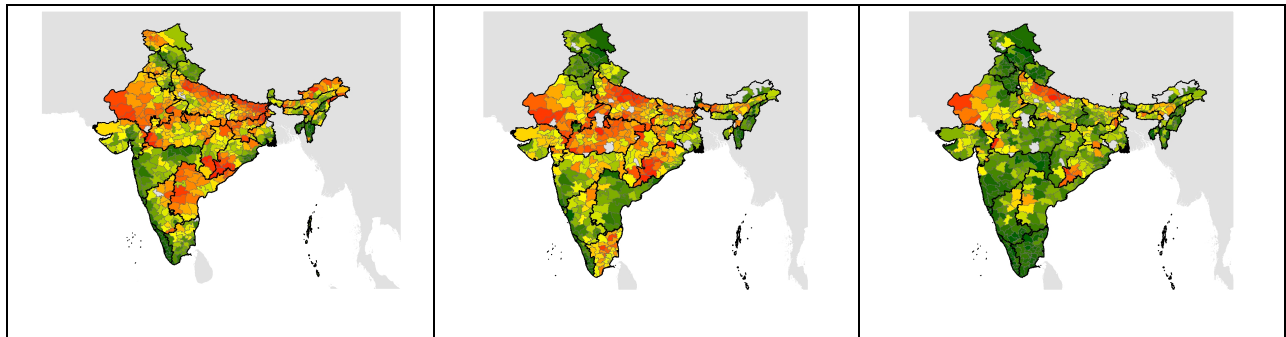
highest performing districts, there are 5% more ASER capabilities districts above the 2.58 std. dev. threshold and 4% more beyond the 1.65 threshold compared to the literacy rate. In the absentee rates, 9% of districts are outside the ± 2.58 threshold of which only 1% is below the 2.58 threshold. As such, in terms of the absentee rates, districts are more likely to be underachieving districts (high std. dev. beyond 2.58) than over achieving below -2.58.

Table 8.4 Ten-State tables of distributions of literacy rate statistics [rank]

	MEAN	RANGE	STD	COUNT	CV
Maharashtra	80.72 [1]	25.53 [4]	5.53 [1]	34	0.07 [1]
Tamil Nadu	79.13 [2]	23.21 [3]	5.47 [2]	28	0.07 [1]
Gujarat	76.71 [3]	26.71 [5]	6.62 [6]	25	0.09 [2]
Karnataka	75.00 [4]	29.01 [7]	7.60 [9]	26	0.10 [3]
Odisha	70.84 [5]	40.44 [10]	12.49 [10]	30	0.18 [5]
Madhya Pradesh	68.49 [6]	37.77 [9]	7.29 [7]	48	0.11 [4]
Uttar Pradesh	67.52 [7]	33.38 [8]	7.38 [8]	68	0.11 [4]
Andhra Pradesh	66.29 [8]	28.21 [6]	6.44 [4]	23	0.10 [5]
Rajasthan	65.15 [9]	21.70 [1]	5.65 [3]	31	0.09 [4]
Bihar	61.39 [10]	22.29 [2]	6.47 [5]	36	0.11 [4]

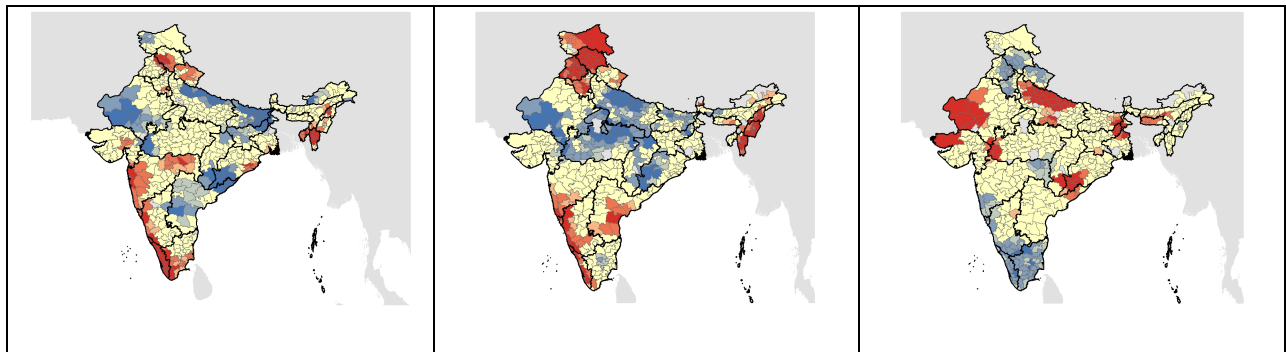
Source: Data from Government of India Census 2010, statistics generated by author

Figure 8.1 Raw 2011 district educational outcomes with high rates in green and red low rates. Literacy rates (left) ASER average capabilities rates (center), and absentee rates with red having more absenteeism (right) and green less.



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.2 National Literacy Rate hotspot (left); National average ASER basic capabilities hotspots (center); and national ASER absentee hotspot map using district data from ASER 2011. Red areas show hotspots and blue cold spots with darker shades having more extreme z-scores.



Legend / Z-score	≤ -2.58	-2.57 to -1.97	-1.96 to -1.66	-1.65 to 1.65	+1.66 to +1.96	+1.97 to +2.58	≥ 2.58
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Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

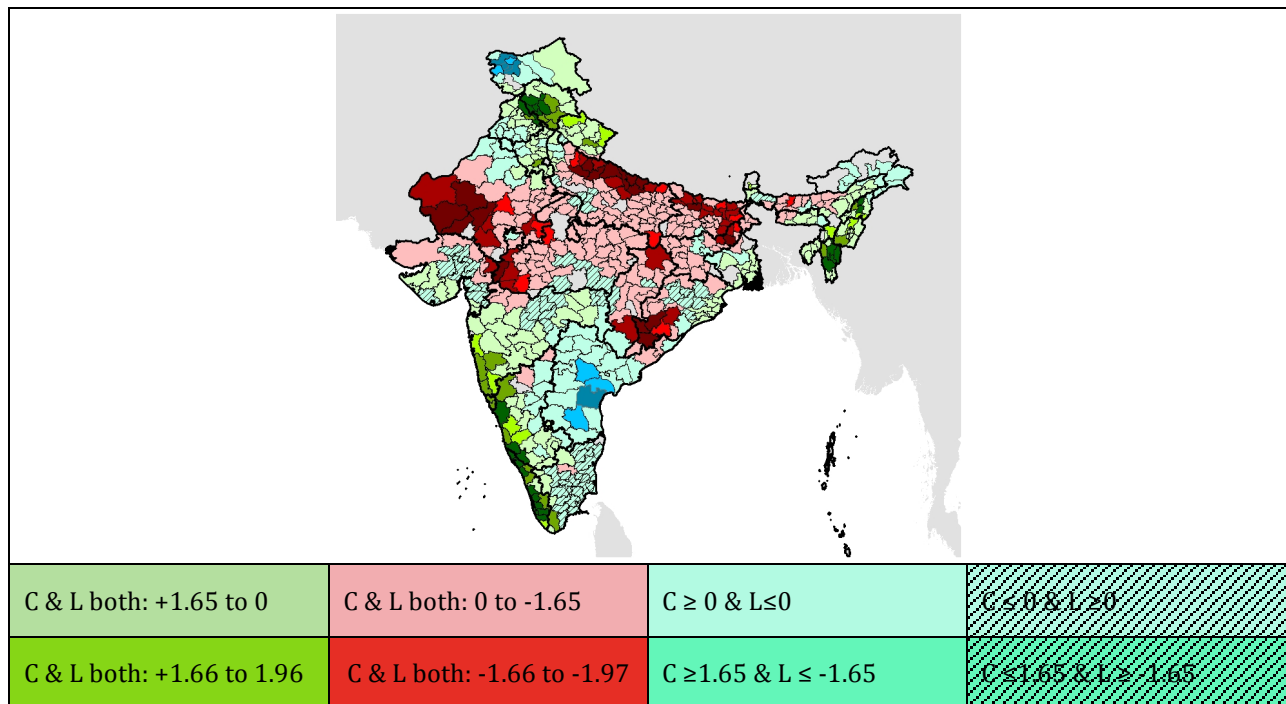
This section examines national education trends regarding the three indicators with regard to their relationship to state borders at the national levels. In subsequent sections, the state level spatial distributions are discussed. In all the maps above, it is evident that both skills and absenteeism do appear to cluster spatially, with few districts with z-scores outside ± 1.65 occurring in isolation or in small clusters. Instead, in the literacy, ASER capabilities, and absentee maps, there is stronger hot and cold spot clustering. In the literacy map, this is especially apparent along the breadth of the Western Coast from the Southern Cape in Kerala, Tamil Nadu, Karnataka, and into Western Maharashtra. This hotspot also corresponds spatially with similar distributions in the absentee cold spot in absenteeism map which is much weaker intensity and extends further into Tamil Nadu and southern Karnataka than either of the ASER capabilities map or the literacy map. A second

prominent hotspot feature in both ASER and literacy capabilities maps is the intense hotspot in the northern states of Himachal Pradesh, Punjab, and to a lesser extent in Haryana and Uttaranchal. In this case, both the intensity and breadth of the cluster is much stronger and wider in the ASER achievement map than in the literacy map. The absentee cluster also has a similarly cold spot in this area, though it has much less intensity. A third interstate hotspot cluster occurs in the southernmost of the Northeastern States along the shared border with Myanmar. Here there are stronger literacy clusters in Tripura and Mizoram; and stronger ASER capabilities in Mizoram, Manipur, and Nagaland. Unlike the previously discussed interstate hotspots, this third spot does not correspond to a similarly located absentee cold spot (Figure 8.3).

8.4.1 Capabilities and Literacy Overlay

Overlaying the ASER Capabilities hotspot map with the literacy hotspot map in Figure 8.3, the hot and cold spots are for the most part aligned spatially. Together they account for much of the country as 74% of districts have $C+L+$ or $C-L-$ classifications between the two indicators (Table 8.5). However, only 22% of the districts are above the ± 1.65 threshold in both indicators.

Figure 8.3 Capabilities and literacy z-scores overlaid.



C & L both: +1.97 to +2.58	C & L both: -1.97 to -2.58	$C \geq 1.97$ & $L \leq -1.97$	$C \leq 1.97$ & $L \geq -1.97$
C & L both: $\geq +2.58$	C & L both: ≤ -2.58	$C \geq 2.58$ & $L \leq -2.58$	$C \leq 2.58$ & $L \geq -2.58$

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Looking at the spatial distributions of the $C+L+$ overlay (shades of green), there are four contiguous, or nearly contiguous, clusters. These occur along the western seaboard; in the far northern states; the northeastern states; and less significantly in coastal Odisha and Coastal West Bengal. While there are $C+L+$ classified districts occur across several states, the 25 highest performing districts (over 2.65 std. dev. from the mean) occur in only six states: Kerala (9 districts), Himachal Pradesh (5), Mizoram (4), Karnataka (3), Punjab (2), and Nagaland (2). With less intensity, the moderate hotspots occur in ten states, all of which border either other moderate hotspots or extreme hotspots with the exception of Jhajjar District, Haryana (which borders New Delhi, a null value region), and Almora, Uttaranchal. The weakest statistically significant hotspots occur in eleven states and are only located adjacent to strong hotspots.

Table 8.5 National distribution of districts with overlapping higher student outcomes and higher literacy ($C+L+$) and lower student outcomes and lower literacy ($C-L-$) districts by degree of intensity.

	$C+L+$	$C-L-$
Between ± 1.65 Std. Dev.	125 (23%)	164 (30%)
Weak	11 (2%)	12 (2%)
Moderate	22 (4%)	30 (5%)
Extreme	25 (5%)	18 (3%)
Total	183 (33%)	224 (41%)

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.4.2 Poor Performing Districts with Low Capabilities and Low Literacy ($C-L-$)

Looking at the other end of the spectrum, districts with overlapping literacy and ASER capabilities, there are many of the same spatial patterns across all of three maps. If the $C-L-$ districts below the ± 1.65 threshold are included, there is a contiguous swath of

lower than average performing districts stretching from the Pakistan border in Rajasthan and Gujarat in the west, to Assam in the east, and from Uttar Pradesh in the north to Andhra Pradesh in the south. Only three of the statistically significant overlapping C-L-districts lie outside this wide swath occurring in Bidar and Bijapur, Karnataka and Salem, Tamil Nadu. However, unlike the extreme hotspots (C_e+L_e+) described above, there aren't as many examples of clustering of extreme cold spots, crossing state borders. However, if moderate cold spots are included, there are cross-border clustering in three of the five discernable national cold spots.

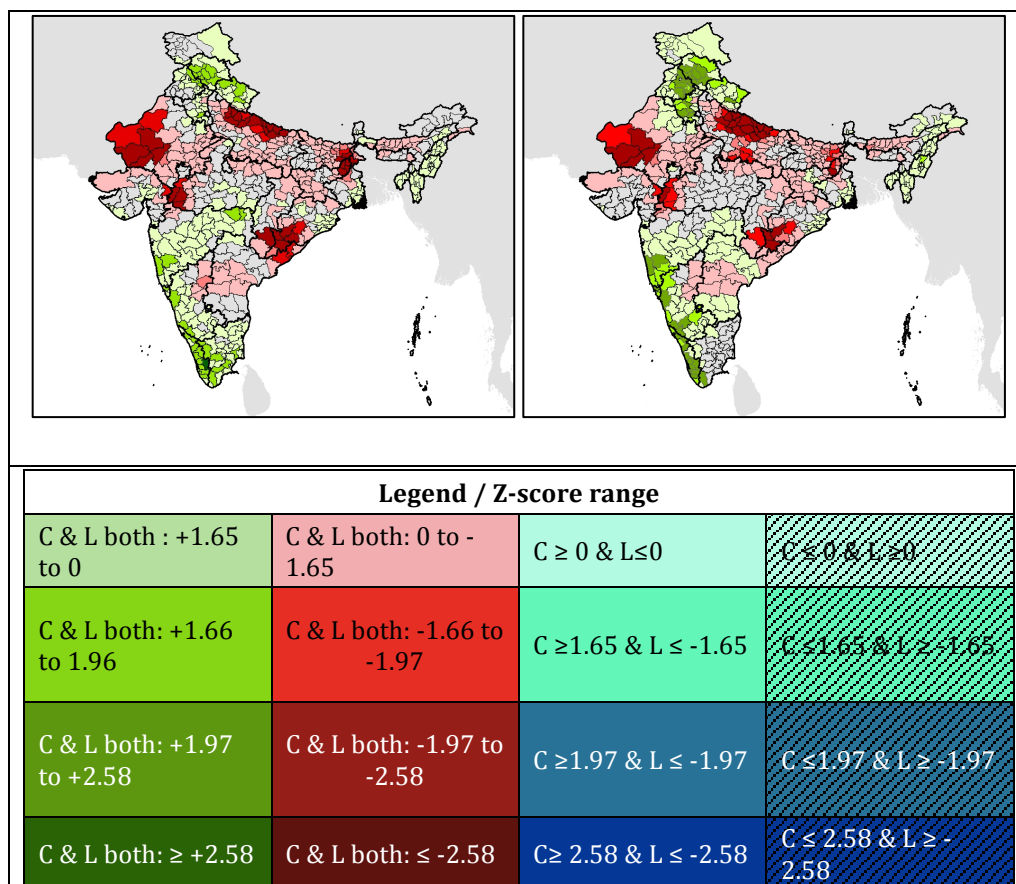
8.4.3 Spatial Relationship Overlay between Literacy and Capabilities Rate and Absentee Rate Hotspots

The overlaps between the literacy (left), capabilities (right), and absentee rate (middle) maps in Figure 8.4 show a somewhat similar geography as the capabilities overlays discussed in the section above. Only one district in India, in Kerala, is there an overlapping extreme literacy hotspot and extreme absentee cold spots. Moreover, there aren't any districts, which have both exceptionally high ASER capability rates and exceptionally low absenteeism relative to the national average. As such, it is safe to say that exceptionally low rates of absenteeism are not necessarily strongly associated with similarly exceptionally high capability or literacy rates in a district. As might be expected, the opposite case of extremely low literacy and capabilities rates combined with exceptionally high absenteeism is far more prevalent with thirty districts (5%) are classified as L_e-A_e+ , and 22 districts (4%) as C_e-A_e+ . This is especially notable considering that only 57 districts were themselves L_e- classified, and 75 districts were C_e- classified respectively. This shows that there are a higher percentage of overlapping districts at the extreme level than with either weak or moderate overlapping with regards to literacy. Put together, these findings show that while low-absentee rates do not have a strong spatial relationship with the districts with highest capabilities rate, exceptionally high absentee rates do seem to be associated with low-performance in capabilities and literacy rates.

8.4.4 Three-indicator Overlay of ASER Capabilities Hotspots, Literacy Rates, and Absentee Rates

At this point, this chapter has only overlaid two indicators in a single map, but by overlaying all three of the indicators of education achievement (literacy rate, ASER capabilities rate, and absentee rate), an even clearer picture of the spatial distribution of the skills emerges. In Table 8.7 one can see that there are similar numbers of districts with poor performance ($C-L-A+$ districts) as districts with better performance across the board ($C+L+A-$ districts). However, there aren't any districts in the map that combine the most extreme high achievement level ($C_e+L_e+A_e-$), but there are 17 districts at the extreme level at the negative end ($C_e-L_e-A_e+$). This indicates that even in districts that excel in a single educational indicator, there remains room for improvement in other indicators throughout the country.

Figure 8.4 (Left) Districts with high literacy rates low absentee rates overlapping districts ($L+A-$, Green); overlapping districts low literacy rate and high absentee rate ($L-A+$, red) hotspot overlays. (Right) High capabilities rates and low absentee rates ($C+A-$, green); low capability rates and high absentee rates hotspot overlapping districts ($C-A+$; red)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Table 8.6 Distributions of *L+A-*, *L-A+* & *C+A-*, *C-A+* classified districts at the national level in India

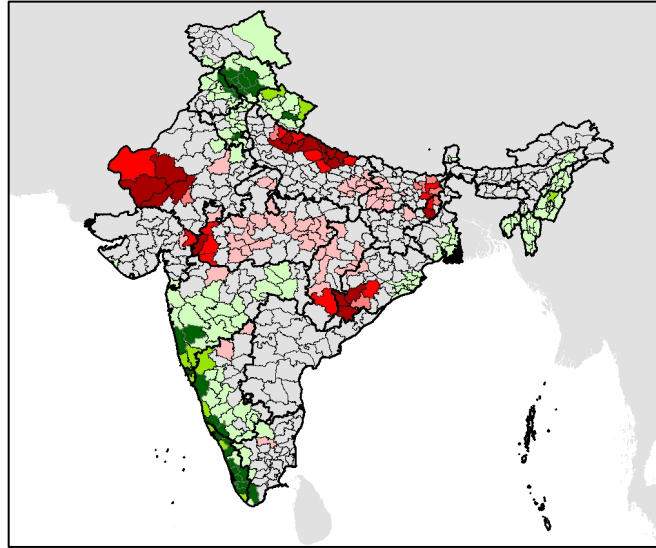
	<i>L+A-</i>	<i>L-A+</i>	<i>C+A-</i>	<i>C-A+</i>
Below ± 1.65 Std. Dev.	149 (27%)	146 (27%)	161 (28%)	136 (24%)
Weak	21 (4%)	9 (2%)	20 (4%)	14 (3%)
Moderate	40 (7%)	11 (2)	38 (7%)	18 (3%)
Extreme	1 (0%)	30 (5%)	0 (0%)	22 (4%)
Total	211 (38%)	196 (36%)	219 (39%)	190 (34%)

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Moving to the spatial distributions in Figure 8.5, the first pattern that becomes apparent is a tendency for clustering in both extreme high and low achieving areas. Only one extreme achieving district appears in isolation in Jhajjar, Haryana adjacent to New Delhi. Likewise only one moderate achieving district occurs in isolation in Senapati, Manipur. The tendency for clustering is even more prevalent in the overlaid cold spots as no statistically significant overlaid districts exist outside of five major clusters.

Spatially, the highest achieving areas across the three skills occurs overlay occur along the western seaboard from Tamil Nadu, through much of Kerala and along the western coast of Karnataka and into Southwestern Maharashtra; in the far north centered in Himachal Pradesh; and the border districts with Punjab. For their part, statistically significant cold spots occur in four distinct areas. Three of which occur across state boundaries (Gujarat-Madhya Pradesh; Chhattisgarh-Odisha; Bihar-Jharkhand) and clusters in Rajasthan, Uttar Pradesh which are bounded within a single state but are also exist along international borders with Pakistan and Nepal respectively.

Figure 8.5 Distribution of high achieving *C+L+A-* (green) classified districts & low achieving *C-L-A+* (red) classified districts



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Table 8.7 Distribution of CLA districts and %

	<i>C+L+A- (districts, %)</i>	<i>C-L-A+</i>
Below 1.65	160 (29%)	172 (31%)
Weak 1.65	41 (7%)	40 (7%)
Moderate 1.96	30 (5%)	32 (6%)
Extreme	0 (0%)	17 (3%)

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Aside from the significant hotspots there is also, see a high degree of clustering among districts that have a consistent C+L+A- and C-L-A+ z-scores. For higher performing districts, this is most notable in the Myanmar bordering Northeastern States, in much of Maharashtra, Western West Bengal; and the districts surrounding the extreme districts in the northern states of Punjab Uttaranchal, Himachal Pradesh; and into Jammu & Kashmir.

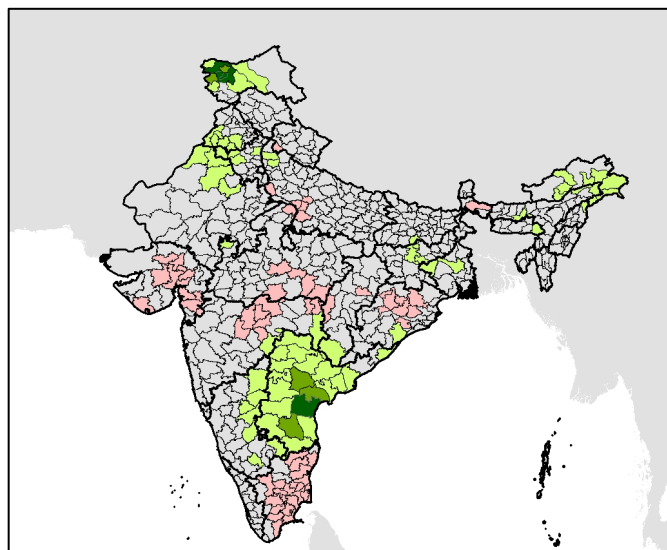
8.4.5 “Flipped” Improving and Stagnating Districts

By overlapping the z-scores of the ASER capabilities map with the literacy map “flipped” districts can be identified. These “flipped” districts have higher than average capabilities scores and lower than average adult literacy scores, where as declining districts are defined lower than average capabilities score and higher than average literacy rates at different degrees of standard deviations from the mean. This is worth examining

because these regions have significantly higher than average children’s capabilities scores and lower than average adult literacy rates, and these districts are showing rapid improvement in the “capabilities” flow relative to the “stock” of existing literates relative to the national average. In subsequent discussions, the relationship to different topics and these important districts are often highlighted. As shown in Figure 8.6 few districts actually fit this description: 77 (14% of all) districts have C scores above the mean and L scores below it compared to 68 (12%) districts whose literacy rates are higher than capability rates. Of these, ten (2%) districts have ASER average capabilities z-scores over 1.65 std. dev. and literacy rates below -1.65 std. of the mean, of which five districts (1%) are over 1.96 std. dev. from the mean. On the other hand, there are no districts in India in which the literacy rate is over 1.65 std. dev. and the capabilities rate is under the -1.65 std. dev. threshold. This would suggest that while there are some areas that have lower ASER capabilities rates then their literacy rates would suggest, but no district in India has rapidly declining education outcomes.

The spatial distribution of the “flipped” districts does appear to show clustering in its own right. Only eight of the combined 145 combined flipped districts (either $C+L-$, or $C-L+$) are “islands” meaning that they are not part of a larger cluster of flipped districts. Moreover, districts of significant flipped clusters (C_w+L_w- , C_m+L_m- , or C_e+L_e-) are surrounded by either other significant clusters or $C+L-$ districts. The clearest example of this occurs in Andhra Pradesh in which every district in the state (with the exceptions of Vishakhapatnam and neighboring Vizianagaram in far northeast) are $C+L-$ districts and significantly so in Prakasam C_m+L_m- , and neighboring Guntur and Nalgonda which are are C_w+L_w- districts. Thus state-wide improvement of ASER capabilities rates relative to the literacy rate supports the larger finding of this research that spatial equality and education rates within a state tend to rise together, and that the by extension, state government must play the key role in facilitating that rise.

Figure 8.6 Map of "Flipped" improving districts with higher capabilities rates than literacy rates ($C+L$, green); and declining districts with higher literacy rates and lower capability rates ($C-L$, red)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

In addition to the complete saturation of $C+L$ - districts in the Andhra Pradesh, many of the districts on the border with Andhra Pradesh in neighboring states are also classified as improving $C+L$ - districts, although not above the overlapping 1.65 std. dev. threshold. These improving districts include five districts in Karnataka; Nanded and Garhchiroli districts along the border in Maharashtra; Dantewada district in southern Chhattisgarh; and Ganjam along the border with coastal Odisha. This multistate trend of $C+L$ - of districts in districts bordering Andhra Pradesh, suggests that the educational improvements in Andhra Pradesh may have influenced the surrounding districts in the manner synonymous with the spread effects in Myrdal's geographical concept of cumulative causation. Noticeably, the lack of other improving flipped districts ($C+L$ -) along Andhra Pradesh's southern border with Tamil Nadu to the south also add evidence to the centrality of state policy in educational outcomes.

A second region of improving flipped districts occurs in far northern India along in the in Jammu and Kashmir. Here is India's largest cluster of C_m+L_m - districts in Baramula, Bagdam, Pulwama and Anantnag, as well as a single C_w+L_w - district in Srinagar. However, unlike the case of Andhra Pradesh, these districts in Jammu and Kashmir are likely a case of catch-up with the already fairly high performing districts in the state (Figure 8.6) rather than a state-wide educational improvement in the same way as appears to be occurring in

Andhra Pradesh. The cluster in Jammu & Kashmir does not show the same bleeding into neighboring districts as is evident in Andhra Pradesh.

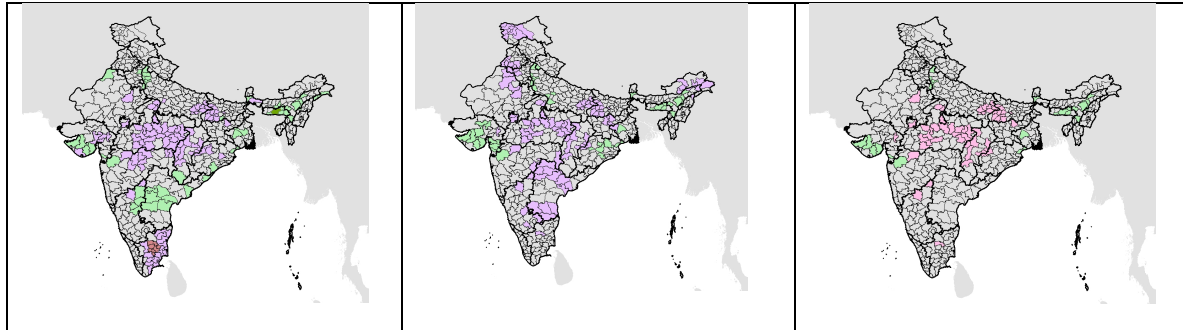
Unlike the encouraging signs in Andhra Pradesh that education outcomes are improving, the opposite case appears in Tamil Nadu. The state has a nearly uniform distribution of districts with lower than average ASER capability scores matched with higher than average literacy rates ($C-L+$). The state saturation of these districts points, again, to state-governance in determining the trajectory of the educational system.

8.4.6 Districts with High Capabilities and High Absentee Rates (C+A+) and Districts with High Literacy and High Absentee Rate (L+A+)

Using the hotspot overlay method with three indicators, it becomes possible to identify districts and regions that have better, or worse capabilities and literacy rates than their absentee rates would suggest they might have. This classification reveals districts which have more efficient schooling, better methodologies, non-traditional schooling, or some other factor may be encouraging better than average outcomes despite the handicap of below average attendance rates. The most striking feature of these maps is the fact that there are very few districts in the country exceed the ± 1.65 significance threshold, that is to say, districts which have either higher than average capabilities or literacy and higher than average absentee rates. In fact, only by looking at leftmost map in Figure 8.7 West Khasi Hills, Meghaland is the only C_w+A_w+ district in which the capabilities rates and absentee rates are both above 1.65 std. deviations from the national mean.

The opposite situation of lower capabilities and literacy rates combined with lower than average absentee rates allow the analyst to identify districts where children are in schools, but the actual educational outcomes of the students remains low and, logically point to qualitative rather than quantitative problems.

Figure 8.7 Spatial relationship between ASER capability rates (C), literacy (L), and absenteeism (A). (Left) C+A+ green & C-A- red. (Center) L+A+ green & L-A- red. (Right) C+L+A+ green & C-L-A- red.



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

First, for both capabilities and literacy rates there are more than double the number of districts with higher than average capabilities rates and higher than average absenteeism with 102 (18%) *C-A-* districts, and 105 (19%) *L-A-* districts. Secondly, there is a clear spatial pattern in their distribution in Figure 8.7. All five of the C_wA_w- districts are contiguous and in the central districts of Tamil Nadu (Salaem, Namakkal, Karur, Tiruchchirappalli, and Permbalur). It is also worth noting the absence of a similar pattern in the *L+A+* map in Tamil Nadu, which further supports the evidence that the states quantitative improvement in attendance rates in schools is not equaled by qualitative improvements in the students' learning outcomes.

Leaving Tamil Nadu, it is possible to identify two other larger clusters of *C-A-* and *L-A-* districts. As seen in Figure 8.7, the first clusters spreads across Madhya Pradesh and into Chhattisgarh and into Maharashtra and Odisha; and the second swath is geographically smaller, but occurs in the densely populated districts along the border of Uttar Pradesh, Bihar, into northern Jharkhand. Although these clusters are not as statistically significant as the cluster in Tamil Nadu, their breadth and the clustering is well worth noting and will be returned to in the next chapter. Finally, before moving on, this series of maps also shows both *C+A+* and *C-L-* within the same state in Gujarat, Karnataka, Maharashtra, Odisha, West Bengal and to a lesser extent in Uttar Pradesh and Rajasthan, suggesting a greater degree of spatial dissimilarity within the states compared to the statewide distribution of other states.

8.5 State-Level Spatial Distributions of Educational Outcomes

The final section of this chapter uses the same methodology as the national methodology and indicators as in Section 8.4, but was conducted at the state level. Each of the ten states included in the discussion are treated separately and are discussed in turn. Each sub-section begins with a description of the statistical distribution of districts within the states and how the state compares to other states ranks in India. This section is particularly useful in providing evidence to the finding that district equality within the state is closely correlated spatially to higher achievement. This is followed by a discussion of each states distributions at the national level, and finally by a discussion on the spatial relationships of educational outcomes within the state.

8.6 Educational Outcomes in Tamil Nadu

The statistical distribution in Tamil Nadu in Table 8.8 add further evidence of the states strength in achieving high literacy and attendance rates, but failure to simultaneously improve student outcomes. Statistically the mean rank for literacy in Tamil Nadu is fifth in India among states, however the ASER Capabilities rate rank is 10 places lower. Similarly, the range of literacy is seven places higher in ASER scores and where as the std. dev. falls only one place. The Coefficient of Variance (CoV) is also lower in the literacy rate ranking than the ASER capabilities scores suggesting less variance between districts within the state in student outcomes. The opposite situation occurs in neighboring Andhra Pradesh. Table 8.8 Tamil Nadu's literacy rate ranks 5th but the capabilities rank is much lower at 15th. This is matched by a similar fall in rank in the range between the highest and districts, but surprisingly not in terms of standard deviations rank. Oddly, despite these apparent decline in the state, Tamil Nadu did better than Himachal Pradesh (one of the highest achieving Indian states in terms of ASER rates) in the internationally administered PERLs testing.

Table 8.8 ASER Literacy and absentee distribution of districts within Tamil Nadu and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between lit. rate and Cap. Rate
Mean Rate	79.13	54.57	0.59	24.56
Mean Rank	5	15	2	-10
Range	23.21	27.75	1.80	-4.54
Range Rank	8	15	2	-7
Std. Dev.	5.47	7.11	0.39	-1.63
Std. Dev. Rank	5	6	2	-1
CV	0.07	0.13	0.67	-0.06

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Tamil Nadu is perhaps the most unique state in terms of spatial distributions. Looking at the national level hotspot map in Figure 8.2 it becomes clear that the states significantly high literacy scores and exceptionally low levels of absenteeism, are consistent with similar trends in the neighboring southern states of Kerala and southern Karnataka. However, the Tamil Nadu's low ASER capabilities rates are much less admirable with only one district, Tirunelveli Kattabo, registering over the national 1.65 std. dev. threshold, and a six-district mixed moderate and weak cold cluster in the center of the state anchored in Namakkal, a district which also has slightly higher absentee rates than the national average. As such, Tamil Nadu has very different spatial distribution of literacy and ASER capabilities rates. This shows the opposite pattern of neighboring Andhra Pradesh that has much higher ASER capability rates and much lower literacy rates. However, unlike Andhra Pradesh Tamil Nadu doesn't have any statistically significant "flipped" districts, which have both hotspots and cold spots in the same state. However, in Figure 8.3 nearly the whole state is classified as *C-L+*, suggesting that the capabilities scores are underperforming relative to literacy rates. Logically, this does not mean that the state are not improving, but that they may be underperforming based on past performance. It might also suggest that literacy rates are going up in the state outside of the formal primary education system.

The low ASER capability rates in Tamil Nadu are also notable considering the low rates of absenteeism in the state (Figure 8.2). The statewide low-student absenteeism is exceptionally so in Dharmapuri and Tiruchchirappali districts in the north and central part of the state respectively which together make up two of the four districts in India with absentee rates less beyond -2.58 std. dev. of the national average. In addition to these high attendance rate districts, the majority of the state's districts are moderate cold spots, eleven districts are weak cold spots, and only a single district Thiruvallur along coastal border with Andhra Pradesh falls within the ± 1.65 "unclustered" classification of absenteeism.

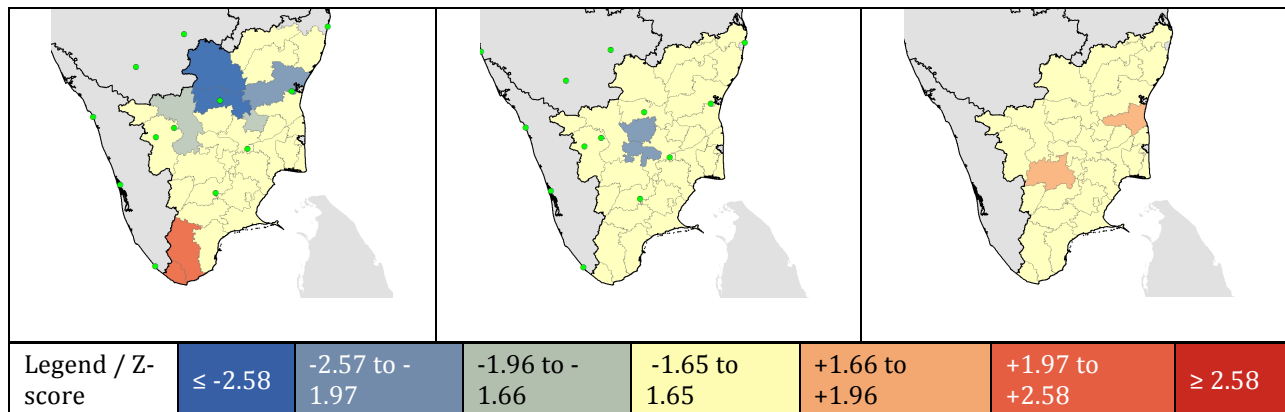
Putting this all together, Tamil Nadu's lower than average capabilities score and lower than average absentee rates make it is safe to say that the state has clearly concentrated its policy attention onto bringing primary school aged students into schools. However well meaning, this has not translated to higher capabilities scores, even consider that the state benefited from of having a higher than average literacy rate to begin with. Moreover, Tamil Nadu's combination of high attendance, high literacy rates and but low capabilities is in stark contrasts to both improving state of Andhra Pradesh; India's basic education state leader in Kerala; and the educational spatially polarized Karnataka weakens the case commonly made that that the southern states somehow offer a coherent model for the other states in India. The sharp differences between the southern states underscore the importance of state policy and prioritization in affecting educational outcomes.

A second interesting pattern in the Tamil Nadu is the presences of several literacy hotspots of at least over +1.96 std. along the along the Kerala border with values especially high in Theni and Kanniyakumari, Tirnuneveli Kattabo, and Coimbatore. These high literacy rates are also unusual in that they occur in inland and higher altitude districts in the Cardamom hills, which go against the general trend that inland districts to underperform relative to coastal districts. This may suggest that the higher performance of districts in bordering Kerala districts may be influencing literacy rates in neighboring Tamil Nadu.

Moving from the national hotspot map to the state hotspot map of Tamil Nadu in Figure 8.8 and 8.9, as might be expected; the three maps show different spatial

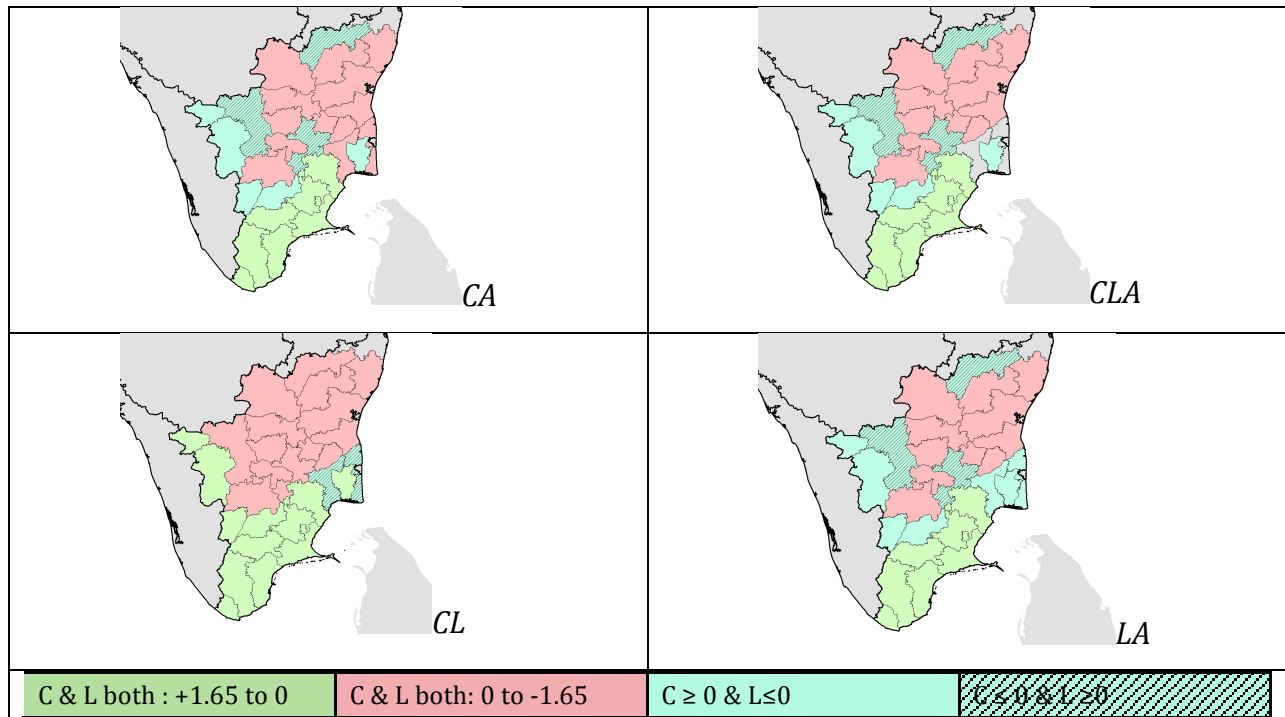
distributions of z-score clustering. Unlike in most other Indian states, especially in Odisha and Karnataka, there aren't any districts in the state where either hot or cold spots of literacy or ASER capability rates overlap. Of the three maps, the literacy map shows the widest spatial z-score distribution with moderate literacy hotspots in the southern district of Kanniyakumari and Tirunelveli Kattabo; an intense cold spots in the north of the state in Dharmapuri and Salem (both below -2.58 std. dev.); and also moderate cold spot in adjacent Villupuram and weak clustering in Erode and Perambalur districts. As for the ASER achievement map, two moderate cold spot districts are in adjoining central districts of Karuar and Namakkal, districts which were also classified cold spots in the national map ASER capacities hotspot map in Figure 8.2. As for absenteeism clusters, there are non-contiguous mild absentee hotspot districts in Cuddalore, along the eastern coast and Dindigul in the interior of the state.

Figure 8.8 Tamil Nadu hotspots literacy rate (left) and average ASER capabilities; capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.9 Overlapping hotspots maps in Tamil Nadu CA, CLA, CL, and LA



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.7 Educational Outcomes in Karnataka

Unlike its neighbors Tamil Nadu and Andhra Pradesh, which have wide gaps between their literacy and ASER capabilities rates in both absolute and in positional terms, Karnataka shows the opposite tendency with an 8th place national ranking in in terms of district mean rates in both indicators. This middling mean rank is contrasted by its position towards the bottom of the tables (17th) in terms of the std. dev. between districts for both indicators. This indicates that the state has a wide range between higher achieving and lower achieving districts, a pattern immediately evident in the state Getis-Gi * hotspot map in Figure 8.10.

Looking the national clustering map in Figure 8.2, the spatial polarization of education rates in the state is immediately apparent. Three of the coastal districts (Uttar Kannand in the north, Dakshin Kannand, and Kodagu along the Kerala border) are among the highest national performing districts across all three indicators $C_e+L_e+A_e$. These high performing overlapping districts and are themselves adjacent to two C_m+L_m districts in

Belgaum and Udapi as well as two C_w+L_w+ in adjoined but inland districts of Shimoga and Chikmagalur

Table 8.9 ASER Literacy and absentee distribution of districts within Karnataka and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	75.00	69.75	1.76	5.25
Mean Rank	8	8	8	0
Range	29.01	45.00	6.20	-15.99
Range Rank	16	8	11	8
Std. Dev.	7.60	10.50	1.90	-2.90
Std. Dev. Rank	17	17	13	0
CV	0.10	0.15	1.08	-0.05

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

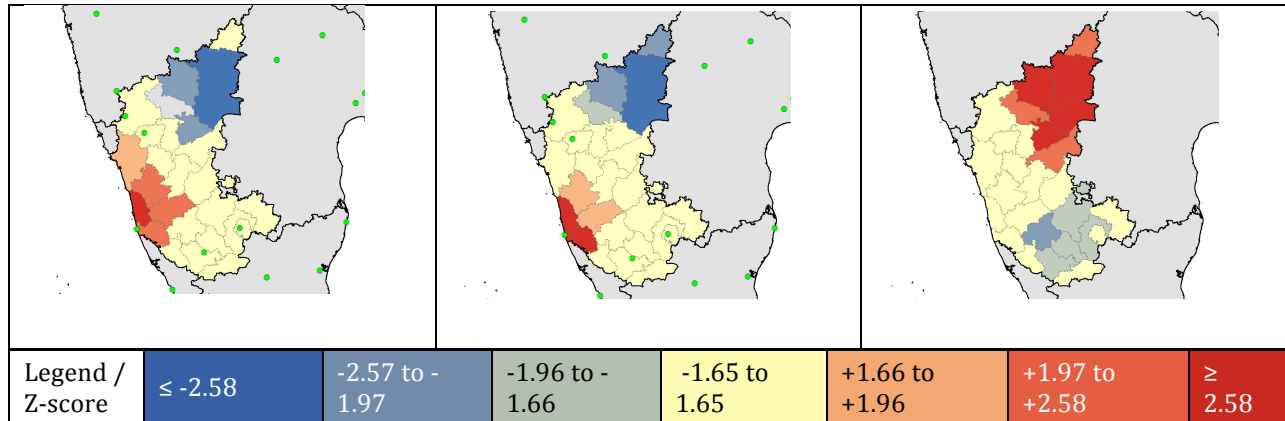
Table 8.10 Z-Score Distribution Karnataka

	ASER Avg. Capability Rate. No. Districts [%]	LitRate [%]	Out of School [%]
STD. Dev. Less than -2.58	2 [7]	3 [12]	0 [0]
STD. Dev. From -1.96 to -2.57	2 [7]	1 [4]	1 [4]
STD. Dev. From -1.65 to -1.95	1 [4]	0 [0]	4 [15]
STD. Dev. From -1.65 to 1.65	18 [67]	17 [65]	15 [56]
STD. Dev. From 1.65 to 1.96	2 [7]	1 [4]	0 [0]
STD. Dev. From 1.96 to 2.58	0 [0]	3 [12]	3 [11]
STD. Dev. More than 2.58	2 [7]	1 [4]	4 [15]

With regards to attendance rates at the national level, Karnataka is one of the strongest states in the national absentee map both in the aforementioned high capability and high literacy districts along the western coast, but also in a larger cluster along the southern border with both Kerala and Tamil Nadu. The cluster of low absentee rates is anchored by one of only four districts in India with an A_e - score in Chamrajnagar, which is itself surrounded by a six district A_m - cluster (in Dakshin Kannad, Kodagu, Mysore, Mandya, Hassan and Rural Bangalore); and two A_w - districts in Udupi and Tumkur. This strong cross border clustering of low absentee rates with neighboring Tamil Nadu and Kerala suggest a cross-border spread effect of low absenteeism in the region. On the other hand, the low absentee rates in inland Karnataka are matched by higher rates in either the ASER capabilities or literacy rates at the national level. Finally, the lower absentee rates in the southern and coastal districts in the state differ from the inland and northern districts that are unclassified in the national map with the exception of a single A_w+ district in Raichar.

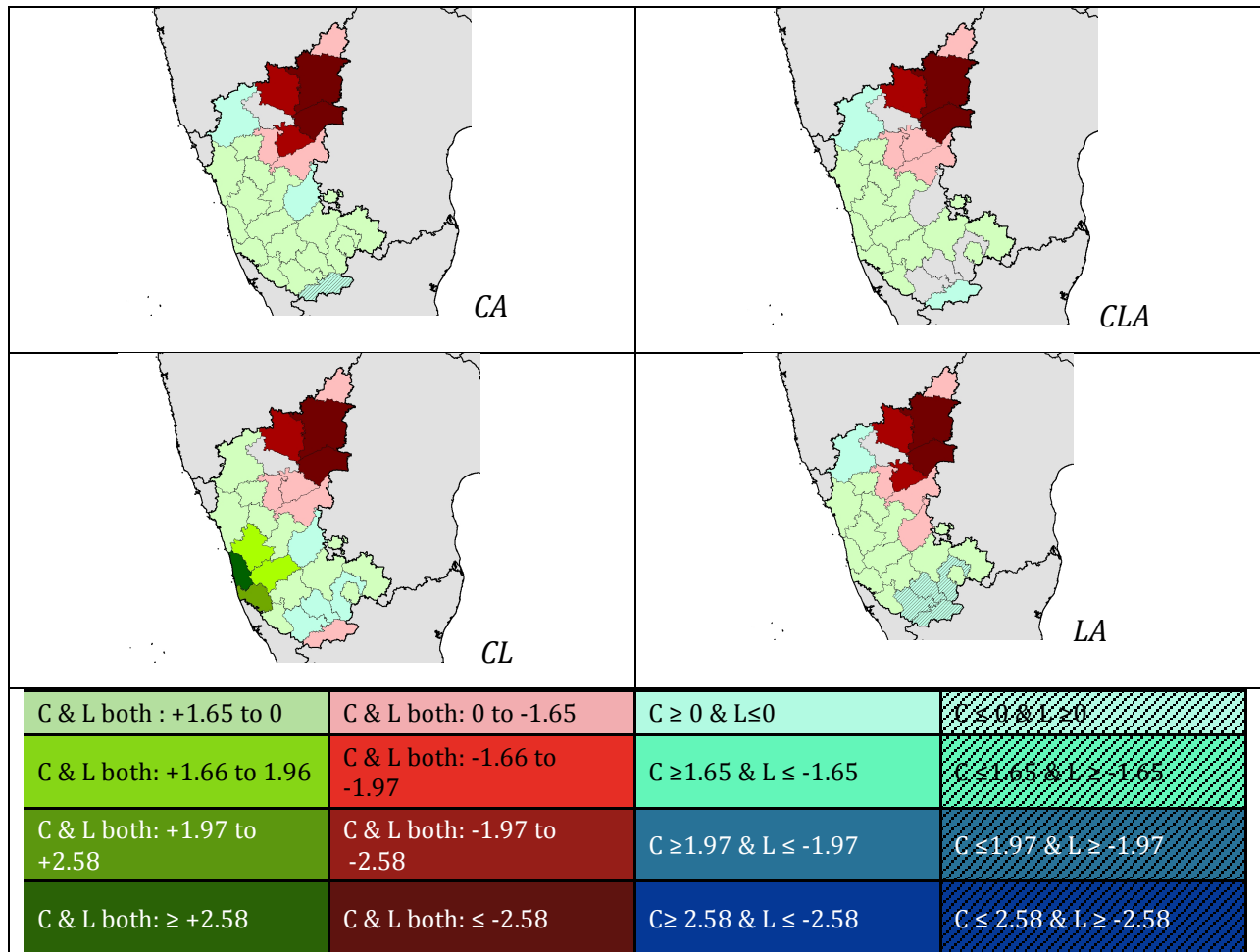
Above, it was noted that Karnataka has some of the highest achieving districts in India both in terms of high capabilities, literacy rates, and low absentee rates. However, in the state level spatial distribution maps (Figures 8.11 and 8.12) it becomes apparent that there are deep spatial inequalities within the state. As in Odisha (Section 8.13), educational achievements in the state are starkly divided between a higher achieving coastal region and much lower achieving inland area. The overlap maps in Figure 8.11 show just how far behind the districts in the north of the state are relative to the coastal districts. There are extremely low performing C_e - L_e - A_e+ cold spots in the northeastern tip of the state in Gulbarga and Raichar districts, bordered by neighboring Gijapur district which stand in contrast to the higher achieving and more equitable coastal and southern districts. As is consistent with distributions in other states, the overlay technique (especially the three indicator CLA maps) is useful in identifying significantly lower achieving districts, more than higher achieving districts.

Figure 8.10 Karnataka Hotspots literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.11 Karnataka CA, CLA, CL, and LA overlays



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.8 Educational Outcomes in Andhra Pradesh

As previously stated in Section 8.4.5, Andhra Pradesh is probably the state with the clearest evidence of recent educational improvement. As shown in Table 8.10 below, Andhra Pradesh has a low literacy rank (17th) and a much higher capability rate (5th), as such, the state is the only state in the study which has a higher mean capability rate than literacy rate-- by nearly 10 percentage points. This stands in strong contrast to the opposite situation, weak capabilities and stronger literacy in Tamil Nadu to the south. Also unlike Tamil Nadu, Andhra Pradesh does not have a particularly low mean district absentee rate, a narrow range, or std. dev. across districts ranking only 12th nationally. Moreover, Andhra Pradesh's aforementioned educational improvements are also equitably distributed spatially between the districts in the state, which differentiate it from the spatially polarized distribution of education outcomes in the neighboring state of Karnataka (Section 8.7). This improvement lends support to the finding that increased spatial educational equality is closely associated with higher mean rates.

Table 8.11 ASER Capabilities, literacy and absentee distribution of districts within Andhra Pradesh and rank among Indian states

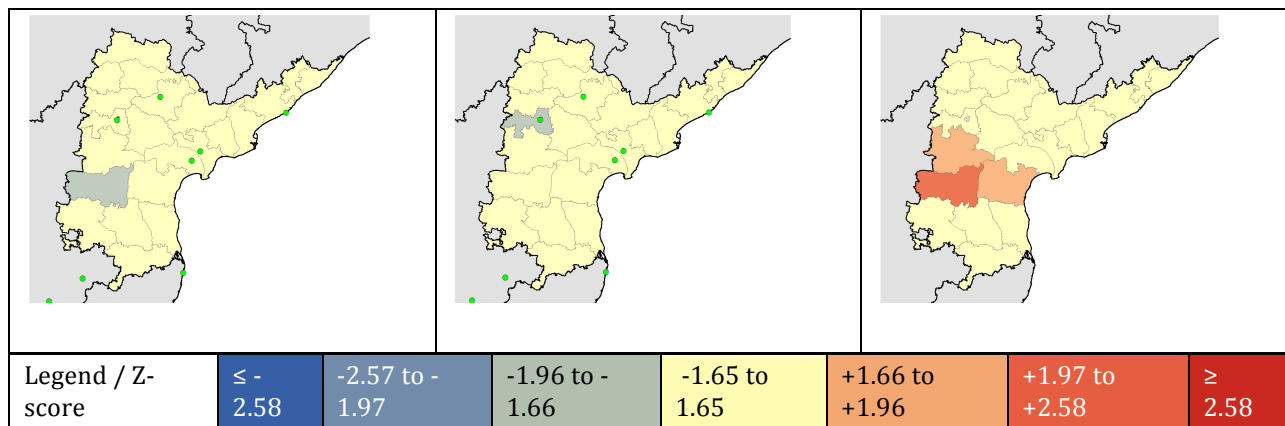
Andhra Pradesh	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	66.29	76.07	2.69	-9.78
Mean Rank	17	5	12	12
Range	28.21	31.30	7.10	-3.09
Range Rank	15	5	14	10
Std. Dev.	6.44	7.24	1.69	-0.80
Std. Dev. Rank	8	7	12	1
CV	0.10	0.10	0.63	0.00
CV Rank	7*	5*	8	2

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

At the state level (Figure 8.13), there is a complicated spatial geography with several flipped districts as noted by the larger number of unclassified districts in the *CLA* map.

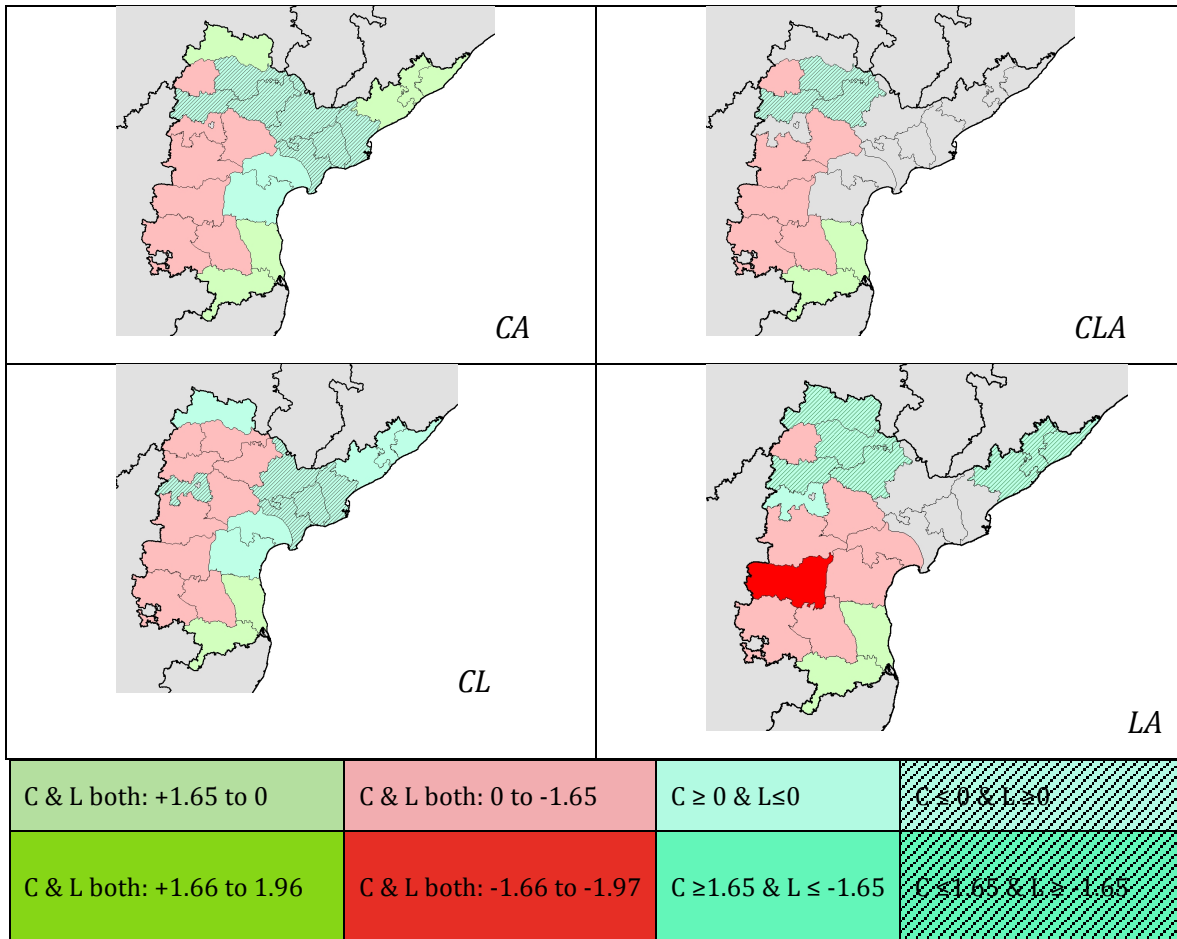
However, this complicated spatial distribution is, for the most part, taking place within the ± 1.65 unclassified range with only one district (Kurnool) having a statistically significant L_w-A_w+ cold spot. Keeping in mind that the distributions are taking place below the 1.65 threshold, there is a slight inland/coastal divide most evident in the *CL* map, but also in the *CLA* map. Finally, it should be stated that there is no notable difference in educational clustering between the current state of Andhra Pradesh and the districts and the proposed new state of Telangana

Figure 8.12 Andhra Pradesh Hotspots literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.13 Andhra Pradesh CA, CLA, CL, LA state distributions



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.9 Educational Outcomes in Maharashtra

The large and influential state of Maharashtra has wide internal differentiation in terms of its distribution of educational outcomes. That state is similar to Tamil Nadu insofar as it has high literacy rates (3rd in India), but a much lower capabilities score (11th nationally). This is matched by a similarly large positional difference between the std. dev. between literacy rank (6th) and average ASER capabilities rate rank of 14th.

The spatial difference between literacy and capabilities scores are readily apparent when looking at the national distributions in Figure 8.2. In both outcome indicators, districts in the state are either unclassified or part of larger multistate regional hotspots. A second important similarity between the maps is the stark difference between Maharashtra and its northern neighbor Madhya Pradesh. In the capabilities outcome map the difference

between the two states is evident in the contrast between the weak performing districts along the western side of the border with Madhya Pradesh and the unclassified performance in northern Maharashtra. In the literacy map, there are similar differences between the strong performance clusters on the Maharashtra side of the border and the unclassified districts in southern Madhya Pradesh. These two similarities aside, there are many differences between the ASER capabilities and literacy rate maps. Both maps follow the national pattern of higher outcomes in coastal districts compared to those inland. However, these differences are not consistent across the two maps. Higher literacy outcomes occur along the northern coast and higher ASER capabilities rates are more prevalent along the southern coast. The *CLA* overlap map Figure 8.5 does show that there are high performing $C_m+L_m+A_m^-$ districts in Ratnagiri, in neighboring Satara, and $C_w+L_w+A_w^-$ districts in Sindhudurg and Kolhapur to the south.

Staying in the national map in Figure 8.2, the districts above account for all of the significant capabilities hotspots, however the literacy map also shows a large clustering in the northern coastal districts of Raigarh, Greater Bombay, and Thane but also in the northeastern part of the state, in Wardha (L_e+) and the surrounding districts of Amravati, Akola, Washim, Nagpur and Bhandara (all L_m+), which are themselves surrounded by three L_w+ districts. The absentee map at the national level in Maharashtra shows a more similar spatial distribution to the literacy map than to the capabilities map in the northern states, however it is more similar to the capabilities map in the southeastern part of the state. Further complicating the situation, the state also has several flipped districts. The first cluster of six declining $C-L+$ districts occur in the center of the state stretching from Amravati to Jalna and Hingoli; and occur in isolated similar districts in Bhandra, and Gondiya districts in the northwest. The state also has improving $C+L+$ districts along the Andhra Pradesh border in Nanded and Garhchiroli districts.

Table 8.12 ASER Literacy and absentee distribution of districts in Maharashtra and rank among Indian states

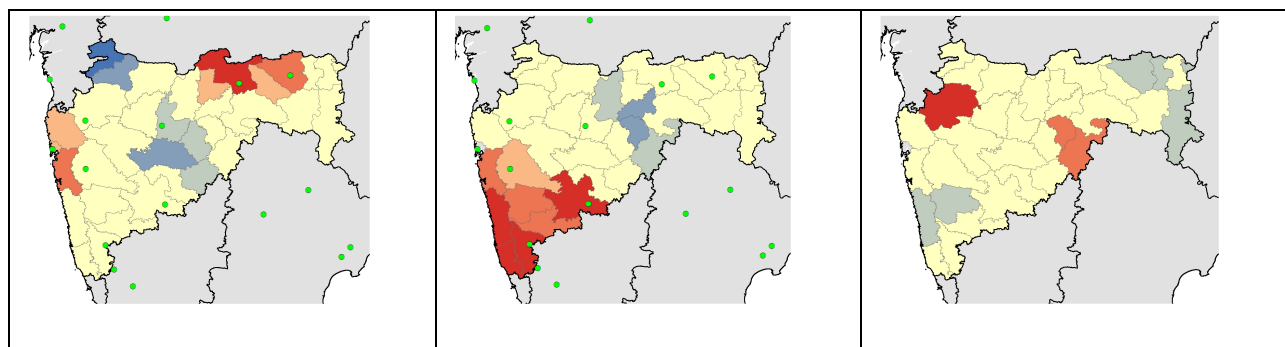
	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	80.72	65.32	1.41	15.40

Mean Rank	3	11	7	-8
Range	25.53	37.85	5.30	-12.32
Range Rank	10	11	10	-1
Std. Dev.	5.53	9.95	1.28	-4.42
Std. Dev. Rank	6	14	7	-8
CV	0.07	0.15	0.91	-0.08
CV Rank	4*	9*	15	-5

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Moving to the state level hotspot maps and overlaps the distributions become slightly more apparent. Both the *CA* and *CL* maps show a strong tendency towards better outcomes in the coastal districts already mentioned with overlapping *C+L+A-* districts in the southwest, but improving *C+L+A+* districts along the northern coast. This improvement in the coastal northern districts is matched by declining flipped districts in the northeast of the state. The *CL* map in Figure 8.15 also shows a broad swath of eleven *C-L+* districts in the same northeastern districts with the exceptionally high literacy scores previously mentioned, however the Amravati district bucks this trend and remains an outlying *C+L+* district. In addition to this declining area, the central districts are weaker than the state average. This is most apparent in the intense cold spotting in the *CA* map in the center of the state near the Andhra Pradesh and Karnataka border. Taken as a whole, Maharashtra presents a very disjointed geography of educational outcomes.

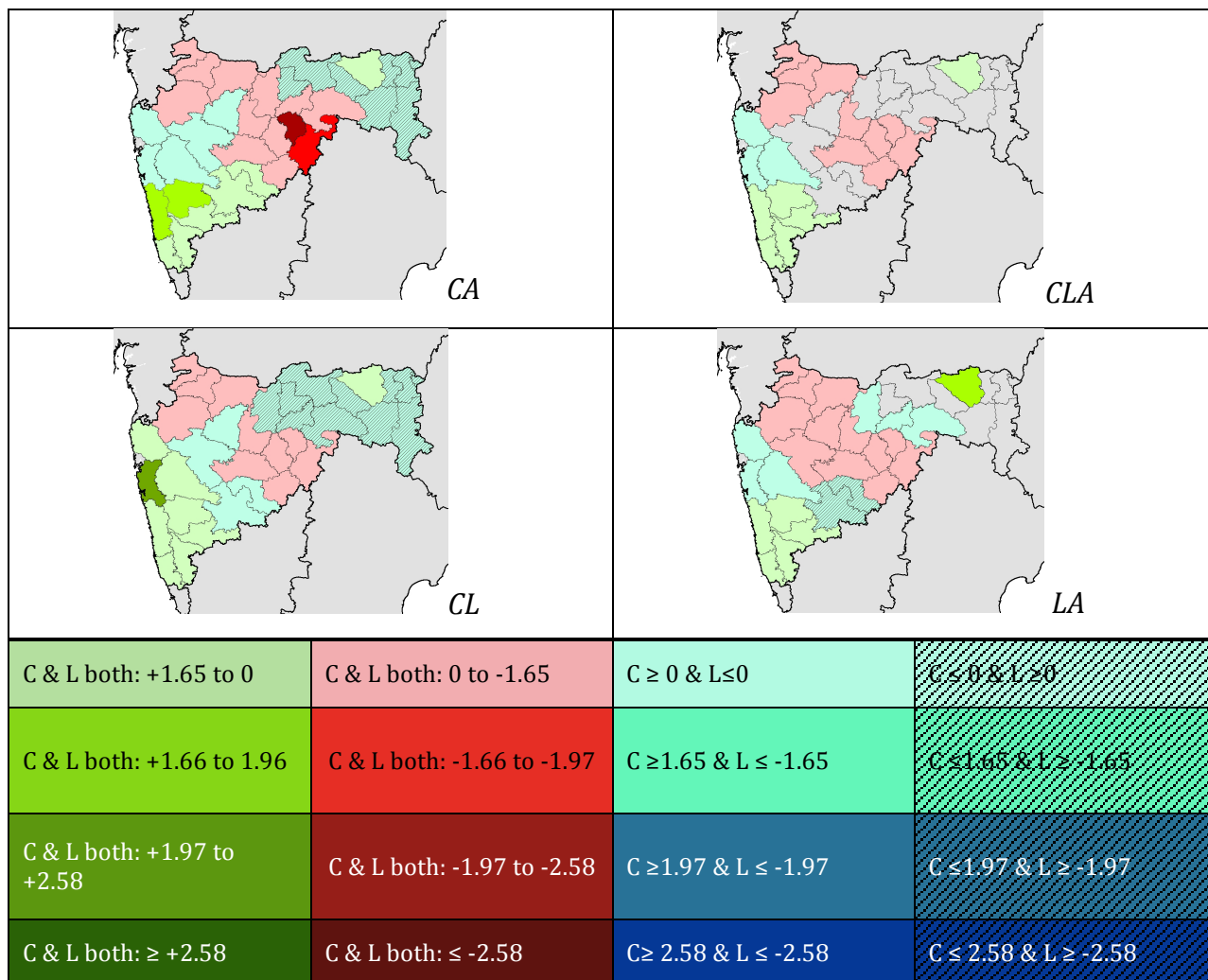
Figure 8.14 Maharashtra literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school (right)



Legend / Z-score	≤ -2.58	-2.57 to -1.97	-1.96 to -1.66	-1.65 to 1.65	+1.66 to +1.96	+1.97 to +2.58	≥ 2.58
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Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.15 Maharashtra *CLA*, *CA*, *LA*, *CL* state distributions



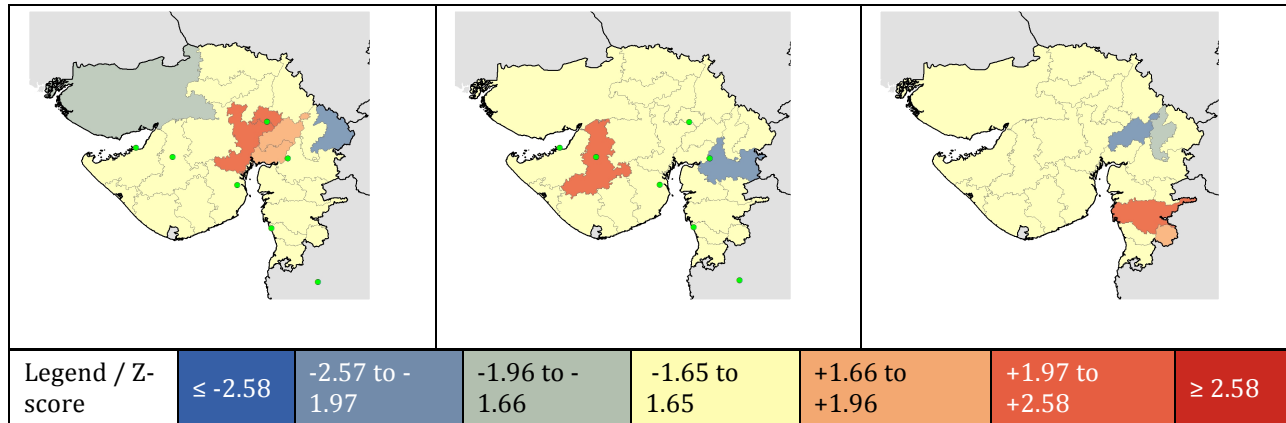
Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.10 Educational Outcomes in Gujarat

In subsequent chapters, it will be shown that Gujarat is consistently spatially uneven compared to the other states in the country. Like its neighbor Maharashtra, Gujarat also shows a complicated geography of educational outcomes between the three indicators and stands in stark contrast to its lower achieving, but more spatially uniform, northern

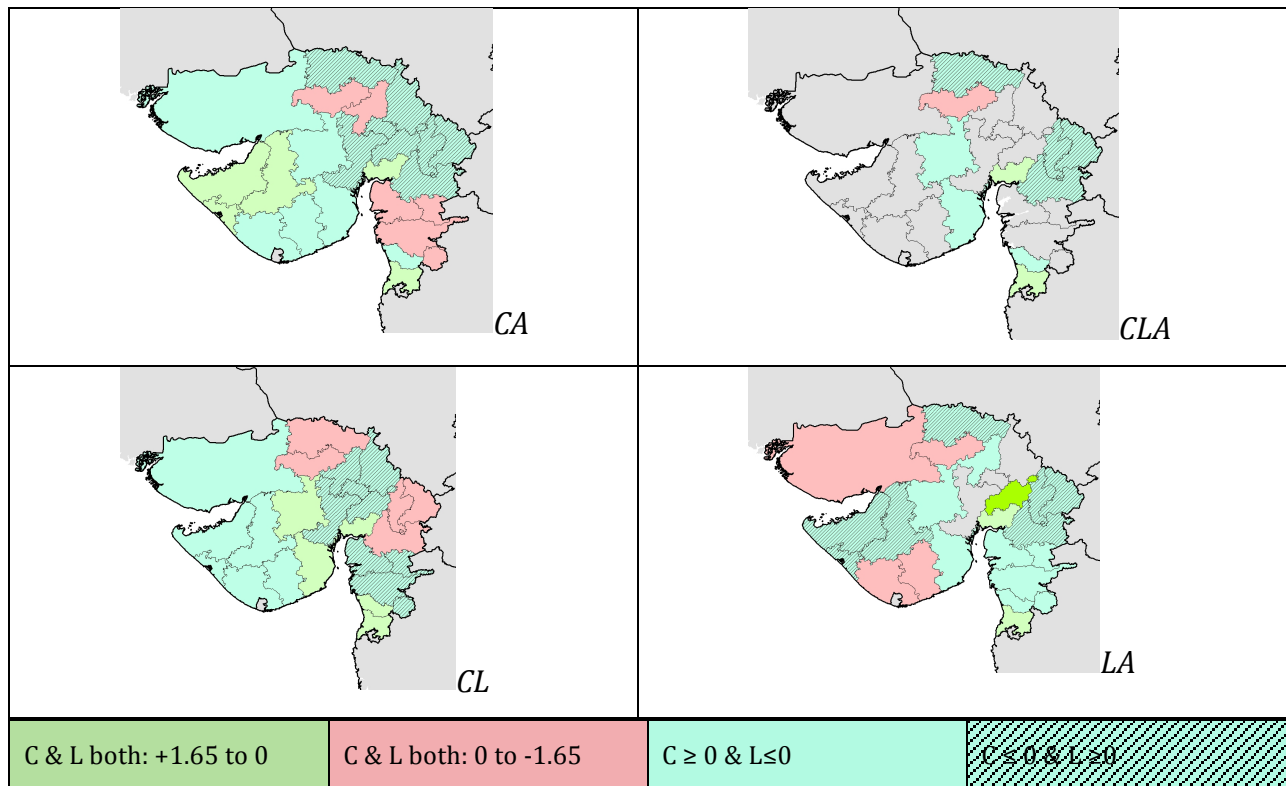
neighbors of Rajasthan and Madhya Pradesh. Also similar to Maharashtra, Gujarati inland districts fare considerable worse than coastal districts. Looking again at Figure 8.2 the state's border regions are all below the national average (*C-L-* or lower) and that the central districts around the Gulf of Khambhat have lower than average capabilities scores and higher than national average literacy rates.

Figure 8.16 Gujarat literacy Rate (left) and average capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.17 Gujarat *CLA*, *CA*, *LA*, *CL* state distributions



C & L both: +1.66 to 1.96	C & L both: -1.66 to -1.97	$C \geq 1.65 \text{ \& } L \leq -1.65$	$C \leq 1.65 \text{ \& } L \geq -1.65$
C & L both: +1.97 to +2.58	C & L both: -1.97 to -2.58	$C \geq 1.97 \text{ \& } L \leq -1.97$	$C \leq 1.97 \text{ \& } L \geq -1.97$
C & L both: $\geq +2.58$	C & L both: ≤ -2.58	$C \geq 2.58 \text{ \& } L \leq -2.58$	$C \leq 2.58 \text{ \& } L \geq -2.58$

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Compared to the rest of India, the literacy rates in the state are roughly comparable to the national level, with a single moderate hotspot in Ahmadabad and the adjacent districts of Gandhinagar and Kheda. On the other end of the spectrum, there is single literacy cold spot district along the border in Dahod, which itself borders a much larger cold spot cluster which covers southern Rajasthan and Madhya Pradesh to the east. In Section 9.4 it is shown that this districts has much in common with neighboring districts with high tribal populations. Like the literacy scores, Gujarati ASER capabilities scores are similarly unclustered with the exception of an overlapping two-district cold spot in Dahod, and Vadodara. In contrast to both the literacy and ASER capabilities distributions, the absenteeism map has hotspots in the Pakistan bordering district of Kachchh and again in Dahod.

Moving to the state level hotspot map and overlap maps in Figures 8.16 and 8.17 respectively, the national trend of higher rates of improvement along the coasts largely holds in Gujarat with improving “flipped” $C+L$ - classified districts around the coast and weaker scores along the inland borders with Rajasthan and Madhya Pradesh. The state overlap maps in Figure 8.17 also show strong degree of variation between districts in the state both spatially and between the three indicators. In the overlap maps there is one higher achieving overlapping district, $(L_m+A_m^-)$ district occurring in Kheda.

Table 8.13 ASER Literacy and absentee distribution of districts in Gujarat and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate

Mean	76.71	59.04	3.28	17.68
Mean Rank	7	12	15	-5
Range	26.71	39.03	7.10	-12.32
Range Rank	11	12	15	-1
Std. Dev.	6.62	8.27	1.92	-1.65
Std. Dev. Rank	11	11	14	0
CV	0.09	0.14	0.58	-0.05
CV Rank	5*	8	5	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.11 Educational Outcomes in Rajasthan

Beginning with Rajasthan, it is now possible to move from the southern and coastal states and into so-called Hindi heartland states of Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, and Odisha. In these states, there is a distinct decline in the both the mean rates of educational outcomes in these states. There is also a corresponding increase in the spatial inequality within the states and less spatial complexity within the states compared to the previously mentioned southern states. Unlike the developmental states of Gujarat and Maharashtra, there is more overlap between the indicators at the state level—all of which suggests a more unequal and stagnant educational system and clearer divisions within the state between higher and lower educationally achieving regions.

Looking at the rankings in Figure 8.14 below, Rajasthan is clearly one of the lowest achieving states in India and one of the most unequal. The mean district literacy rate is a paltry 65% (18th nationally). The table also shows that that both the ASER capabilities rates and out of school rates are also among the lowest in the country however unlike the literacy rate, the range and standard deviation between districts are also among the very highest in the state making it both low-performing and highly spatially unequal.

At the national level map in Rajasthan, there low score overlapping classifications in the more sparsely populated districts in and around the Thar Desert and Aravali Range along the Pakistan border especially in Barmer, Jodhpur, and Jalor (all overlapping C_e-L_e -districts). These extremely low performing districts are bordered by only slightly less poorly performing C_m-L_m - districts of Jaisalmer, Bikner, Sirohi, Pali, and Rajsamand districts, and C_w-L_w - districts in the southwestern districts of Ajmer, Bundi, Baran, Chhattaurgarh and Banswara. As a congruent swath, these districts make up one of the lowest and most widespread low performing regions of India. Moving to the north and west from this swath, the education rates remain low, but are closer to the national average. Interestingly, the northernmost districts of Rajasthan that border southern Punjab and Haryana have higher capabilities rates than the national average though not significantly so. Nor do these higher performing districts in the north of the state have correspondingly higher literacy rates compared to the national average. All told, this educational geography gives strong evidence to the importance of state borders in India in delineating educational outcomes.

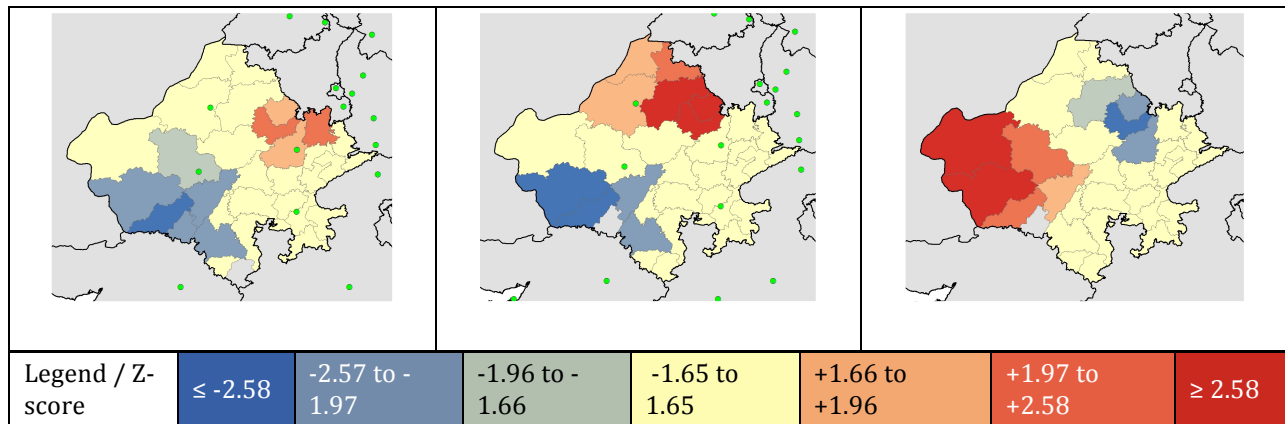
Table 8.14 ASER Literacy and absentee distribution of districts in Rajasthan and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	65.15	51.11	5.15	14.03
Mean Rank	18	19	20	-1
Range	21.70	36.38	13.20	-14.68
Range Rank	5	19	19	-14
Std. Dev.	5.65	10.04	3.17	-4.38
Std. Dev. Rank	7	15	18	-8
CV	0.09	0.20	0.61	-0.11
CV Rank	5*	13*	7	-8.00

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

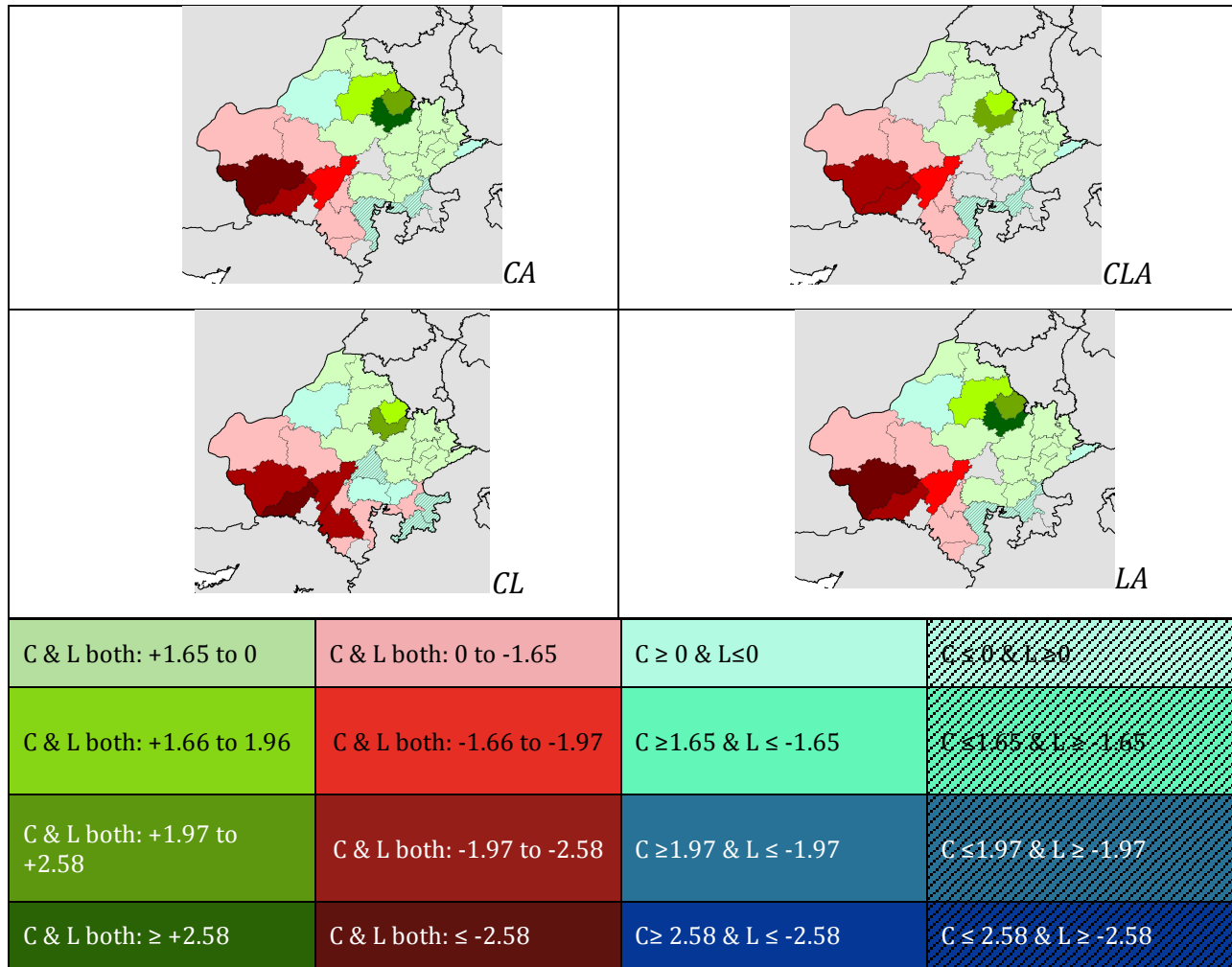
As would be expected, Rajasthan's spatial distributions closely mirror the divide visible at the national level described above and are consistent with other educationally polarized states such as Odisha and Karnataka. The *CLA* in Figure 8.19 map shows two low $C_m-L_m-A_m+$ districts in the large districts of Balmer and Jalor, a $C_w-L_w-A_w+$ district in neighboring Pali all of which are bordered by unclustered but below average $C-L-A+$ districts. This is juxtaposed by a northern state hotspot with a $C_m+L_m+A_m-$ hotspot in Sikar and a $C_w+L_w+A_w-$ district in Jhunjhunun along the Haryana state border. Just as the lowest performing districts in the southern part of the state are bordered by less clustered areas, the higher performing northern areas are also surrounded by a wide and congruous $C+L+A-$ eleven-district swath. This wide separation between a higher achieving and a lower achieving regions in the state lends credence to the finding that education scores appear to cluster more distinctly in poor achieving states.

Figure 8.18 Rajasthan literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.19 Rajasthan *CLA*, *CA*, *LA*, *CL* distributions



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.12 Educational Outcomes in Madhya Pradesh

Before discussing the spatial distribution of educational outcomes in Madhya Pradesh, it's first worth mentioning the higher percentage of null districts without data in the state, mostly in the far eastern districts. That said, at the national level map in Figure 8.2, Madhya Pradesh has a wide and intense clustering of low literacy and capability rates and high absentee rates along the border with Rajasthan and Gujarat in the adjoining Jhabua and Barwani districts. In the national literacy distribution map (Figure 8.2), however, these very low literacy and high absentee rates in the far western districts are not part of a larger statewide trend and in both cases the vast majority of the districts in the

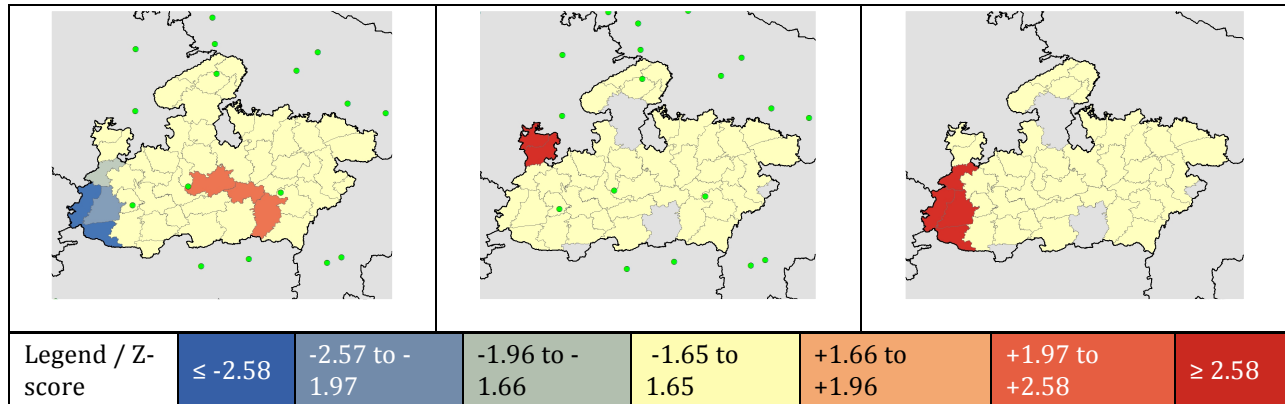
state are not significantly lower than the national average. However, in the capabilities map all but seven of the states districts (not including null value districts) are below -1.65 standard deviation thresholds. This discrepancy suggests that the state’s educational system is uniformly underperforming relative to its literacy rate—even as low as it is. This also shows the degree to just how wide the gap between indicators of basic skills can be.

Table 8.14 ASER Literacy and absentee distribution of districts in Madhya Pradesh and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	68.49	49.30	2.75	19.19
Mean Rank	14	21	13	-7
Range	37.77	60.43	16.30	-22.66
Range Rank	20	21	21	-1
Std. Dev.	7.29	10.78	2.62	-3.49
Std. Dev. Rank	15	18	17	-3
CV	0.11	0.22	0.95	-0.11
CV Rank	8*	14	16	-6

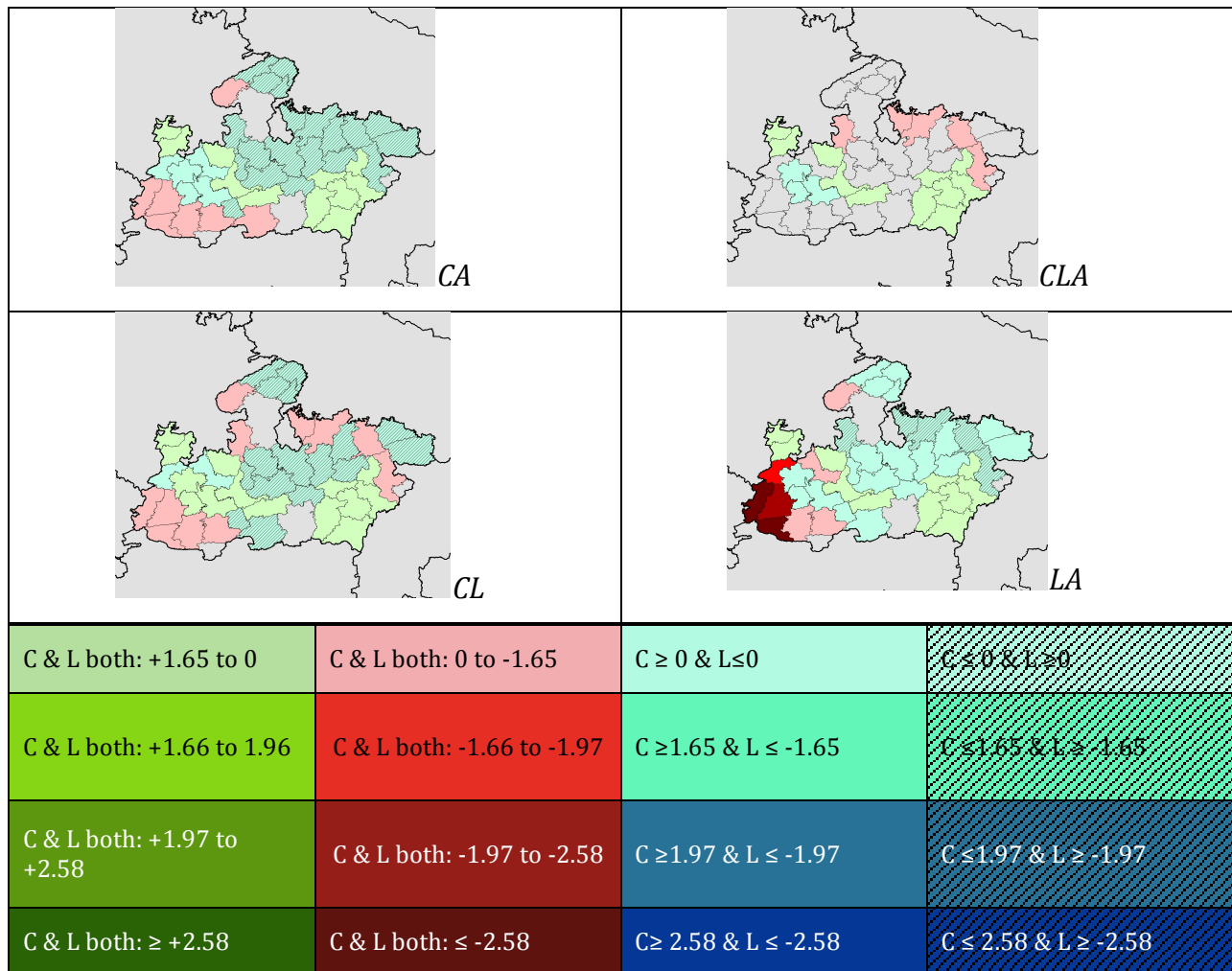
Turning to the state-wise distributions in Madhya Pradesh, there are far more low performing districts in the far west relative to the rest of the state. The state map also, surprisingly, shows a two districts hotspot in Neemuch and Madsaur districts in the far northwestern tip to of the state. However, the higher performance of these districts underscores the weakness of the state as a whole, as they do not register as even weak hotspots in the national map, and are below the national average in terms of both literacy and above average in terms of absenteeism.

Figure 8.20 Madhya Pradesh literacy rate (left) and average ASER capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.21 Madhya Pradesh CA, CLA, CL, LA



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.13 Educational Outcomes in Odisha

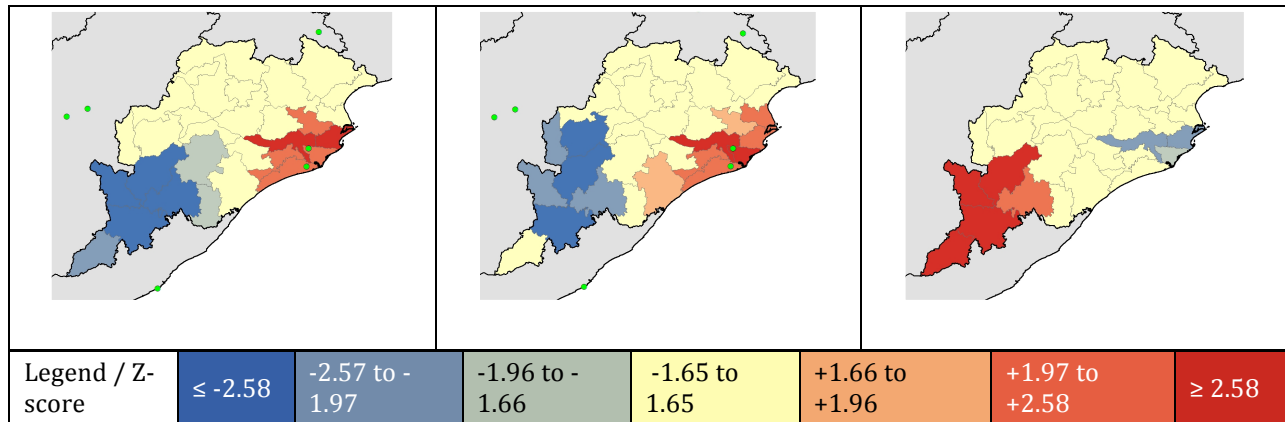
In terms of ASER capabilities, Odisha is the lowest performing state in India. The state also has the largest spread between mean district rate and range between the highest performing and lowest performing districts (Table 8.16). Moreover, Odisha is the only state in which less than half of the children tested were able to complete the basic tasks in the ASER capabilities test. The state also ranked low in the standard deviation between districts at 14th nationally, and is ranked 14th in terms of mean district literacy scores as well. Lastly, the range between the highest and lowest performing district is the widest states tested.

Table 8.15 ASER Literacy and absentee distribution of districts in Odisha and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	70.84	53.81	4.21	17.03
Mean Rank	12	16	17	-4
Range	40.44	58.80	13.20	-18.36
Range Rank	21	16	18	5
Std. Dev.	12.49	16.08	3.46	-3.58
Std. Dev. Rank	21	21	20	0
CV	0.18	0.30	0.82	-0.12
CV Rank	10	16	14	-6

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

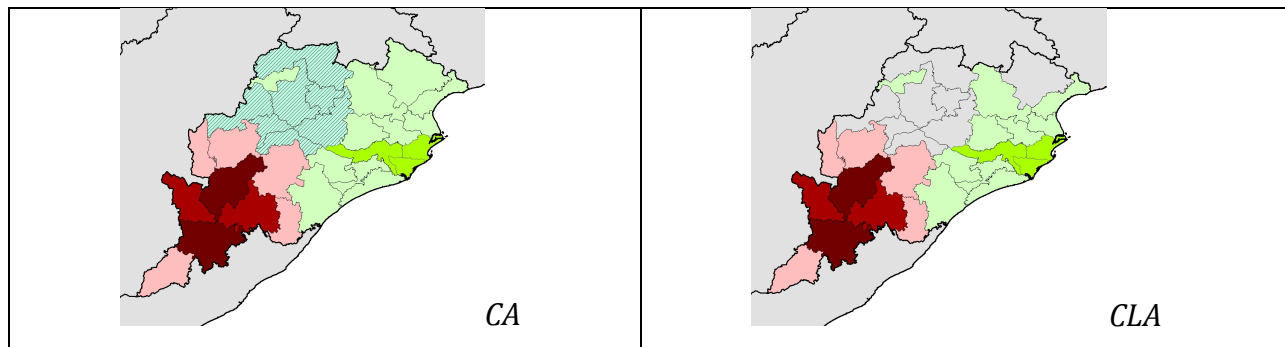
Figure 8.22 Odisha literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school (right)

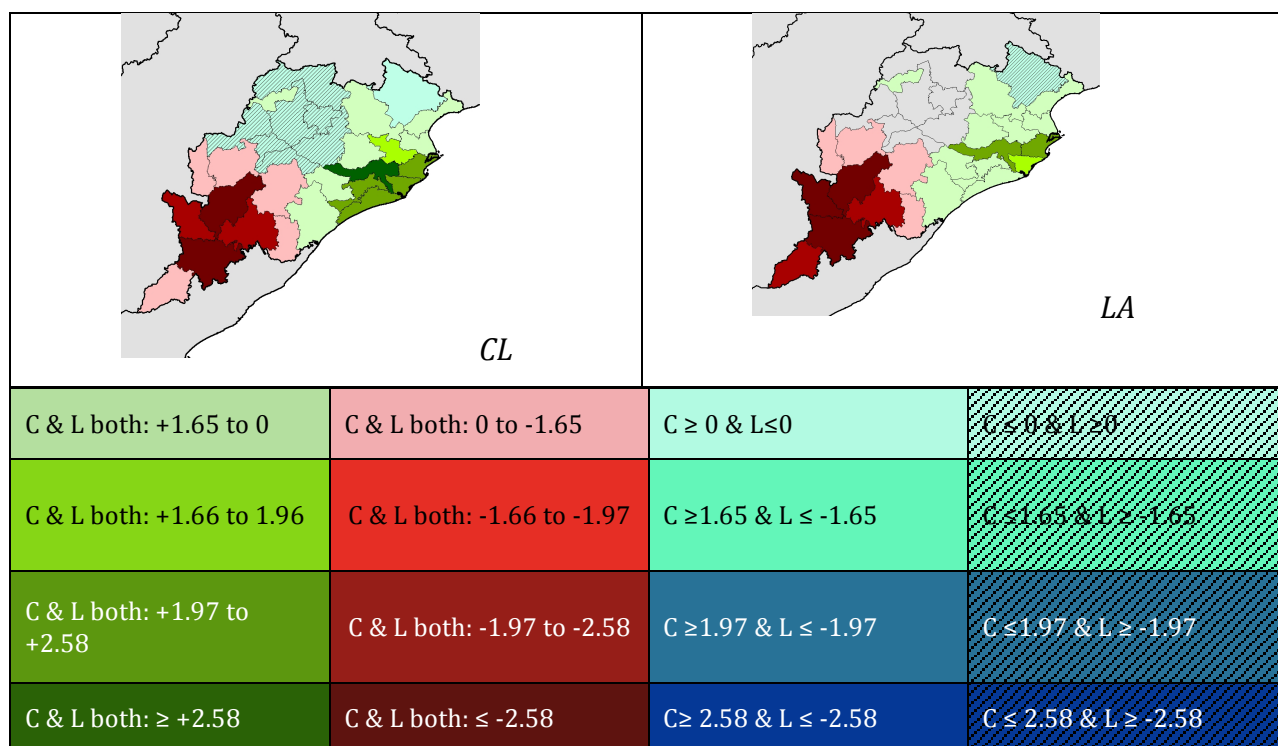


Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Odisha is similar to Rajasthan, Uttar Pradesh, and Karnataka insofar that it has a very consistent, if highly unequal, educational geography. Although Gujarat, Karnataka, West Bengal, and Assam all have hot and cold spots beyond the ± 1.65 threshold in their state borders on the national map, Odisha has the unique distinction of being the only state with both extreme L_{e+} and L_{e-} districts in the same state. There is a single extreme high performing (L_{e+}) district in Cuttack while there are extremely low performing (L_{e-}) districts in five districts (Malkangiri, Nabarangpur, Kalahandi, Rayagada, and Gajapati).

Figure 8.23 Odisha State CL, CLA, LA, CA maps





Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

However, this extreme polarization in the literacy rates is not registered in either the capabilities or absentee maps which only show L_e - districts, and $C+$ and $A-$ districts. Here there is further evidence of the disconnect between the three indicators which add evidence to Myrdal's point in Section 8.2 that defining and measuring literacy was more difficult than it appeared conceptually. Looking at Odisha in the CL overlap map Figure 8.2, the state also adds strong evidence to the general trend of higher educational outcomes along coastal districts than in inland districts within states. At the national level, Odisha is also notable for having poor performance in educational outcomes in adjoining districts across its southern border with Chhattisgarh (especially in Bastar and Dantewada districts) in the far south of the state along the Andhra Pradesh border.

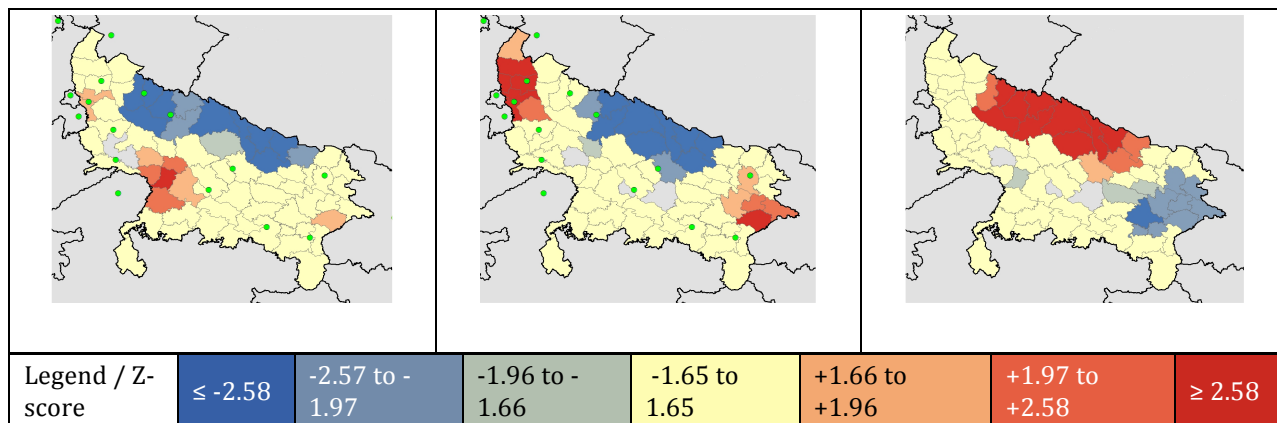
As previously, noted Odisha (like Rajasthan) has closely overlapping literacy and ASER cold spots and absentee hotspots. These state level cold spots occur in the same low performing districts visible in the national maps in the adjoining inland southwestern districts of Koraput, Kalahandi (both $C_e-L_e-A_e+$), Nabarangpur and Rayagada ($C_m-L_m-A_m$). At the other end of the spectrum, hotspots exist in the aforementioned Cuttack district

(C_e+L_e+), and moderate clustering in neighboring Bhadrak and Kendrapara, and to a lesser extent in Puri, Khordha and Jaipur.

8.14 Educational Outcomes in Uttar Pradesh

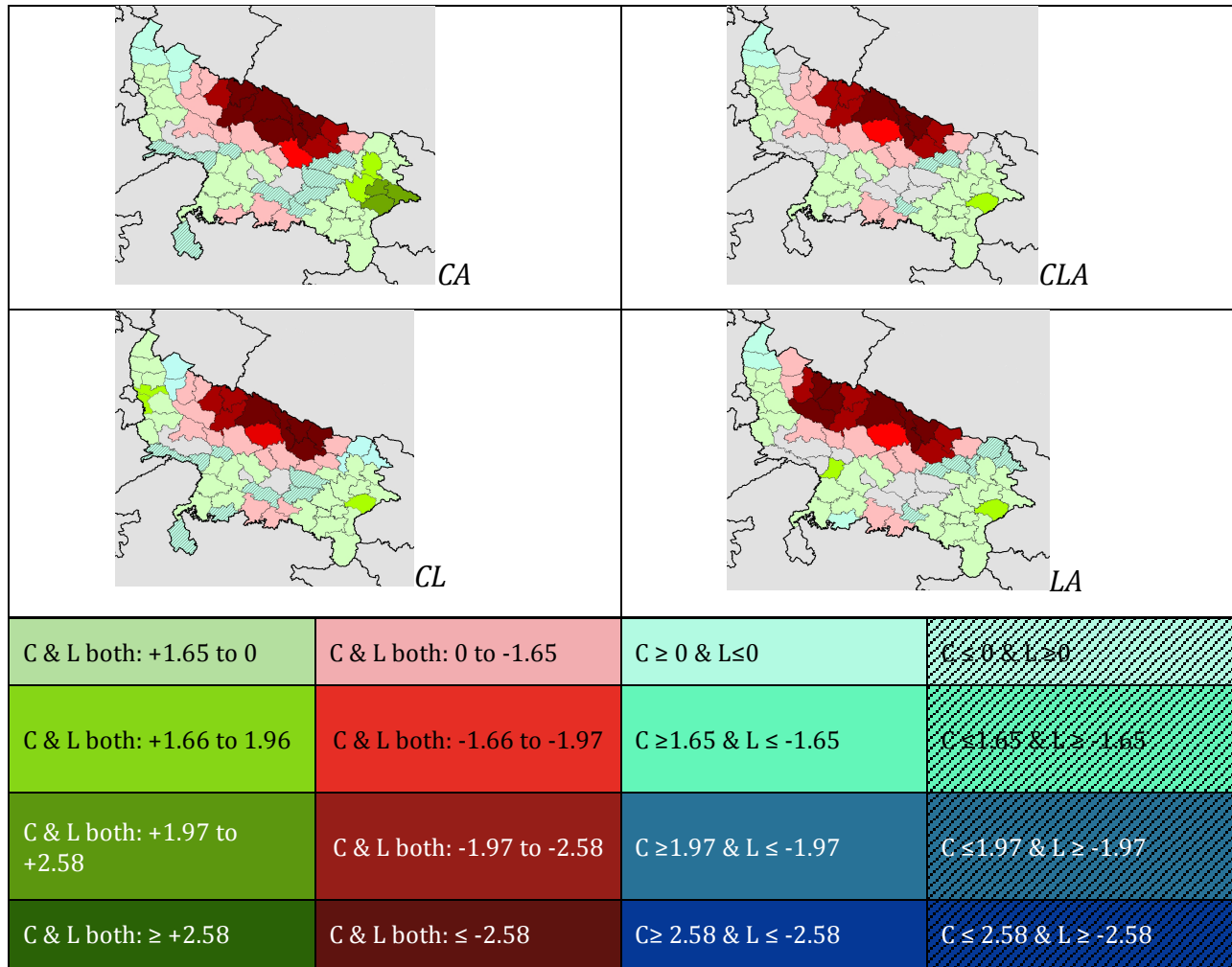
The geographically large and most populated state of India, Uttar Pradesh follows many of the patterns previously discussed in other lower performing states. Firstly, the state has middling a mean district literacy rank of 12th, and a slightly lower rank of 16th naturally in the ASER capabilities score. However, the distribution of both literacy and capabilities rank between districts is the highest in terms of standard deviations and has the highest range between district literacy rates in the country. Though to some extent this degree of variation can be expected from such a large and populated state. It should also be mentioned that at the national level (Figure 8.2), the state has no districts over 1.65 std. deviations from the national mean in either literacy or ASER student capability rates, so that even the higher achieving districts discussed in this section at the state level are themselves very low even by Indian standards.

Figure 8.24 Uttar Pradesh literacy Rate (left) and average ASER capabilities, capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.25 Uttar Pradesh CL, CLA, CA, LA maps



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

At the national level, the very low education rates in both maps along the states northern border with Nepal are one of the most immediately features of the map. Similar to case of Madhya Pradesh, the low educational performance in Uttar Pradesh is evident in the literacy map (Figure 8.24), but is far more pronounced in the ASER capabilities maps. The literacy and capabilities maps overlap most intensely in Badaun, Bareilly, Shahjahanpur, Lakimpur Kheri, Bahraich, Shavasti, Gonda, Balrampur (all $C_e-L_e^-$), and slightly less intensely in the bordering districts of Rampur, Philipit, Sitapur, Bara Banki, Siddharth Nagar (all $C_m-L_m^-$).

State spatial distribution of educational outcomes in Uttar Pradesh have a stronger degree of overlap between the three indicators than in most Indian states. As is consistent

with the national trend, it is easier to identify overlapping cold spots than hot spots in Uttar Pradesh. There is a single significant $C_w+L_w+A_w$ - district in Ghazipur district along the Bihar border. At the other end, there are nine statistically significant and congruent cold spots in the *CLA* map: three of which are the most intense statistical outlier $C_e-L_e-A_e+$ districts (Bahraich, Lakhimpur Kheri, and Balrampur); five of which are $C_m-L_m-A_m+$ districts (Pilibhit, Shahjahanpur, Balrampur and Gonda,); and single $C_w-L_w-A_w+$ district in Sitapur. Uttar Pradesh also has clusters of $C+L+A$ - districts along the state border with New Delhi. is reminiscent of the higher achieving districts in Tamil Nadu along the Kerala border and evidence of a spillover effect in districts bordering higher performing neighboring districts in this case New Delhi.

Table 8.16 ASER Literacy and absentee distribution of districts in Uttar Pradesh and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	67.52	49.69	6.10	17.83
Mean Rank	16	20	21	-4
Range	33.38	43.48	15.20	-10.09
Range Rank	19	20	20	-1
Std. Dev.	7.38	10.05	3.88	-2.68
Std. Dev. Rank	16	16	21	0
CV	0.11	0.20	0.64	-0.09
CV Rank	8*	13*	9	-5

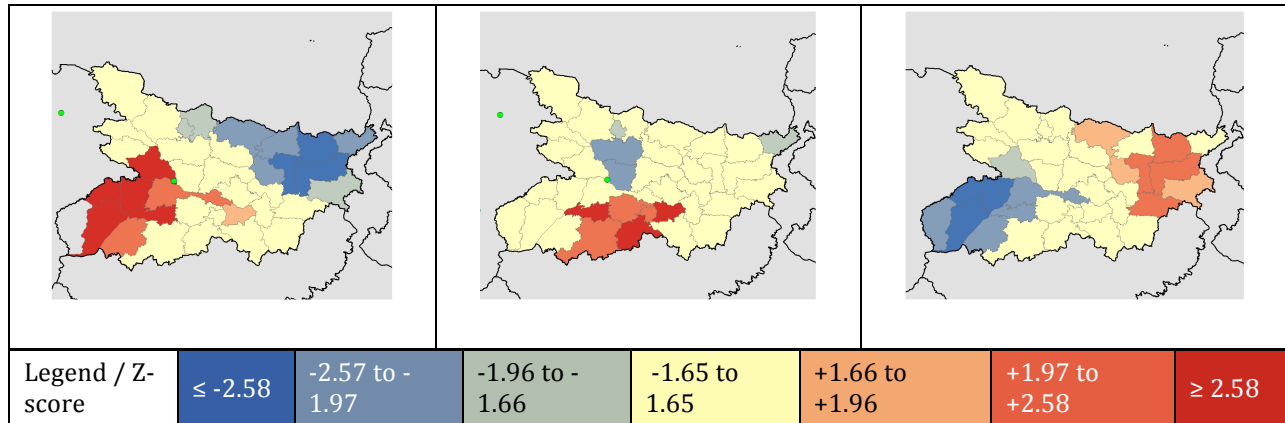
Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

8.15 Educational Outcomes in Bihar

Educational outcomes in the long troubled state of Bihar are very low. The state has the lowest mean literacy rate in India (61.39%). However, its low performance is surprisingly evenly distributed across districts in the state with an inter-district range of

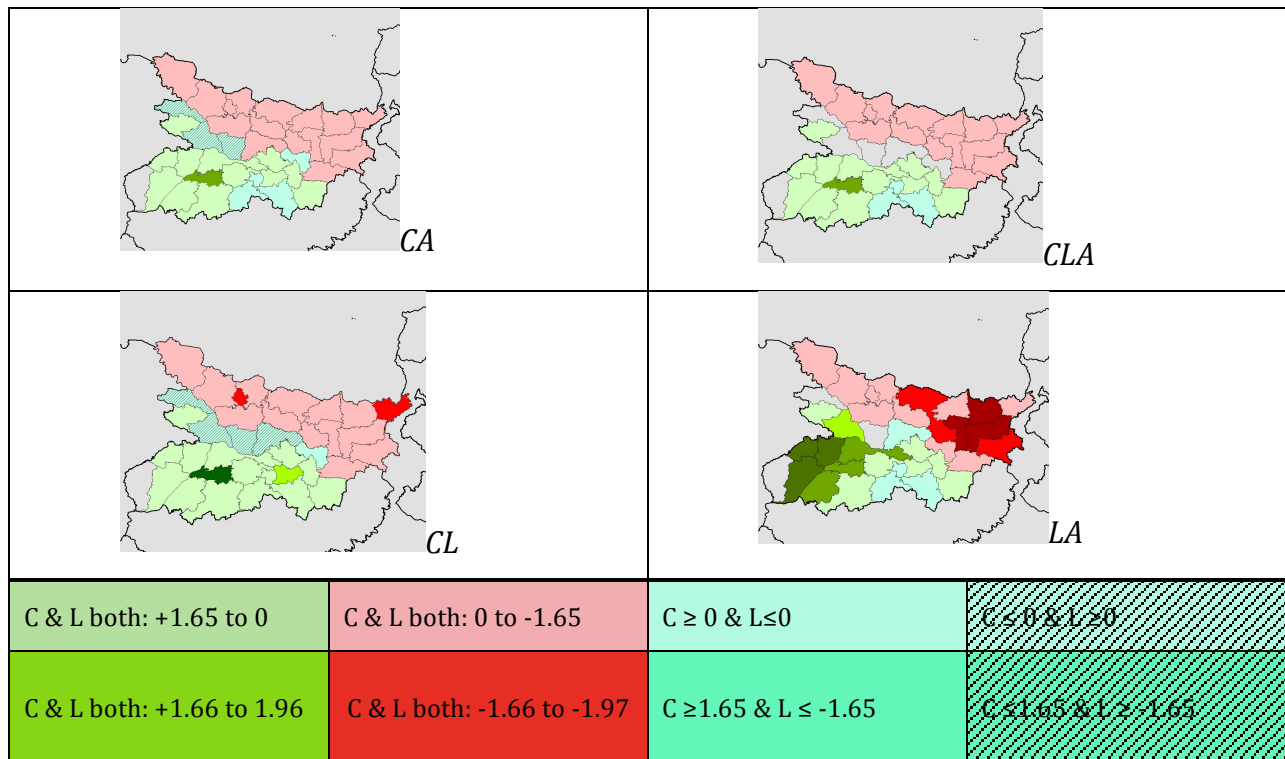
22.29 (6th); and a standard deviation between districts of 6.47, still above the national average. This bucks the general trend of lower district mean rates being matched with wider distributions between districts. This spatial continuity is not matched in the ASER capacity ranks which are much more in line with the national trend with both very low capability rates (18th) and high range (18th) between district rates.

Figure 8.26 Bihar literacy Rate (left) and average ASER capabilities (middle), ASER percent out of school (right)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 8.27 Bihar CA CLA CL LA distribution maps



C & L both: +1.97 to +2.58	C & L both: -1.97 to -2.58	$C \geq 1.97$ & $L \leq -1.97$	$C \leq 1.97$ & $L \geq -1.97$
C & L both: $\geq +2.58$	C & L both: ≤ -2.58	$C \geq 2.58$ & $L \leq -2.58$	$C \leq 2.58$ & $L \geq -2.58$

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

At the national level, Bihar is clearly a very weak state across all educational indicators. The literacy rate is below the -1.65 standard deviation threshold in all but eight districts in the state, all of which are in the west and southwest of the state near the border with Uttar Pradesh. Although by no means high performing, the capabilities map shows a less dire situation with both fewer and less intense cold spots in Bihar. ASER student capabilities rates fall below the lowest -2.58 classification threshold in one district (Muzaffarpur). However, fourteen contiguous districts have z-scores between -1.96 and -1.65 indicating that there is a high stock of literates in the state but the situation appears to be moving in the right direction. The younger generation is still performing well below the (already quite low) national average, but not quite as desperately so as in literacy rates.

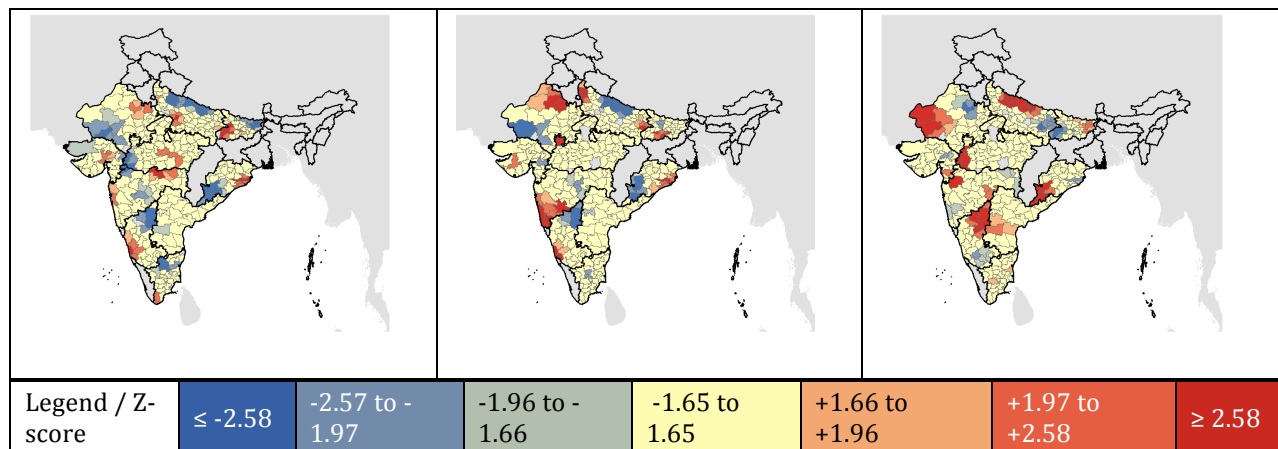
Switching to the state level hotspot maps of Bihar in Figure 8.27, a familiar pattern of deviation in the state between a higher performing half (in this case the south of the state) and a lower performing half (in the north) emerges hidden in the national map (Figure 8.2). Similar to Maharashtra, in Bihar there adjacent districts in the hotspot map, but few overlapping, districts that do not register strong overlapping in Figure 8.27. In fact, in the three-indicator *CLA* map there is only a single three-indicator overlapping district in Jahanabad ($C_m+L_m+A_m^-$). Uncharacteristically, this moderate hotspot is not adjacent to similarly other overlapping hotspots, but is instead neighbored by higher capacity scores to the south and east and higher literacy scores to the west. This isolated positive hotspots is mirrored by two cold spots on opposite sites of the state in Sheohar and Kishanganj both of which are ($C_w-L_w^-$).

8.16 Ten-State Spatial Distribution of Educational Outcomes Together

The three map series in Figure 8.28 combines the state hotspot maps for those states described above. Doing so is useful because state hot and cold spots emerge along shared state borders. Of course, as this map stitches together individually generated state

maps, a literacy hotspot in one state, might actually be lower than a cold spot in another state thus all discussions of hot and cold spots in this sub-section are relative only to other districts within a given state.

Figure 8.28 Ten state Joins of state literacy rate (left); state ASER capacity rates (center); and state absentee rates (right) from sections 8.6 to 8.16



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Table 8.17 ASER Literacy and absentee distribution of districts in Bihar and rank among Indian states

	Literacy Rate	ASER Capabilities Rate	Out of School	Difference between Lit rate and Cap. Rate
Mean	61.39	52.47	3.69	8.92
Mean Rank	21	18	16	3
Range	22.29	31.40	7.30	-9.11
Range Rank	6	18	16	-12
Std. Dev.	6.47	7.99	2.02	-1.52
Std. Dev. Rank	9	10	16	-1
CV	0.11	0.15	0.55	-0.05
CV Rank	8*	9*	4	-1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

In stitched literacy map, there are only a few areas where a cross border trend is evident. There is cold spot of cross state education rates in the corridor where eastern Gujarat, Southern Rajasthan, Western Madhya Pradesh, and Northern Maharashtra meet. In

addition to this four state border area, cross border cold spots also exist to a lesser extent in the border area between Northern Karnataka, south central Maharashtra, and eastern Andhra Pradesh. The patchwork state literacy map above also shows little cross-border congruous hotspot clustering of literacy rates with the minor exceptions in the northern Maharashtra-southern Madhya Pradesh cluster, and the western Bihar-eastern Uttar Pradesh cluster. In the ASER capabilities map, there are few hot or cold spots adjacent to each other. The exception being a stark contrast between the shared border between southern Maharashtra and northeastern Karnataka where a large cluster of three intense and one moderate hotspots in Maharashtra hotspots borders an intense and moderate Karnataka cold spots.

In addition to the cross-border clustering, other trends emerge by stitching the state maps together. For example, one can see that only two state literacy cold spots are coastal—a weak cold spot in northern Tamil Nadu and Western districts in Gujarat—this stands in clear contrast to the thirteen coastal hotspots clusters. The coastal dominance appears even more prevalent with zero coastal cold spot districts of educational outcomes.

8.17 Chapter Summary and Reference to Research Questions

This long chapter but foundational chapter began with a discussion on Myrdal's conceptions of the theoretical and methodological problems associated with the concept of literacy in *Asian Drama*. From this, it was shown that Myrdal's stress on the instrumental use of a functional literacy as an essential driver for improving economic productivity, empowerment, and development in general has largely been adopted into the mainstream of the discussion on literacy into the mainstream UNESCO definition, the human capabilities model and more radically with the work of Paulo Friere. However, subsequent scholarship on the literacy concept has also expanded the definition of literacy to include ever higher order skills in ways that somewhat dilute the terms original meaning in ways that diverge from Myrdal's normative suggestion that expanding a basic literacy among the population was more important than expanding definitions of it.

At this point, the chapter moved into the spatial discussion of the literacy, capabilities rates, and absentee rates in India first at the national level (Section 8.4) and

then at the state level (Sections 8.5- 8.16). Doing so allows the author to address several Research Questions simultaneously. First and most importantly, this chapter assessed the spatial dimensions of educational inequality in India and in the larger states in India (Research Question three). As to whether educational outcomes cluster into higher and lower areas (Research Question 3.1), it is shown that they do cluster at both the national and subnational level, and especially so in lower performing states.

This chapter also answers Research Question 3.2 as to whether there is spatial overlap between adult literacy rates, children's educational outcomes, and absenteeism in part to check Myrdal's assumption that student attendance was only weakly related to skills attainment. Based on the spatial discussion above it is shown that they are. For Research Question 3.3 on state border clustering in India, state boundaries do appear to be instrumental in determining the educational outcomes. This is most apparent in states with less spatial inequality between districts. This suggests that state level implementation of educational issues is likely to be the key feature in determining student outcomes, and is consistent with Myrdal's conception of the 'soft state'. Research Question 3.4 asks whether the developmental states of Maharashtra, Gujarat, and Karnataka have fared better or have different features than other states in India in terms student outcomes. This chapter showed that these states did not have significantly higher performance than other states, but that they showed a far wider degree of difference between districts in all three of the indicators tested. This difference was particularly apparent in contrast to them more social democratic states of Kerala and Tamil Nadu (but not compared to West Bengal). In some sense this higher degree of clustering of higher educational outcomes does validate Myrdal's suggestion that a growth focused state with more *laissez-faire* institutions would lead to more clustering of higher outcomes. For Research Question 3.5 on the regional patterns to educational development, this chapter showed that, in general, the far northern states, the northeastern tribal states, and the southern states of Kerala, Andhra Pradesh and Karnataka appear closer to achieving universal literacy across the state than the central latitude states from Rajasthan to Assam. Taken as a whole with the benefit of retrospect, this chapter showed that Myrdal's view of intersection between the state, geography, and the education sector appears well validated. In the next three chapters the

ASER capabilities map in Figure 8.2 is used as a base map in order to access the relationship of exogenous (Chapter 9), and endogenous (Chapters 10 -11) factors in the educational sector to student outcomes to test Myrdal's conception of circular and cumulative causation (Research Question 4).

Chapter 9 Spatial Relationship of Exogenous Factors to Educational Outcomes in India

9.1 Introduction

The previous chapter examined the spatial relationships between three indicators of educational outcomes: literacy rates, absentee rates, and average ASER capabilities rates at the national and state level to show the geography of educational outcomes in India based on Myrdal's educational hypothesis. In this and the following two chapters, the author examines the spatial relationship between the average ASER capabilities rates (*C*) and the exogenous and endogenous issues of the educational system for which district level data is available in India. Doing so allows an empirical testing of Myrdal's theoretical understanding of Circular and Cumulative Causation (CCC) as described in Chapter 5 as it applies to the educational sector. To do this, a Getis-ord G_i^* hotspot map for each exogenous factor (listed below in Table 9.1) based on the methodology described in Section 1.6 in order to answer Research Question 3.1. This also identifies relationships between the clusters identified and state boundaries as well as other sub-national regional patterns to address Research Questions 3.3, through 3.6.

After generating the hotspot maps, the relationship between the spatial patterns of each factor and educational student outcomes are examined by overlaying each factor (below) with the ASER average capabilities (*C*) map (Figure 8.2), the closest approximation available to the functional literacy as Myrdal understood it (Section 8.2). This allows us to answer Research Question 4³ and assess the degree to which Myrdal's conception of cumulative causation of "desired" and "undesired factors" reinforce one another spatially as stipulated in Chapter 5. More specifically, sub-Research Questions 4.1 – 4.6 on the relationship between each individual exogenous factor below and its relationship to student capabilities outcomes can also be answered. This chapter employs the full nomenclature and map legends described in Section 1.6 in the introduction.

³How do spatial distributions of exogenous economic and social factors relate to the geography of educational outcomes inequality in India?

Table 9.1 Exogenous Social and Economic Factors, Symbol and Sub-research Question Answered

Exogenous Factor	Symbol	Research Question Addressed
Decadal Growth rate	<i>G</i>	4.1
Scheduled Castes	<i>S</i>	4.2
Scheduled Tribes	<i>T</i>	4.3
Public /Private school ownership	<i>P</i>	4.4
Sex Ratio	<i>X</i>	4.5
Percent of population aged 0 to 6	<i>AGE</i>	4.6

Source: generated by author

9.2 Spatial Relationship Between Decadal growth rate (*G*) and Average ASER Capabilities Rates (*C*)

The theory that universalized basic education is essential to stimulate economic growth is at the core of the human capital model, Sen’s capabilities model, as well as Myrdal’s circular and cumulative causation conception as described in Chapter 5. Looking at the district level in India, this subsection finds that the relationship between economic growth (*G*) and higher (*C*) scores appears to be quite weak for the majority of districts in India. In fact, this section shows that the opposite appears more frequently in India, as there are significant overlaps between the states with lower decadal growth rates and higher *C* scores. This highlights the peculiarity of India’s growth model compared to the economic rise of other countries especially in Asia and suggests that, if the human capital theory is correct, a “second boost” of economic growth may be possible if broad improvements of the educational sector are made towards universal literacy. Secondly, this section showed that the disconnect between economic growth clustering and basic skills clustering highlights quite clearly limitations of GDP as an indicator for human development and need for more holistic indicators as described in Chapter 1. Thirdly, the local context appears to be crucial in describing the relationship between economic growth

and capabilities rates. The contrast between the diverse educational outcomes (C) of the neighboring states of Kerala and Tamil Nadu, and the intense cold spots of growth in both of the states weakens the argument that higher educational outcomes are inherently associated with economic growth in the Indian context. When high student high attendance rates in Tamil Nadu (in Section 8.5) are considered, it can further offer that the attendance in schools also is not apparently linked to higher growth rates.

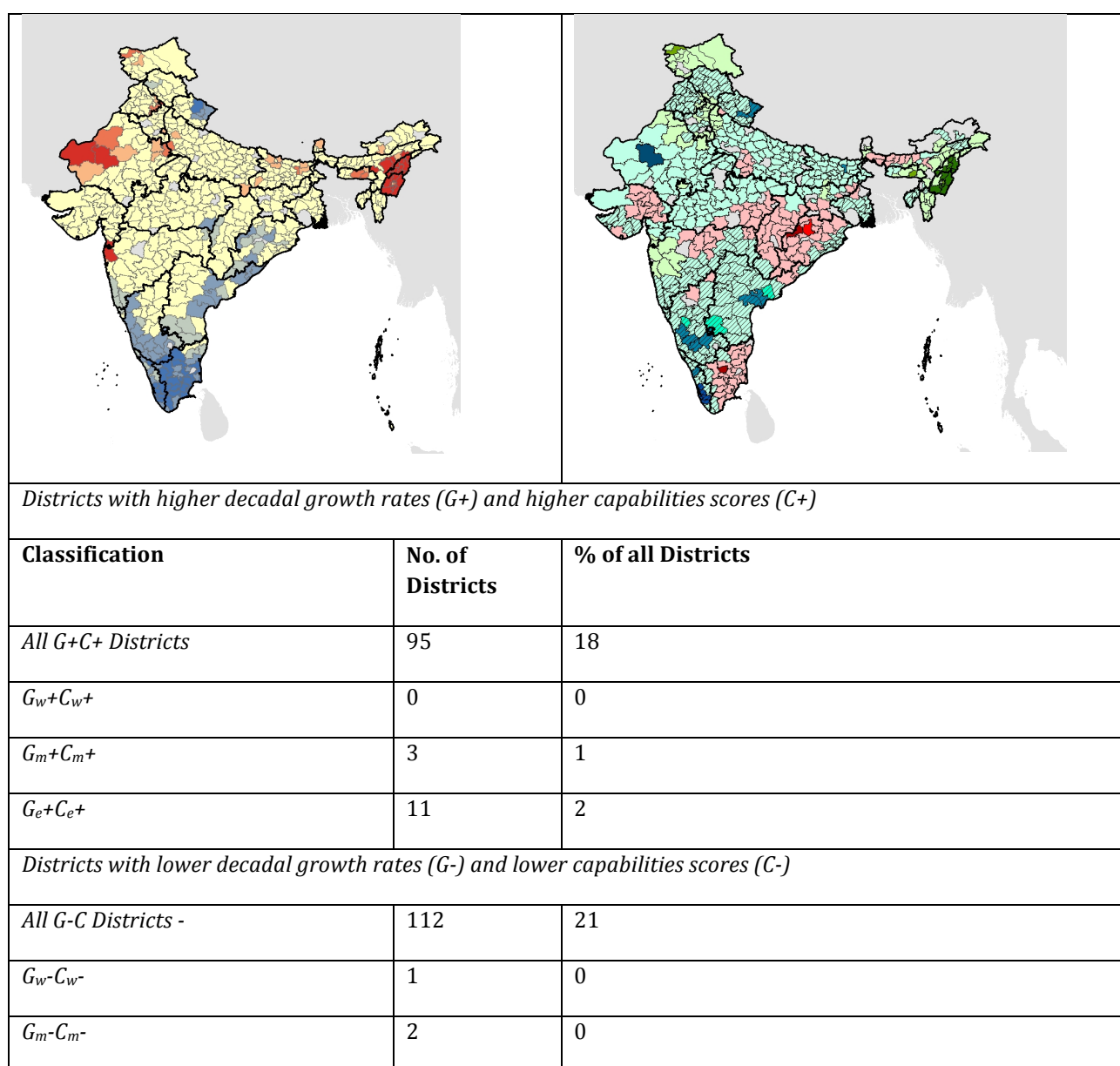
This section also shows that the spatial distribution of educational outcomes in the more developmental states of Gujarat, Maharashtra, and Karnataka show considerably more spatial inequality within the states than in other states. Before presenting the data it should be noted that, the decadal economic growth rates used to generate the hotspot map in Figure 9.1 is only marginally useful insofar that many of the hotspots districts occur in some of the least inhabited districts in the country and areas with very low initial state GDPs.

With the exception of the G_{e+} saturation in both Manipur and Nagaland and in the bordering eastern districts of Assam and a geographically larger five district cluster in Western Rajasthan, the hotspots in the decadal GDP growth rate in Figure 9.1 do not occur along state boundaries but rather in small isolated patches throughout the country. Interestingly, there is only one significant hotspot district in Gujarat, a state often exalted for its economic growth, and as the political propellant to the rise of current Indian Prime Minister Narendra Modi. This single hotspot in the state occurs in southernmost district of Valsad adjacent to a similar G_{e+} district in Thane, Maharashtra. As such, the hotspot map of decadal growth in Figure 9.1 above shows that the economic growth is taking place in Gujarat is not occurring across the state evenly and that economic growth appears to be fragmented across the state. The same could also be said of Maharashtra to the immediate south.

In contrast to the scattered hotspots in the decadal GDP, the economic growth cold spots are much more spatially clustered. This is particularly true of the G_{e-} and G_{m-} saturated southernmost states of Kerala, Tamil Nadu. This South Indian economic growth cold spot expands northward from the similarly low GDP rates in southern Karnataka and

southern Maharashtra. The same cold spot also extends towards the northeast along the Eastern Ghats in southern and coastal Andhra Pradesh, and in much of southern and inland Odisha. The eastern branch of low growth clustering extends farther north than the western branch. However the saturation is slightly less and there is more variation in the intensity of the cold spots.

Figure 9.1 (left) Getis-Ord G_i^* hotspot map of decadal economic growth rate 2001 to 2011 (G); and (right) overlay map with ASER achievement rates hotspots (C)



$G_e^-C_e^-$	0	0
<i>Districts with higher decadal growth rates (G+) and lower capabilities scores (C-)</i>		
<i>All G+C- Districts</i>	168	31
$G_w^+C_w^-$	0	0
$G_m^+C_m^-$	1	0
$G_e^+C_e^-$	1	0
<i>Districts with lower decadal growth rates (G-) and higher average capabilities scores (C+)</i>		
<i>All G-C+ Districts</i>	159	30
$G_w^-C_w^+$	3	1
$G_m^-C_m^+$	9	2
$G_e^-C_e^+$	5	1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

9.2.1 Spatial Overlay of Decadal Economic Growth (G) and Average ASER Capabilities Rates (C)

The $G+C+$ classification in Figure 9.1 above shows areas with higher decadal economic growth rates and higher than average capabilities rates. Although the classification accounts for large number of $G_e^+C_e^+$ districts (11), they all occur in the previously mentioned sparsely populated areas of Manipur and Nagaland districts. This provides a useful juxtaposition to the low economic growth and higher skills rates in Kerala, and offers evidence to the importance of regionalism in assessing the same exogenous factor can have different relationships in different social contexts. Other than the most extreme high growth and high educational outcome $G_e^+C_e^+$ classified districts, the $G_m^+C_m^+$ districts occur in Meghalaya state and in Bandipora in Jammu & Kashmir. In the case of Jammu & Kashmir, the high growth and high capabilities districts occur throughout the state, but do not spread southward into either neighboring Punjab or Himachal Pradesh, where as the many of the northeastern states are $G+C+$ categorized. $G+C+$ districts

also occur in smaller clusters in northeastern Maharashtra, in several districts in Haryana, and in the bordering districts in Rajasthan and northwestern Uttar Pradesh.

The $G-C-$ classification denotes those areas with lower than average growth rates and lower than average capabilities rates. Districts with this classification occur in slightly more districts than the $G+C+$ classification above, but not with the same intensity. There are only three significantly overlapping districts, none of which are the most intense G_e-C_e- classification. This suggests that just as higher capabilities rates and higher scores do not clearly “go in the same direction” as Myrdal’s circular causation would suggest, but instead only seem weakly related. Spatially, the two overlapping hotspots, one G_w-C_w- and the other G_m-C_m- are in adjacent districts in northwestern Odisha in Bargarh and Sambalpur respectively, with the other in Namakal, Tamil Nadu.

The $G+C-$ classification identifies districts with higher economic growth rates with lower than average scores. With 168 (31% of all) districts, the $G+C-$ classification is much larger in terms of numbers than either the $G+C+$ or $G-C-$ classifications, however there are only two significant overlapping districts (Jodhpur, Rajasthan and in Madhepura, Bihar). Surprisingly both districts are part of a single extensive $G+C-$ cluster stretching across central India from Pakistan to Bangladesh borders mostly through Rajasthan, northern Madhya Pradesh, and through Uttar Pradesh and Bihar and the border with Jharkhand. The breadth and continuity of the of the $G+C-$ swath attests to common poor circumstances facing the so-called Hindi belt but also to the weakness of the relationship between GDP growth and C scores in India as a whole.

The $G-C+$ classification of areas with low GDP growth and higher degrees of universal literacy rates again attests to the weakness of the spatial connection between the two indicators. This is especially true of the southern states of Kerala, Karnataka, and Andhra Pradesh which are that are saturated in $G-C+$. These three states also have significant clustering of overlapping significant districts: Kerala has five G_e-C_e+ districts four of which are adjacent in the south of the state; Karnataka has four G_m-C_m+ districts and a single G_w-C_w- district all of which are adjacent; and bordering G_w-C_w+ district in Andhra

Pradesh which also has a three overlapping adjacent districts of two G_m-C_{m+} and one G_w-C_{w+} along its northern coast.

9.3 Spatial Relationship Between Scheduled Castes (S) and Average ASER Capabilities Rates (C)

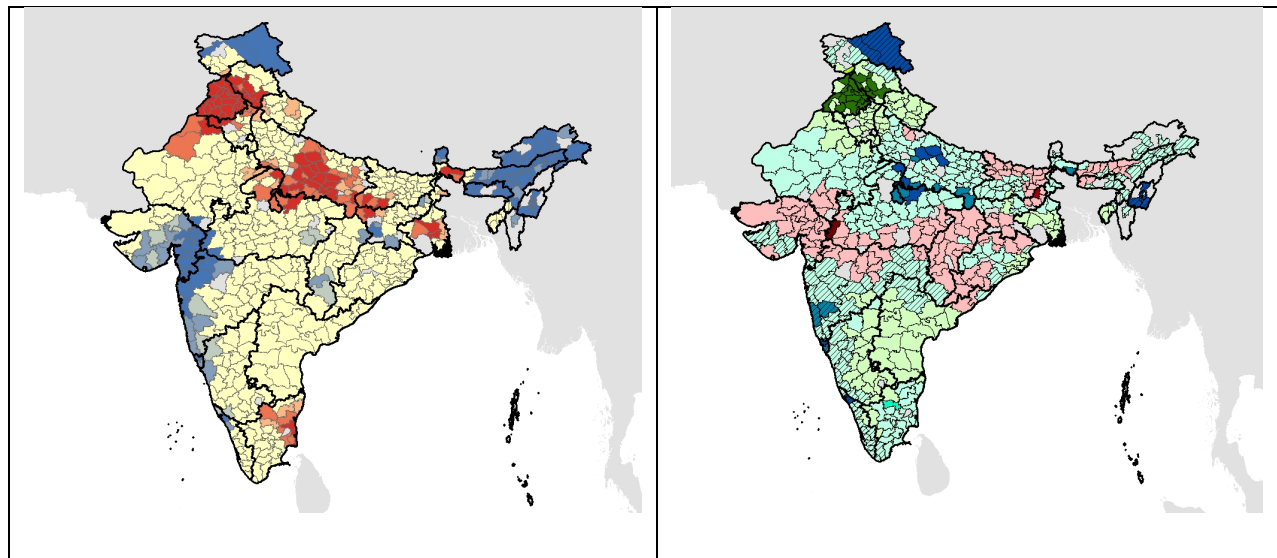
In this and the following Section 9.4 and Section 9.5 the intersections between Scheduled Castes and Scheduled Tribes and the spatial distribution of basic student skills (C) is explored. Caste is a major and uniquely Indian dimension of inequality and a persistent topic in *Asian Drama* as described in Chapter 4. As such, the relationship between clusters of districts with caste clustering and educational outcomes can be useful to assessing the spatial fit between social inequality and educational outcomes. However, the maps created come with two important considerations. First, the hotspot map in Figure 9.2 below shows areas with higher percentages of low-caste populations at the district level relative to the national average and as such does little to describe educational outcome differences between high and low castes in areas with particularly low percentage of low caste populations. Furthermore, as only low caste data is available, compare districts with low castes and against the national average as opposed to comparing districts with higher castes over lower castes, which would more methodologically sound. That the Indian government collects and distributes information on low caste populations, but not similar statistics on high caste populations as part of the national census, shows a lack of symmetry in the data. Finally, it should be added before continuing that given the nature of the village system in India, the district scale is likely too wide a scale to accurately assess the variation in skills between scheduled castes and tribes and the rest of the population.

The Scheduled Caste (S) hotspot map in Figure 9.2 shows the distribution of districts with significantly higher and lower percentages of scheduled castes in India, of which the hotspots are significantly more useful than the cold spots in the map, which, as will be shown in the subsequent section are mostly areas with higher percentages of tribal populations. The exception to this is the caste cold spots along the Western coast of Maharashtra, which do not correspond to a tribal hotspot in the map figure 9.2. Returning to the hotspots, the first striking feature is the complete state saturation of the most intense

hotspots throughout Punjab, spreading into southern Himachal Pradesh, northern Rajasthan, and northern Haryana with strong intensity but little state saturation. There is also a larger hotspot of districts with high percentages of SCs centered in central Uttar Pradesh and along the shared border with Madhya Pradesh as well as in southwestern Bihar and northwestern Jharkhand. Outside of these large SC hotspots there are also SC hotspots in both northern and delta districts of West Bengal. Finally, the only southern hotspot of high SC percentages occurs in the southern states found in the northwestern corner of Tamil Nadu.

The $S+C+$ in the overlap map in figure 9.2 denotes districts and regions with higher than average SC populations and higher than average capacities scores. The combination occurs in relatively few districts (129, 25%), but occurs with high number and percentage of intense S_e+C_e+ districts compared to total the $S+C+$ districts. All of the S_e+C_e+ districts occur in a contiguous cluster from Punjab and Southern Himachal Pradesh, though conspicuously do not spread into the border districts in neighboring Haryana or Rajasthan, areas that in other maps overlay maps in this and subsequent chapters usually share common characteristics with Himachal Pradesh. This high spatial concentration of such intense state-centric clustering highlights the usefulness of the spatial approach used here, and the benefits of spatially differentiated data over tabulated state aggregated data.

Figure 9.2 (left) Getis-Ord GI* hotspot of higher than average percentage of Scheduled Castes population (S); (right) overlay map with ASER achievement rates hotspots (C)



Higher percentage of Scheduled Castes (S+) and higher average capabilities scores (C+)

Classification	No. of Districts	% of all Districts
All S+C+ Districts	129	25
S_w+C_w+	1	0
S_m+C_m+	1	0
S_e+C_e+	19	4

Higher percent of Scheduled Castes (S+) lower average capabilities scores (C-)

All S+C- Districts	166	32
S_w+C_w-	1	0
S_m+C_m-	8	2
S_e+C_e-	6	1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

The uniquely strong classification of high education outcomes and high percentage of the population classified as low caste in Punjab compared to the low performance of districts with low caste groups in Uttar Pradesh and Madhya Pradesh shows that a single social factor (in this case caste) can lead to very different educational outcomes. This finding combined with the strong intensity and state saturation in Punjab, in contrast to its neighbors, and other low-caste areas also suggest that it is likely that Punjab is more

invested, committed, or competent in addressing educational inequality along caste lines than in states which do not have such uniformly high scheduled caste populations.

The opposite classification, districts with higher percentage of SCs and lower than average scores, occur in significantly more districts than the $S+C+$ classification discussed above with 166 (32%) and also only a slightly lower number and intensity. Spatially, these districts are also more widely distributed and certainly less state centric than the clearly delineated Punjab $S+C+$ hotspot. This offers further evidence to the uniqueness of the Punjab model. Secondly, the $S+C-$ districts outside of Punjab do not show any degree of state boundedness or state saturation. This suggests that state policy towards targeting literacy rates among the lower castes is unlikely to be a factor. Spatially, nine of the significant overlapping districts of higher percentage of SCs and lower than average rates occur in two areas. The first is in a centrally located four-district cluster in Uttar Pradesh (Hardoi, Sitapur, Lucknow (all S_e+C_e-), and S_m+C_m- in Kannauj). The second cluster occurs across the Madhya Pradesh, and along the Uttar Pradesh border from Bhind, Jhansi, Lalitpur, Tikamgarh, Chhatarpur and Mohoba, Chitrakoot, Mizapur, and Sonbhadra. Other more isolated significant districts occur in Koch, Bihar in the far northwest of West Bengal, and in Salem, Tamil Nadu.

9.4 Spatial Relationship Between Scheduled Tribes (T) and Average ASER Capabilities Rates (C)

Very similar to the previous subsection that examined the role of caste, this subsection examines the spatial relationship between scheduled tribes (T) and average ASER capability rates (C). Here more evidence that states in which the whole state has higher percentage of more disadvantaged groups (like Punjab in the example above) are more likely to also have higher student capabilities scores. This chapter also provides evidence that districts that have more scheduled tribes, but do not have their own state are more likely to do poorly, though the evidence for this is weaker in the tribal areas map and classifications in Figure 9.3 than in the caste map in Figure 9.2.

The most immediately recognizable feature of the Scheduled Tribes (T) hotspot map in Figure 9.3 is the larger number of null districts in Punjab, Haryana, and Uttar Pradesh.

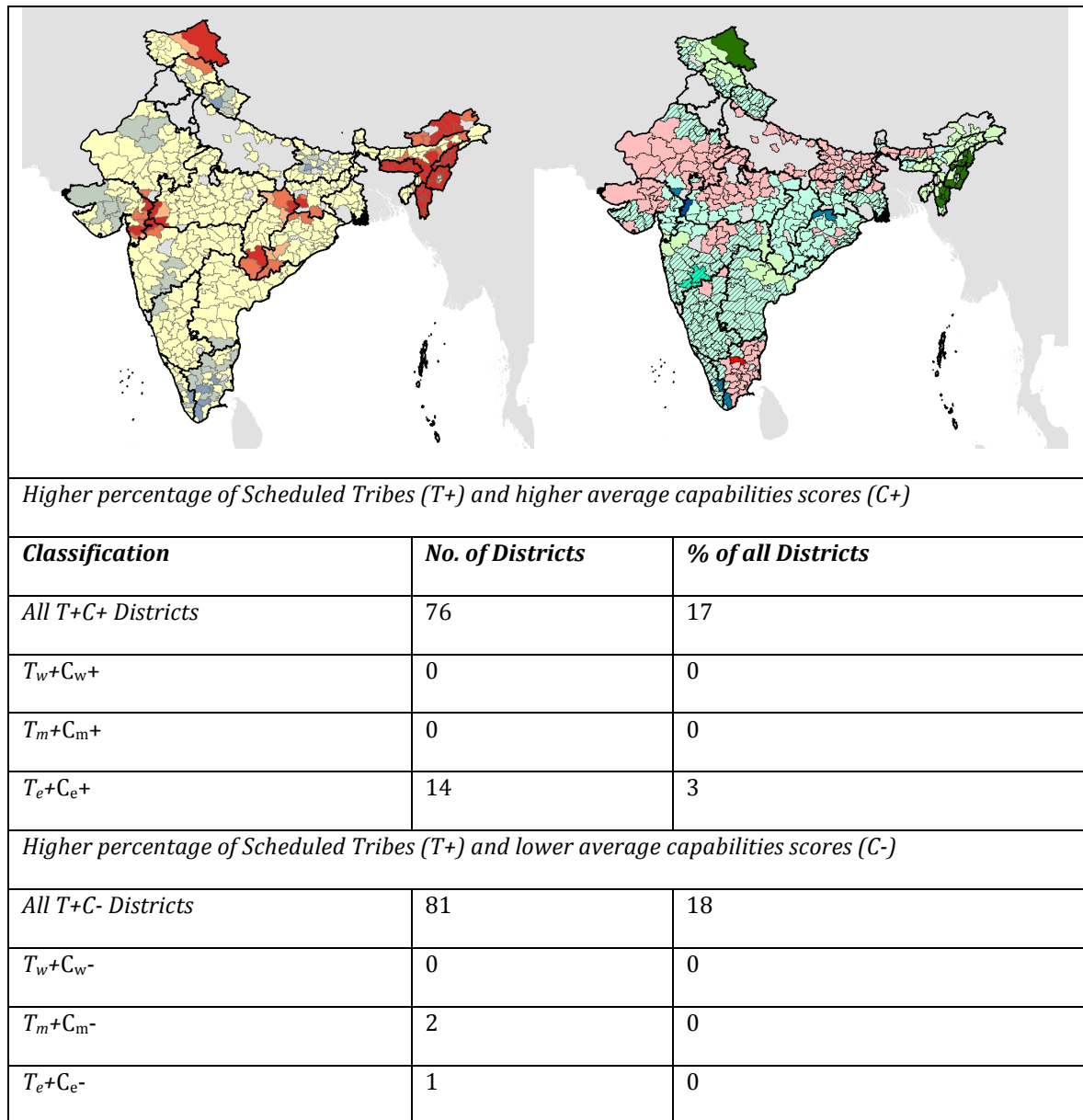
However, because these districts have low percentages of scheduled tribes, the overall impact on the on the spatial geography is likely to be very small especially considering that tribal cold spots are not included this discussion. The tribal hotspots in the map occur entirely in five easily defined areas. The largest of which deeply saturates and spreads across several state lines in the northeastern states with intense T_{e+} districts found in Mizoram, Manipur, Nagaland, Meghalaya, eastern Assam, as well as in Arunachal Pradesh. Outside of this largest hotspot, the other tribal hotspots do not occur with anywhere near the same degree of state saturation compared to the northeastern states, and in every case spread across (often multiple) state boundaries. A second larger swath occurs in the poor educationally performing region in Gujarat with six hotspots (two T_{e+} , three T_{m+} , one T_{w+}); western Madhya Pradesh three hotspots (two T_{e+} , one T_{w+}); southern Rajasthan (one T_{m+} , one adjacent null-district); and northern Maharashtra (One T_{e+} , one T_{m+}). Other areas of high populations of STs occur along the low performing between southern Chhattisgarh (in Bijapur and Dakshin Bastar Dantewada) and in Malkangiri, Koraput, Nabarangapur, and Kalahand, Odisha.

The overlay statistics in Figure 9.3 show a low number of 76 (17% of) all districts have this $T+C+$ classification, however 20% of these are intense classified and there are no weak or moderate intensity classified districts. With the exception of Leh in Jammu & Kashmir, all of the $T_{e+}C_{e+}$ districts in India occur in the northeastern states of Mizoram, Manipur, and Nagaland along the India-Myanmar border. That there exists such a jump between the non-clustered $T+C+$ districts and the extreme $T_{e+}C_{e+}$ districts again attests to the degree of difference between the northeastern states and other tribal regions with regards to educational outcomes. The degree of spatial clustering, intensity and state centricity in the hotspot states has a strong parallel with the case of Scheduled Castes hotspot map in Figure 9.2, and as such it is possible to come to similar conclusions: namely that higher tribal populations, like higher low-caste populations do not necessary have lower educational outcomes.

In both cases this is particularly true when the states are saturated with higher percentages of the tribe or caste, rather than consisting of a minority region that makes up part of a larger state as they are in the case of Gujarat and Madhya Pradesh. Moreover,

Myrdal’s finding that more universally literate tribal areas occur in Christianized areas do give a historical and cultural explanation for the educational success of the tribal areas (advantageous “initial conditions” in Myrdal’s terminology), but this religious factor cannot be an explanatory factor for the exemplary basic literacy progress in Punjab’s low caste areas described in the proceeding subsection.

Figure 9.3 (left) Getis-Ord G_i^* hotspot map of higher than average percentage of the population scheduled tribes (T) and, (right) overlay map with ASER achievement rates hotspots (C)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Outside of the northeastern region, the remaining of $T+C+$ districts occur in Northern Jammu & Kashmir and in northern Himachal Pradesh in the far north; as well as in Tripura eastern Assam and eastern Meghalaya near the T_e+C_e+ swath. Of the $T+C+$ clusters below the 1.68 std. dev. threshold, the districts in Andhra Pradesh are particularly noteworthy and add evidence that disparity between the tribal northern areas and the rest of the state (as it exists before the 2014 partition) are not mirrored in discernable educational outcome difference at least using the techniques used in this research.

The $T+C-$ classification of districts with higher percentages of tribal populations combined with lower than average occurs in a slightly fewer number of districts than the districts with higher than average scores. Despite the higher number of districts, there are far fewer overlapping poor achieving districts. However, the three significant districts do occur in districts with exceptionally low scores especially the T_e+C_e- district in Alirajpur and Jhabua, in Western Madhya Pradesh along the states western border with Gujarat. High tribal populations with lower scores T_m+C_m- occur in Dungarpur in same cluster, other T_m+C_m- occurs in northwestern Odisha in Sundargarh. The other non-overlapping $T+C-$ districts exist in a nearly contiguous swath across the southern Madhya Pradesh, northern Madhya Pradesh, nearly all of Chhattisgarh inland Odisha and southern Jharkhand. Before moving on, a macro view of figure 9.3 shows a wide variation of outcomes within several states most notably in Gujarat, Madhya Pradesh, and especially Maharashtra, which has at least two districts with each of the four classifications suggesting a wide degree of difference districts in these states with regards to the relationship between tribal populations and educational outcomes.

9.5 Spatial Relationship Between Percent Government Schools (P) and Average ASER Capabilities Rates (C)

The following subsection shifts from the spatial distributions of Scheduled Castes and Tribes and their relationship to educational outcome clustering and examines the issue of public and private schools on educational outcomes. In Figure 9.4, the relationship between school privatization and student outcomes is shown. Given Myrdal's normative

view that the government should take the lead in administering the education system (Chapter 7), he would be discouraged at the subsequent expansion of the private schools in India for two reasons. First, he saw that private schools did not necessarily follow the educational policies or priorities of the state, despite the fact that most private schools receiving a bulk of their funds from the state (Myrdal 1968. p. 1821). Second, Myrdal felt that the private schools themselves had considerable political power due to the softness state, and as such were not subject to controls or regulation by the state (Myrdal, 1968 p. 1821). He also considered private schools to be a relic from the colonial period rather than a likely future player in a reformed educational system. As such, the relationship between public and private schools on student skills outcomes is an important measure of the state's ability (or inability) to impart skills broadly and serves as a good proxy for testing the 'softness' of the state as outlined in Chapter 6 and to answer Research Question 3.7.

The hotspots in Figure 9.4 show those areas with a significantly higher than average percentage of government schools compared to schools administered by nongovernment private, religious, or NGOs. These hotspots occur most prominently, and with the highest degree of state centrality, in four of the lowest achieving states in the study: Bihar, Jharkhand, West Bengal, and Odisha which add to the evidence of the softness of the Indian state in the educational system.

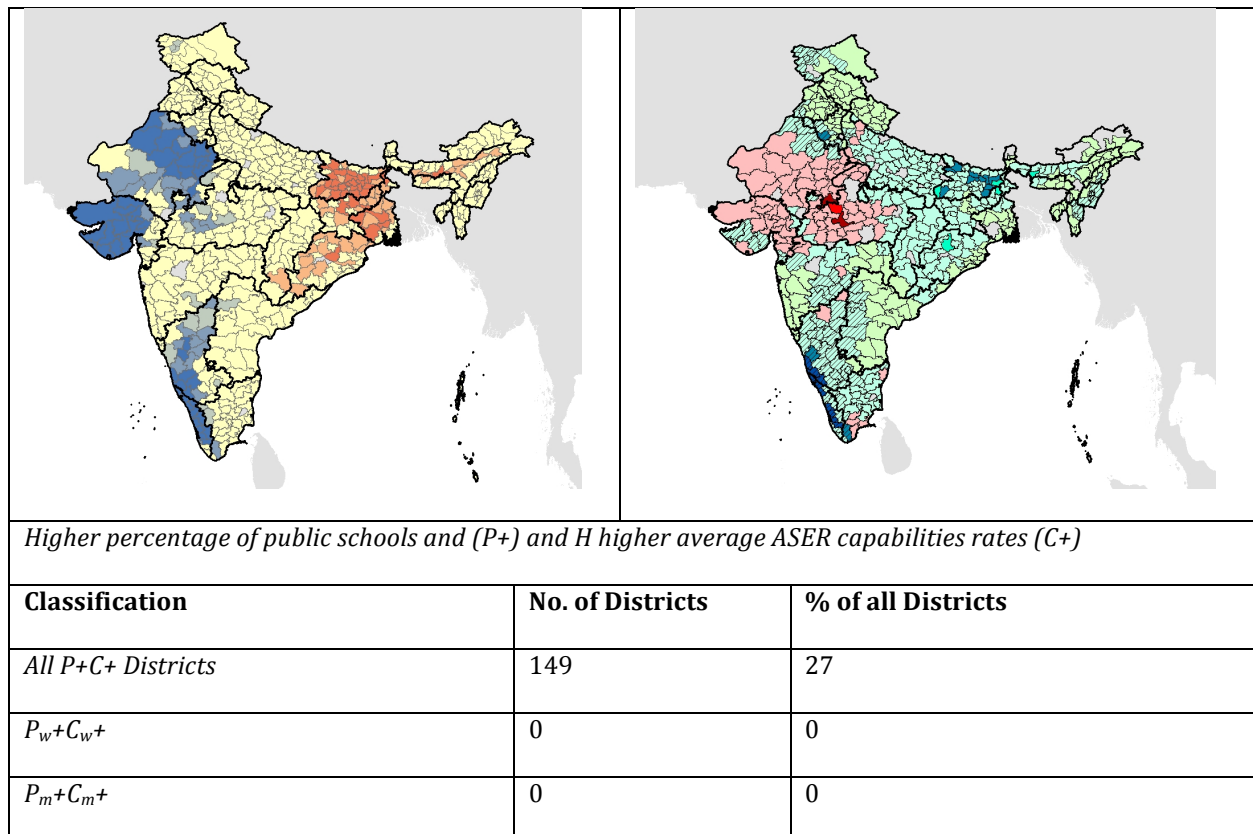
Hotspots of government schools occur for the most part in a single large cluster in the eastern states, and the cold spots in Figure 9.4 show a more intense saturation and are divided into three discernable regions-- all of which have different educational outcomes. A southwestern cluster is centered in Kerala, a state entirely saturated with P_e - districts with the exception of the two southern most districts of Kollam and Thiruvananthapuram, which are unclassified. This cold spot extends into neighboring Tamil Nadu in three districts, most notably, Tirunelveli in the far south. Low percentages of government school P_e - districts also extend northward into southern Karnataka in Udipi, Dakshina Kannada, and Kodagu, and are met from the north by five P_m - and two P_e - districts and a four P_w - districts.

The fact that Kerala and coastal Karnataka, two of the highest performing educational areas, are both so heavily saturated by private schools adds evidence to the

ineptitude of the state in directly administering public schools even in the educational showcase state of Kerala. Alternatively, the high concentration of government schools in West Bengal highlights a commitment to government led educational provision, and serves as an example of the difference of approach by two of the states Kohli (2013) classifies as India’s most Social Democratic states.

The second intense cold spot cluster occurs in a very large swath of contiguous districts in northern and the western two-thirds of Gujarat, though importantly, not in the unclassified seven easternmost districts including the low-performing districts of Dahod, Pancha Mahals, and Vadodara along the border with Madhya Pradesh and southern Maharashtra. These districts have a higher percentage of government schools than the rest of the state and match the tribal hotspot map in Figure 9.3 discussed in the previous subsection. Thus, in Gujarat, lower performing government schools occur in tribal areas, but elsewhere in the state private schools are amongst the most prevalent in India.

Figure 9.4 (left) Getis-Ord G_i^* hotspots of higher than average percentage of government run schools (P); and (right) overlay map with ASER achievement rates hotspots (C)



$P_{e+}C_{e+}$	0	0
Lower percentage of public schools and (P-) and lower average ASER capabilities rates (C-)		
<i>All P-C- Districts</i>	86	16
$P_{w-}C_{w-}$	1	0
$P_{m-}C_{m-}$	2	0
$P_{e-}C_{e-}$	0	0
<i>Higher than Average Public Schools (P+) and lower than average ASER Capabilities rates (C-)</i>		
<i>All P+C- Districts</i>	202	37
$P_{w+}C_{w-}$	5	1
$P_{m+}C_{m-}$	10	2
$P_{e+}C_{e-}$	0	0
<i>Lower percentage of government schools (P-) and higher than average ASER capability rates (C+)</i>		
<i>All P-C+ Districts</i>	112	20
$P_{w-}C_{w+}$	0	0
$P_{m-}C_{m+}$	3	1
$P_{e-}C_{e+}$	10	2

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

The final cold spot cluster stretches southward from the very intense blue spots along the breadth of, but not crossing, Rajasthan's northern borders with Haryana. This Rajasthan cold spot weakens in the intensity towards the south of the state and is loosely contiguous with a smaller and less intense cluster of three P_{m-} and three P_{w-} districts across the central districts of neighboring Madhya Pradesh. In addition to these three large cold spots, there are also states with a single weak hot spot in Chhattisgarh, Maharashtra, and Andhra Pradesh, and a single medium weak spot in Haryana. Notably, there aren't any significant hot or cold spots in states north of Rajasthan; in Uttar Pradesh, Maharashtra, Tamil Nadu, or any of the highest achieving northeastern states. Instead, these usually polarizing states are unclassified in the national map as they have percentages of private schools close to the national average.

The *P+C+* classification in the map above shows areas with a higher than average percentage of government schools and higher than average educational outcomes. This classification occurs in just over a quarter of all Indian districts (149), however the overlay doesn't have any overlapping statistically significant districts. This shows that while government schools can be associated with higher than average scores, they are not associated with the districts closest to achieving the highest basic skills rates.

The combination of a lower percentage of government schools with lower capabilities rates occurs in far fewer districts (86, or 16%) than the *P+C+* classification above. Moreover, they do occur in a three overlapping districts, though none of which occur above the highest -2.58 std. deviation threshold. These overlapping districts cluster with all three significantly overlapping and adjacent districts stretching across the state border from Rajasthan into Madhya Pradesh in Jhalawar, Rajgarh, and Sehore districts. This classification shows that there are discernable regional differences between districts with poorer performing private schools and the higher performing private schools. At a more macro level, this also shows the benefit of the spatial approach to examining relationships between educational factors and again this adds evidence that India's regional contextual diversity must be taken into account in any debate over increased privatization of Indian schools.

The most damning evidence against the quality of government schools compared to private schools and, by extension evidence of the softness in Indian state in the educational sector, is the strong overlap between the areas with higher than average percentages of government schools and lower than average scores. These low performing government schools occurs in very high number (202, 37%) of all districts. More importantly, unlike the previous mentioned classifications, there are many overlapping districts in the classification, ten of which are *Pm+Cm-* and the remaining five are *Pw+Cw-* districts. Of which all of the *Pm+Cm-* and two of the *Pw+Cw-* districts occur in Bihar. As such, Bihar has a particularly poorly performing public school sector. The other three significant overlapping districts occur in single district "islands" in Odisha, Assam, and along the Bihar border in northeastern Jharkhand.

The final classification of $P-C+$ districts shows the areas which have a lower percentage of government schools and higher than average student capabilities rates. While not the most common classification in the subsection with only 112 (20%) of all districts, thirteen are statistically significant overlapping districts. These districts add supporting evidence that states with high percentages of government schools are unlikely to be associated with widespread literacy compared to states with more private schools. Spatially, only one P_m-C_m+ hotspot occurs in the far north in Bhiwani, Haryana. Based on the discussion above, it is safe to say that the higher percentage of private schools is not a strong factor in understanding the higher achievement outcomes in the higher achieving northern states of India. However, because there are relatively few statistically significant overlapping districts across all of the classifications regarding school administration types, the issue does not appear to be a defining factor in determining educational outcomes.

9.6 Spatial Relationship Between Sex Ratio (X) Hotspot Map and Average ASER Capabilities Rates (C)

One area where Myrdal's understanding of circular causation and Sen's human capabilities approach agree is on the relationship between education and demographic issues, especially the instrumental need to lower Indian birth rates and narrowing sex ratios. As such in this and the following Section 8.7, the spatial relationship between these demographic issues and student outcomes is examined. Before turning to the hotspot map, one can see from the district dissolve map in Figure 9.6 below that there is a clear divide between narrower sex ratios in the southern states (green) and the much wider sex ratios in the north (red)—and are shockingly high in Punjab and Haryana. Uttarakhand is a conspicuous northern outlier to this trend and has a much more narrow sex ratio compared to its neighbors. Moreover, Uttarakhand is one of only two states in India which has more girls than boys.

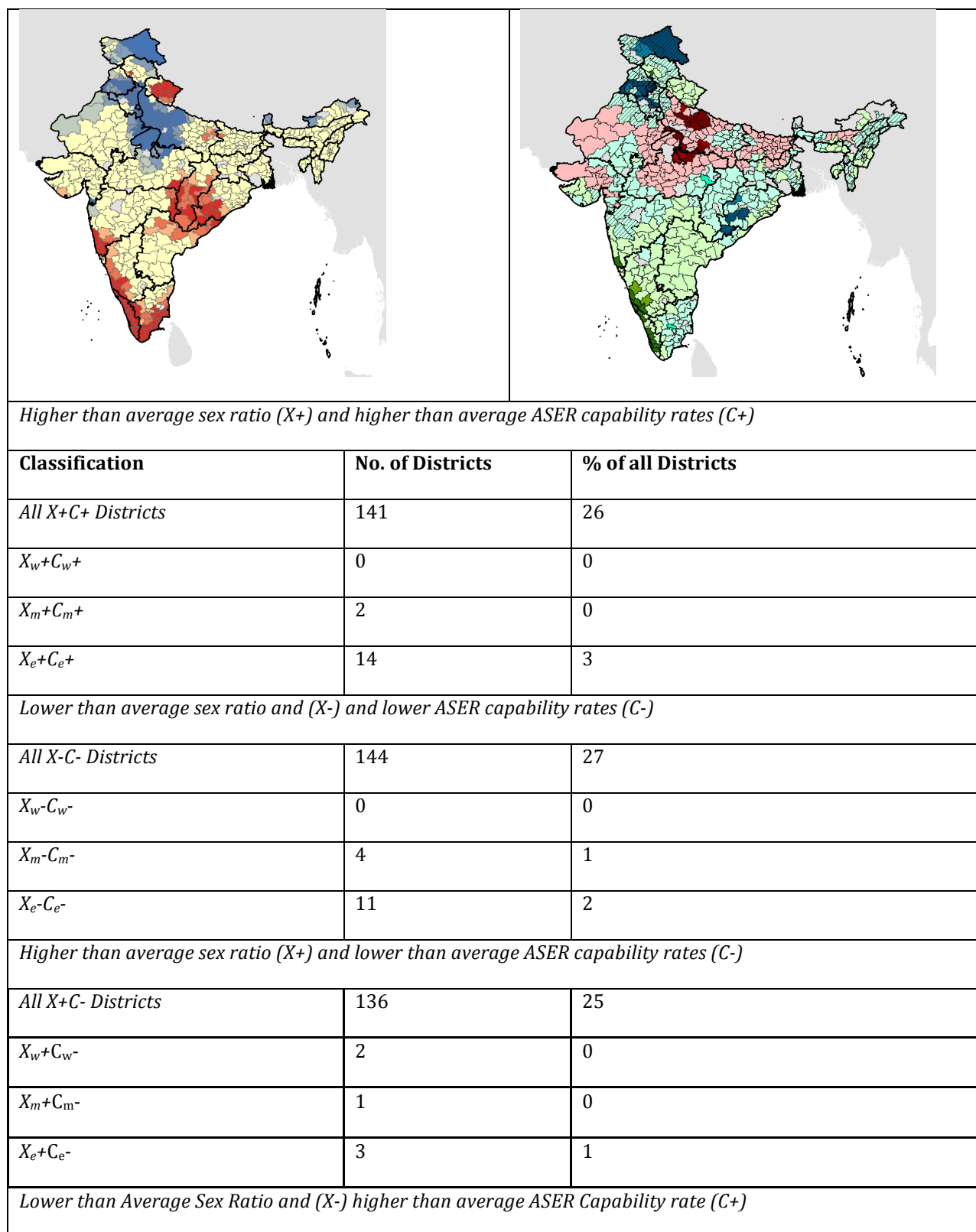
The sex ratio hotspot map in Figure 9.5 shows those areas with higher and lower sex ratios relative to the district mean. The red hotspots identify those areas in which sex ratios are more equitable, and blue cold spot areas show where the number of men outnumber women. There is a southern trend toward more equitable sex rates, however

the hotspots map allows us to see that the low sex ratios in the southern states are not equally distributed between districts but are clustered along the western coastal districts; around the four-state border area of Chhattisgarh; southwestern Odisha; eastern Maharashtra; and northern Andhra Pradesh.

In contrast to the wider sex ratios occur for the most part in a long and intense multistate cluster from Jammu & Kashmir, through Punjab and Haryana into the western half of Uttar Pradesh and into northern Madhya Pradesh. Outside this large cold spot, there are not hot or cold spots in the rest of the country, especially in the northeastern states of Bihar, Jharkhand, West Bengal, or Gujarat. However, in all of these states the sex ratio is far below parity. The wide sex ratio in Punjab is particularly interesting given the states' laudable performance in addressing universal literacy in districts with a high percentage of scheduled caste populations (Section 9.3) which highlights the deficiency of Myrdal's circular causation conception of virtuous cycles at least in this particular case.

By overlaying the sex ratio hotspot map with the average ASER capabilities rate map in Figure 9.5, it can be seen that an unusually high number of overlapping districts in all four classifications, all of which are tightly spatially concentrated. This suggests that there is a high degree of regional variation and tightness of fit between sex ratio and primary student outcomes. Moreover, across very different states of Uttar Pradesh, Gujarat, Maharashtra, Jharkhand, West Bengal, and Himachal Pradesh there is a strong degree of interstate variation between districts. The relationship between higher sex ratios (closer sex parity) and higher educational outcomes appears strong and occurs in 141 (26%) of all districts, and statistically significantly so in over half of those districts. This fits with both Myrdal's logical prediction and Sen's findings that sex ratios would become more even with more education and literacy. Spatially, all but one of the significantly overlapping X_e+C_e+ districts occurs along the southwestern coast primarily in Kerala, but also in southern Karnataka, and a single district in Sindhudurg, Maharashtra with the remaining X_m+C_m+ district in Bilaspur, Himachal Pradesh.

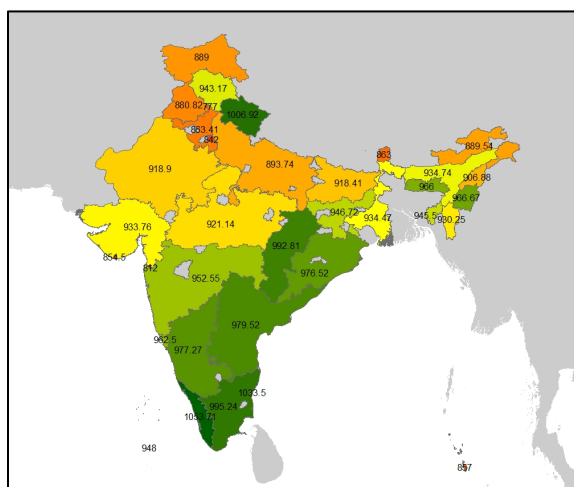
Figure 9.5 (left) Getis-Ord G_i^* hotspot of higher than average sex ratio (X); and (right) overlaid map of ASER achievement rates hotspots (C)



<i>All X-C+ Districts</i>	113	21
X_w-C_w+	0	0
X_m-C_m+	6	1
X_e-C_e+	12	2

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 9.6 District dissolve map of mean sex ratio by Indian State



Source: Data from Government of India Census 2010, and statistics generated by author

The opposite combination of more inequitable sex ratios and lower educational outcomes also has a strong degree of spatial overlap and occurs in 144 (27% of all) districts, eleven of which are X_e-C_e- districts and four are X_m-C_m- . Like the $X+C+$ districts, these are also tightly clustered, in this case into two clear overlapping areas: along in northern Uttar Pradesh and along the Uttar Pradesh-Madhya Pradesh border. The $X-C-$ classification extends across the so-called Hindi belt from Gujarat in the west to Assam in the east, however the cluster doesn't saturate any state and only comes close to doing so in Bihar, as even Uttar Pradesh has large regions of $X-C+$ and $X+C-$ districts in the northwest and eastern parts of the state.

The combination of higher sex ratios (more sex parity) and lower scores occurs in a quarter of all Indian districts but has the lowest number of overlapping significant hotspot districts (6) in the subsection, but also has three X_e+C_e- districts, which are spatially

clustered in in southern and inland Odisha. These X_e+C_e- and X_m+C_m- districts in the poorest performing parts of Odisha and is part of a wider $X+C-$ cluster. This cluster is particularly important in so far that it contradicts Amartya Sen's (1999) often cited Kerala example that equates higher education with more equitable sex ratios. The same $X+C-$ classification also occurs throughout Tamil Nadu as well as in the border region between Gujarat- Rajasthan- Madhya Pradesh- Maharashtra border districts largely along tribal lines addressed in section 9.4 above.

The final classification of lower sex ratio (more sex inequality in favor of males) and higher scores also occurs in roughly a quarter of all districts (113) and has a high number of overlapping $X-C+$ districts. The twelve X_e-C_e+ districts all occur in the northern most states in two clusters. The first occurs in Western Jammu & Kashmir, and the second stretches across the state border from Southern Punjab into Haryana. This classification is notable in that shows that narrowing sex ratios alone will not guarantee improvements in student outcomes.

9.7 Spatial Relationship Between Average Population Aged 0 to 6 Hotspot Map and Average ASER Capabilities Rates (C)

Expanding on the discussion above, this subsection addresses Research Question 4.6 regarding the relationship between the percentages of the population aged 0 to 6 and gives us another tool in which to test the nexus between education, fertility rates, and development as a whole. As the discussion below shows, the indicator shows similar results as the sex ratio map above and a strong tightness of fit between higher ASER capability rates and lower recent population growth.

In much of Myrdal's discussion on development, the issue of population growth was at the forefront of his mind, this was especially true of the formal educational sector. For Myrdal, population growth prevented many of the Southern Asian states to proceed with the modernization process at the relatively "leisurely pace" of Europe or the United States. He wrote,

In all South Asian countries the task of bringing about educational reform is made much more difficult by the population explosion. The number of children is increasingly so rapidly

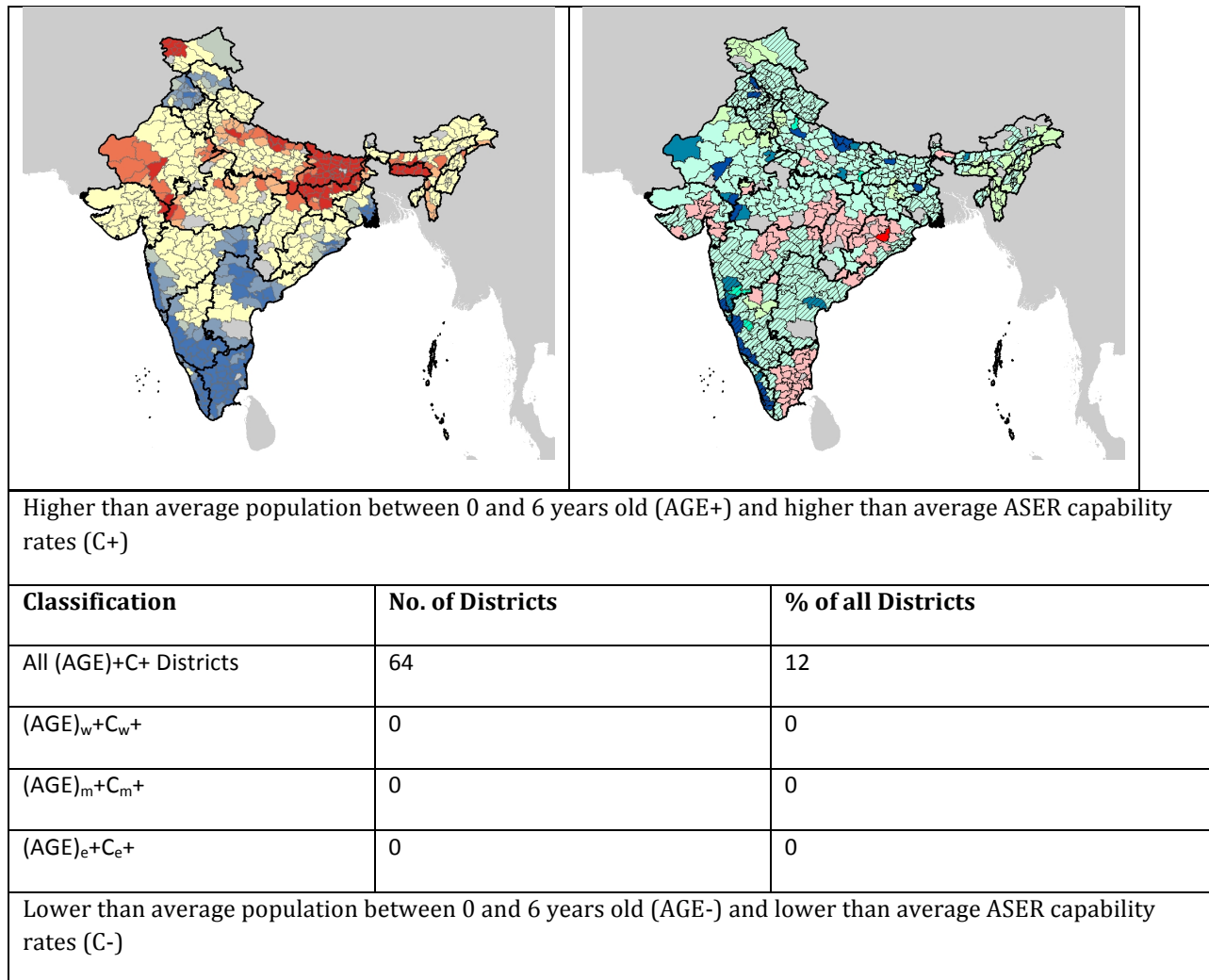
that the responsible authorities must exert themselves merely to maintain the status quo in schooling and literacy” (Myrdal, 1968 p. 1650),

and again,

“The South Asian countries must strive for a much speedier dissemination of the attitudes, knowledge, and skills favorable to development, in as much as they have vast handicaps to overcome in their planning for development, including an unprecedentedly higher rate of population increase (Myrdal, 1968 p. 1621).

Under such considerations, this chapter examines the spatial aspects of birth rates in India and their relationship to student outcomes.

Figure 9.7 (left) Getis-Ord G_i^* hotspot of percent of population aged 0 and 6 years old (AGE); and (right) overlay map with ASER achievement rates hotspots (C)



All (AGE)-C- Districts	80	15
(AGE) _w -C _w -	1	0
(AGE) _m -C _m -	0	0
(AGE) _e -C _e -	0	0
Higher than average population between 0 and 6 years old (AGE+) and lower than average ASER capability rates (C-)		
All (AGE)+C- Districts	200	37
(AGE) _w +C _w -	2	0
(AGE) _m +C _m -	7	1
(AGE) _e +C _e -	10	2
Lower than average population between 0 and 6 years old (AGE-) and higher than average ASER capability rates (C+)		
All (AGE)-C+ Districts	192	36
(AGE) _w -C _w +	2	0
(AGE) _m -C _m +	5	1
(AGE) _e -C _e +	13	2

The Getis-Ord GI* hotspot map in Figure 9.7 above shows those areas that have higher (red) and lower (blue) birth rates. With both a large number of, and deep intensity of hot and cold spots, the map shows that there is a high degree of spatial difference in the issue between districts across the country. Hotspots of higher recent birthrates are strongest in the entirely saturated Bihar. These hotspots in Bihar are the most intense AGE_{e+} districts, and extend southward into Jharkhand across the shared southern border. Meghalaya is another strongly saturated and state bounded with high recent birthrates. With the exception of these districts in saturated states, there are also extensive hotspots of high percentage of young children in southern Rajasthan increasing in intensity along the tribal corridor along the four state border of eastern Gujarat- southern Rajasthan- and western Madhya Pradesh. Another cluster occurs in the northeastern corner of Jammu & Kashmir-- in the same area that showed evidence of improved educational outcomes as discussed in Section 8.3.5. Two other areas of less intense, but nonetheless extensive,

hotspots districts stretch along the Northern Uttar Pradesh border with Nepal and Uttarakhand and along the shared border of Uttar Pradesh and northern Madhya Pradesh.

For their part, the cold spots of areas with lower populations of children aged 0 to 6 occur in the Punjab and Himachal Pradesh, coastal districts of West Bengal and in latitudes south of the Madhya Pradesh- Maharashtra border. The far southern states of Kerala and Tamil Nadu share a deep saturation of state saturated cold spots of much lower recent birth rates than the national average. The same state boundedness and saturation is also seen in Punjab although with lesser intensity than in the far southern states. There is also a very strong and wide breath of $(AGE)_e$ - cold spots stretching from southern Karnataka and along the whole of the western coastline though Goa and the entirety of neighboring coastal Maharashtra. Another very wide swath of districts with low percentages of the population aged 0 to 6 occurs in northern Andhra Pradesh (but not in either Vishakhapatnam and Vizianagaram districts the usual state laggards) and into eastern Maharashtra, and finally in the southern coastal districts of Odisha.

Neither the $(AGE)+C+$ classification of higher recent population growth and higher student achievement rates in Figure 9.7 or the $(AGE)-C-$ of lower percentage of children aged 0 to 6 and lower ASER capability rates make up a high percentage of districts in India, covering only 12% and 15% of all Indian districts respectively. Between the two there is only one statistically significant overlapping district between them. In stark contrast to these weak relationships, the higher percentage of the population 0 to 6 and lower than average ASER capability rates (table 7) shows a very tight fit at the district level occurring in 37% of all Indian districts with nineteen statistically significant overlapping districts, ten of which are at the most intense $(AGE)_e+C_e$ - level—one of the strongest spatial relationships in the study. Despite the high number of overlapping significant districts, there is a surprisingly lack of clustering of these districts. Instead, only two small clusters of four districts occur in the low educationally performing tribal corridor in the three state border of Gujarat-Maharashtra-Rajasthan, and a five district cluster along the Uttar Pradesh border with Nepal. Outside of these intense clusters there are “islands” of non-adjacent overlapping districts in western Rajasthan (3), Uttar Pradesh (4), Bihar (1), Jharkhand (1), and Assam (1).

Aside from the overlapping districts, the state saturation of the *(AGE)-C+* districts is high in several northern states including Bihar, Uttar Pradesh, and Jharkhand, and to a lesser extent in Madhya Pradesh and Rajasthan. Of these, Uttar Pradesh is the most interesting because the state, often has advantages in terms of facilities and access to schools, but does not have high student outcomes. Putting these together one can see just how intertwined birthrates and educational outcomes are, largely validating the weight that Myrdal and Sen put on addressing demographic concerns as a key component in improving the educational system and visa versa.

Just as the classification above showed a strong relationship between poor education outcomes and higher recent birth rates, the *(AGE)-C+* classification shows an equally strong connection between strong educational outcomes and lower percentages of the population aged 0 to 6. The classification occurs nearly the same percentage of districts (36%) and in eighteen significantly overlapping districts with three more overlapping districts of the most intense level than the previous classification. In contrast to the *(AGE)_e+C_e-* classification described above in which the overlapping districts were grouped into two small clusters with several island overlapping districts, the spatial distribution of *(AGE)-C+* overlapping hotspots for the most part occur in a long nearly continuous stretch along the western seaboard from southern Kerala into southwestern Maharashtra; in Punjab (two districts) and Andhra Pradesh (one district). All of this suggests that not only is there a strong relationship between the percentage of children aged 0 to 6, but that demographic size appears to be based to a large part on state policies. Secondly, the clear divide between the higher performing southern and far northern states on the one hand, and the lower performing states with higher recent birth rates in the so-called Hindi heartland shows that cross-state cultural diffusion of the issue may also be at play. This finding also coincides with Govinda's (2007) optimism that the percentage of and numbers of school aged children in the southern Indian states of Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh have begun to decrease, ostensibly lowering the demand for the quantitative number of teachers and facilities and collectively easing the burden on those states' educational systems.

9.8 Chapter Summary with Reference to Research Questions

In this chapter Myrdal's theoretical concepts of the relationship between educational outcomes and factors exogenous to the education sector were tested. Doing so it was found (in partially answer to Research Question 3.1) that the spatial hotspot approach is a useful tool for uncovering geographic patterns in the usually aggregated table data across Indian districts. Specifically, a great deal of regional variation and hot and cold spots could be identified in all five of the exogenous factors covered. Thus, Myrdal's cumulative causation hypothesis that there is a tendency for clustering of higher and lower educational achievement, even at the primary level, between dramatically more and less developed regions in a poor country is, for the most part, vindicated by the empirical findings above. However, with regards to his circular causation theory (Research Question 4), that advancement (or stagnation) in one factor would have a discernable equally positive (or negative) impact on another factor was not found to be the case across the board between the exogenous issues tested and the ASER capacities scores. Instead, this chapter found that that the spatial relationships between exogenous factors and in some regions were tight (especially demographic issues in Section 9.6 and 9.7), but in other regions had the opposite results occurred. This was especially notable in the overlay map between economic growth rates and ASER capacity scores.

With regards to Research Question 3.8 on Myrdal's specific discussion on the centrality of addressing social inequality, this chapter examined scheduled tribes, scheduled castes, and sex ratios and their relationship to educational outcomes. In the scheduled castes and tribes discussions it was shown that these historically disadvantaged groups tend to do much better than the national average when they form a substantially large percentage of the population of a state compared to when they make up a minority group within larger heterogonous states. This would suggest that while Myrdal's stress on circular causation between different factors and student outcomes may not be easily discernable in the techniques used as stated above, his stress on the necessity of tailoring development policies in response to the local cultural and historical contexts (Section 3.3) appears strongly relevant. However, the final map in the chapter on the percent of the population aged 0 to 6 and the relationship with educational outcomes appeared to be

universally applicable across India and underscored the strength of the connection between population control and functional literacy as stipulated by Myrdal. Similarly, the sex ratio hotspot map used as a proxy for gender inequality and overlay in Section 9.6 showed an exceptional tightness of fit between educational outcomes and sex ratios, but again with the caveat that there are also larger regional differences in this case between northern and southwestern states. With regards to Myrdal's conception of the 'soft state' and its relationship to the educational sector (Research Question 2.5), the differences in student outcomes between private and public school (Figure 10.11) there is some evidence of the general weakness in the state as an educational provider. However, the finding is not substantial enough to advise larger scale privatization—again due strong regional differences.

Chapter 10 Spatial Relationship Between Teachers, TPR, and Teacher Training and Student Outcomes

10.1 Introduction

The purpose of this chapter is to test Myrdal's normative suggestions on the role of the teacher in the education sector as part of his larger modernization vision. The first half of this chapter summarizes Myrdal's normative policy suggestions. Specifically, that large numbers of teachers were needed to meet India's promise for universal education, but more importantly that those teachers be motivated to serve as frontline agents for his vision of national modernization. This is followed by a review of the literature that largely confirms his fears that the need for quantitative numbers of teachers has trumped adequate teacher training. Moreover, this chapter shows that teachers in India remain poorly trained and weakly motivated to the extent to which teacher absenteeism has become a chronic problem. In this theoretical section, Research Question 2, and more specifically Research Sub-Questions 2.1, 2.4, 3.7 and 3.8 test the viability of Myrdal's suggestions against the subsequent empirical findings and historical development in the education sector. Throughout this discussion, particular attention is given to the 'soft state'. The first half of this chapter concludes with a discussion of the current raging debate on the issue of contract (or para-) teachers as it relates to Myrdal's normative understanding of the subject in Section 10.4.

In the second half of this chapter in Sections 10.5 the spatial aspects of teaching related issues are tested using the same GIS methodology employed in the previous chapter to empirically test Myrdal's assumptions on the issue of teacher training, class sizes, and their spatial relationship with student outcomes. This section is geared toward answering Research Question 3, and Sub-Research Questions 3.1 and 3.3, 3.8 on the spatial relationships between different teacher related factors and student outcomes. The topics chosen for discussion in this section are either explicitly mentioned by Myrdal in the education related chapters of *Asian Drama*, or areas where the spatial analysis tools can discern the effectiveness of the state. The spatial relationship between the student

educational outcomes as defined by the ASER capabilities rate map in Figure 8.2 and the following teacher-related issues:

- Teachers per capita (Research Question 3.7.1);
- Single teacher schools (Research Question 3.7.2);
- Teacher Pupil Ratios (TPRs) (Research Question 3.7.3);
- Female teachers (Research Question 3.7.4);
- Contract teachers (Research Question 3.7.5).

10.2 Myrdal's View on Teachers and Recent Discourse

10.2.1 Quantitative Need for Teachers

When the Indian state had declared universal education to be a priority of the state at the dawn of her independence (Section 1.1), both Myrdal and the Indian planners recognized there was a severe shortage of teachers in general, and an even more acute shortage qualified teachers. Recognizing the quantitative lack of both teachers and schools, India launched the Karachi Plan for a massive expansion of a mostly unreformed school system. According to Myrdal (p. 1659; 1676), The Karachi Plan not only forced Southern Asia to address the shortage of schools and teachers to staff, but had to account for a rapidly rising population of school-aged, and soon to be school-aged children, an issue examined in the previous chapter in Section 9.7. In such circumstances, Myrdal saw that the state was committed to recruiting an enormous number of teachers. This quantitative policy approach aimed at expanding the number of schools and teachers to teach in them has also been the favored goal of international development policies including the Second Millennium Development Goal which presses developing countries to provide a primary education universally, but, importantly doesn't stipulate the quality of that education or the training of the teachers

He felt that that the number of primary teachers per 100,000 population in Southern Asia was only approaching adequate levels in post-war Ceylon (Sri Lanka), Malaya, and possible Thailand and the Philippines, but not all in either India or Pakistan (Myrdal, 1968, p. 1730). He also saw that Indonesia's new government was the only] new

countries in the region that was recruiting close to the number of teachers needed to meet its promises for universal literacy. However, despite Myrdal's insistence that a massive quantitative infusion of teachers was required to meet the states' promises for universal education, he felt that such a single-minded focus on raising the number of teachers was ill-conceived as this chapter shows. Instead, of a quantitative expansion, he suggested that a more cost-effective development oriented education policy should instead focus on reforming the inherited colonial system, starting with modern teacher training methods. Only from this stronger qualitative position could a widespread expansion of the existing system be warranted. He writes,

"As resources are much more limited, it is evident that some compromises has been often biased so heavily in favor of expansion that the increased resources allocated to education have not made a maximum contribution to development and have often been wasted" (Myrdal, 1968, p. 1659).

As Myrdal had feared, the massive expansion of an unreformed school system has perpetuated inferior quality and single teacher schools. In the spatial analysis section in the second half of this chapter, it is shown that Myrdal's prediction continues to be accurate. There remains in India both a lack of an adequate number of teachers, and strong evidence that teachers in several states (notably government school teachers in Uttar Pradesh and to a lesser extent in Tamil Nadu) remain of particularly poor quality.

10.2.2 Myrdal's Normative Vision of the Teaching Profession

Myrdal felt that the role of the teacher in a development-oriented society was not only to pass on useful skills onto children, but also to be beacons for modernization itself at the most local level. In order to do so, he saw that teachers needed to be respected as intellectuals in the villages they taught in especially the least modernized parts of the region (Myrdal, 1968, p. 1691), in essence, to be the local representatives of both the state, and modernity itself. Myrdal hoped that well trained, and enthusiastic teachers would be capable of inspiring the general public towards a mass rational modernization of attitudes, building popular and genuine momentum for development from below to generate virtuous circles:

“The schools must seek to change the attitudes of the children and, ultimately, of the people. This would be a hopeless task without teachers who are not only satisfied with their social and economic condition and are accepted as intellectual and moral leaders in their community, but are also dedicated, enthusiastic, and imbued with a zeal to disseminate the modernization ideals” (Myrdal, 1968, p. 1823).

As such, his conception of the ideal village teacher had much in common with Mao’s idealized barefoot doctors that forgo wealth and status and so motivated that they would devote their own time to modernization projects. However, unlike Mao’s barefoot doctor mythology, Myrdal felt that to be successful in their task Indian teachers needed to have a degree of social status at the local level, an opinion he shared with by Gandhi, that Myrdal addresses in Chapter 33. Myrdal’s vision was also shared by Niak who had a similar vision and acknowledged that the numbers, quality and commitment of teachers needed to be increased who wrote in the Fourth Indian Five Year Plan for Education: “We need an army of good teachers, well-informed, well-adjusted, competent and devoted to their duty” (Myrdal, 1968 p. 1691).

10.2.3 Myrdal’s Emphasis on Teacher Training for Modernization

Myrdal also saw that teacher training had been badly neglected by the colonial regimes in all of the states with the notable exception of the Philippines and Ceylon, (Myrdal, 1968 p. 1644). He felt the problem was particularly acute in India, where during the colonial period there had been a long period in which the combination of low teacher status and low salaries conspired to undermined recruitment efforts and state interest in improving teacher training. This in turn was exacerbated, as he saw it, by a traditionalist Brahman monopolization of religious based education, combined with an elite disinterest in expanding education outside of existing caste lines (Myrdal, 1968, p. 1645). He contrasts this religiously sanctioned elitism with the Thai veneration of the modern teacher as the inheritor of the traditional exhausted role of the monk as educator in traditional society (Myrdal, 1968 p. 1645). Thus, the poor initial conditions in teacher educational and status were a major weakness on the dawn of independence in India even compared to other education systems in Southern Asia.

In order to address what he saw as a problem of poor teacher quality, Myrdal implored that more policy attention (and financing) should be allocated to teacher training. The teacher training reform that he endorsed would not use a more current teaching curriculum replace the systems stress on memorization with more modern teaching and learning techniques, but more fundamentally act as a sort of secular seminary to train a cadre of developmental focused civil servants. As such, he suggests that teacher training was the most logical place to begin to counter vicious circles in the educational system writing:

“If any one aspect of planning for educational reform is to be given the highest priority, the expansion and improvement of the teacher training should be given that assignment...the institutions for teacher training should have a strategic importance in educational reform...[teacher training institutions] should be nothing less than, “power plants’ that will generate moral and intellectual energy among their students [teachers in training] to prepare the people for development” (Myrdal, 1968 p. 1823).

Despite these lofty normative goals, Myrdal’s view of the education system as he saw it was considerably lacking. He saw that the state of teacher training was not only low, but varied considerably geographically not only between countries but within countries writing,

“All of the countries still have a large number of teachers classified as untrained; the percentage of trained teachers is especially high in Thailand, Malaya, and India. The data on the percentage of trained teachers, must, however, be viewed with great suspicion; moreover, standards of teacher training are not comparable within a country like India and still less among several countries The scattered information we have indicates a concentration of trained teachers in the cities and more generally, in areas with high literacy rates” (Myrdal, 1968 p. 1732).

Myrdal saw this lack of standardized teacher training as less of a problem at the secondary and tertiary levels than at the primary level insofar as primary school teacher training and curriculums as,

“simpler because it derives from a commonly accepted assumption that such education should be comprehensive and undifferentiated, laying a foundation of literacy and imparting knowledge that will be useful whatever course life may take teaching in the primary schools

is therefore a problem of curriculum and methods of teaching rather than one of differentiation" (Myrdal, 1968, p. 1736).

Despite his normative suggestions, Myrdal was saddened by the existing state of teacher training, resources, and state commitment to education and even in the states' inability to collect meaningful data on teacher quality and teacher training writing,

"The data on the percentage of trained teachers must, however, be viewed with great suspicion; moreover standards of teacher education are not comparable within a country like India and still less among the several countries. The scattered information we have indicated a concentration of trained teachers in the cities, more generally in areas with high literacy rates. The single-teacher schools in the rural areas, which should have the best-qualified teachers probably have the least competent... [and later] Teaching in the primary schools is therefore a problem of curriculum and methods of teaching rather than on of differentiation. However, with the insufficiency of trained teachers and the low competence of even those who are considered qualified, and with the scarcity of teaching aids, especially textbooks and writing paper, teaching in primary schools is most often reduced to an attempt to impart formal literacy and a smatter of information about a variety of "subjects" (Myrdal, 1968 p. 1736).

In the spatial discussion in the second half of this chapter evaluates whether, in the subsequent nearly forty years, districts and states with more single teacher schools (Section 10.5.2) continue to have lower related student performance as the quote above suggests, and whether communities with a higher number of schools with blackboards (Section 11.4.7) have higher student outcomes as the quote above predicts that they would.

10.2.4 Myrdal on Teachers' Social Status

Myrdal notes that in the Philippines, Ceylon (Sri Lanka), and Indonesia primary teachers made a fairly competitive salary, but that in India and Pakistan salaries were abysmal compared not only to other government workers but even compared to non-skilled jobs. Moreover he saw that this problem was particularly acute in rural areas which he saw as weakening teacher recruiting efforts and teacher status in the places that needed well trained teachers the most (Myrdal, 1968, p. 1735). Similarly, over a fairly lengthy discussion, he shows that the social status of teachers was traditionally higher in the Philippines, Indonesia, Ceylon, and Thailand than in India and Pakistan and therefore had a

better chance of building and earning the respect from the local community as intellectuals and leaders (Myrdal, 1968 p. 1691). However, he also witnessed a vicious cycle in which the low competence of the teachers perpetuated their low social status which then limited their justifications for higher pay, which, in turn, limit the ability to recruit the best and brightest of the next generation to become teachers (Myrdal, 1968, p. 1736). Breaking this cycle by raising the social status, and by extension, the effectiveness of the teacher in society was, “an absolute pre-condition for raising the levels of teaching” (Myrdal, 1968 p. 1736).

Later, he adds that the low social status of teachers in India combined with internal social divisions that prevent them from being moral and intellectual leaders of the community:

“Because teachers lack authority in the community, they have difficulty in introducing ‘new ideas’- the very core function of their role in a society dedicated to development. As a result they are often a disgruntled and even a bitter group. Differences in family backgrounds (class, caste, and religion), and often language, between teachers and villagers make it even more difficult for the teacher to play a leading role in village affairs” (Myrdal, 1968, p. 1735).

He did however note that the higher economic and social status granted to teachers in Indonesia and, the Philippines, and Ceylon allowed teachers to have a more active and influential role in local communities than in India (Myrdal, p. 1736).

10.2.5 Teacher Recruitment

One aspect of raising the social status of the teacher was to recruit from the “better” representatives of society. To recruit this “better” sort, Myrdal suggested that raising teacher pay would elevate the status of teacher in society (Myrdal, 1968, p. 1822)

On the more concrete goal of raising teacher salaries to be commensurate with a perception of professional, he saw the profession's paltry salary an important factor,

“A majority of teachers with families to support live in extreme poor circumstances, spending almost all their income on food and bare necessities. Under such conditions, it is natural that those who can avoid teaching do so...there is no doubt that the ablest are attracted to other occupations. The extremely low-income levels discourage intellectual

advancement of the teacher, to the detriment of his work. In the region as a whole, the teachers in rural areas are the most disadvantaged” (Myrdal, 1968 p. 1735)

Myrdal also noted (perceptively as is shown in Section 10.5.3) that the lack of female teachers was likely to be a limiting factor in the education system, and that breaking male dominance in education was an integral part of his larger conception of modernity and equality writing,

“Few women enter the teaching profession...although coeducation is increasing with the expansion of schools, most female teachers in India and Pakistan probably work in schools for girls... Male predominance even in the lowest-paid employment is generally taken for granted. Consequently, there is resistance to recruiting female teachers... Traditional attitudes toward women working outside the household add their influence. Single women find it particularly difficult to live in villages. The general reluctance to give girls professional training further limits the supply of women teachers” (Myrdal, 1968 p. 1734)

10.3 Current Teacher Quality and Motivation

Now that the components of Myrdal’s view on need to improve teacher quality have been made, it is worth asking whether his warnings have been addressed subsequent to the publication of the *Asian Drama*. It can be seen that improving teacher quality in the ways that Myrdal suggested has not been high on the education agenda in India. Instead, they have been combined (often as an afterthought) into a larger suite of other educational issues. This sublimation is shown in the quote from a UNESCO EFA policy recommendation in the introduction of this chapter. Contrary to Myrdal’s hopes, the vicious cycle he described of poorly trained; inadequately paid; unprofessional teachers; and difficulties in recruiting more teachers that are hopeful has not been broken in India.

The quality and morale of teachers in India also remain low. Myrdal’s hope that teachers would be seen as progressive intellectuals in the villages has had not occurred. Kumar also suggests that improving teacher quality and confidence will requires increased attention to improving communication between the institutional structures in which teachers operate. He suggests more cooperation and greater communication between, “policy makers, curriculum designers and non-governmental organizations” (p.21). That reforms for change were blocked by the teachers and state themselves is emblematic of the

structural failure of the 'soft state' in the educational sector. Furthermore, that Kumar considers that more communication and incorporation of actors outside the state are needed, also attests to the failure of the state to devise and implement reforms, characteristics of a 'soft state'.

In addition to an inability or unwillingness to change and implement a new curriculum, the social status of teachers remains low. According to Roy et. al (2003), teachers in India are "underpaid, and overburdened with non-teaching duties, being a captive pool for all manner of government tasks" (However, Kremer et al. found that while this was an often-cited excuse for teacher absenteeism official non-teaching duties could only accounted for about 1% of primary teachers (Kremer, Chaudhury, Rogers, & Hammer, 2005)).

Nor are teachers taking advantage of the teaching time they are being paid to do. A well-funded and large-scale study conducted by the World Bank in 2003 in India found that in half of the 200 schools which researchers visited unannounced, "no learning activity was taking place". The report credits this laxity on a number of interrelated factors closely associated with Myrdal's conception of both the 'soft state' and of cumulative causation including: the need for teachers to have a second job (low teacher status); lax standards ('soft state'), a complacent educational authority ('soft state') and the HIV/AIDS pandemic (poor public health systems) as the most likely reasons (Kremer, Chaudhury, Rogers, & Hammer, 2005).

The chronic problem of teacher absenteeism also serves as a useful indicator of teacher motivation, status and pay and also highlights the regional nature of the issue. The same 2003 World Bank study found strong regional differences in teacher absenteeism as 25% of teachers were absent on a given day in the national average, but this ranged from 15% in Maharashtra to 42% in Jharkhand with higher rates of absenteeism generally occurring in poorer states. In Kremer et al.'s joint Harvard- World Bank study also found that teacher absenteeism in India was correlated with many inequalities in the educational system and Indian society as a whole including:

Higher teacher absenteeism among:

- A) Head teachers;
- B) Older teachers;
- C) More educated teachers;
- D) Teachers in poorer areas even when teacher salaries were higher than the local median income;
- E) Locally controlled non-formal 'alternative' schools compared to state run government schools;
- F) Low Per-capita state GDP;
- G) Higher pupil to teacher ratio;
- H) Mean parental education;

No correlation between teacher absenteeism and:

- A) Contract teacher and non-contract teachers;
- B) Teachers from local or outside the community;
- C) Schools with PTAs that have not met in the last 3 months;
- D) had attended teacher training in the last six months

Less absenteeism in

- A) Wealthier areas;
- B) Areas with infrastructure near paved roads;
- C) Places with more incentives to attend work;
- D) Private schools compared to public schools in generally, but private school teachers are less likely to be absent than public school teachers in the same village. (Kremer, Chaudhury, Rogers, & Hammer, 2005)

The low morale of teachers and the lack of modernization zeal that Myrdal saw as mandatory for modernization are also evident in the finding that pedagogic changes away from rote memorization and toward student centered learning has also not occurred. In India, teachers remain a stagnating force in educational reform. According to Kumar (2004), in the first years of independence in India a major effort was made to improve the

pedagogic teaching methods away from rote learning and the regurgitating of memorized facts. However, these changes were blocked in part by teachers, resistant to changing their teaching techniques (Kumar, 2004, p. 12). Banerjee et al (2012) found that teachers in Bihar and Uttaranchal were “ingrained” with the ‘regular’ curriculum and that and had difficulties in alternative arrangements and the incorporation with new learning materials. This fixedness on and outdated curriculum shows the conservatism of teachers and their resistance to the changes in the profession and in the greater society, as Myrdal understood it. It also gives evidence of the inability, unwillingness, or ignorance the Indian state to coerce unwilling teachers and teaching training centers to improve teaching methods and standards—which again underscores the softness of the Indian state in terms of educational policy reform.

10.3.1 The Current state of Teacher Training in India

Myrdal’s insistence that improving teacher training centers was the logical first step towards reversing vicious circles in the educational system have not been adopted into in India by either the government by the academic community. Instead, the state has favored quantitative bureaucratic expansion rather than quality improvement. In 1973, India established the National Council for Teacher Education (NCTE) to, “advise central and state governments on all matters pertaining to teacher education.” However, for thirty years until the Parliamentary Act of 1993, its role was only advisory and lacked the authority to enact or implement its suggested guidelines for regulation and maintenance of government standards of teacher training (UNESCO-IBE, 2009, p. 37). This again demonstrates the continuation of a ‘soft state’ mentality in policy making that is capable of formulating complex policy, but is unable or unwilling to implement its recommendations.

That said, there are a variety teacher training facilities are available in India at different levels. The details regarding the activities of the various institutions aside, they are worth noting to demonstrate the complexity and bureaucratic overlap in teacher training. The number of institutions also emphasizes the point that with regards to teacher education, that quantitative expansion, rather than qualitative improvement remains the rule. At the national level, teacher training institutions include the National Council of Education Research and Training Universities (NCERT), National Institute for Education,

Planning and Administration (NIEPA), The Central institute of English and Foreign Languages in Hyderabad, The Central Institute of Indian Languages in Mysore, as well as four Regional Institutions of Education. At the state level, there is also a wide teacher training system that includes, the State Counsel of Educational Research and Training, The State Institute of Education, The State Institute of Science Education, The Institute of Advanced Study in Education, College and Colleges of Teacher Education and State Institutes of Educational Technology. More recently, district level training organizations have also proliferated including the District Institutes of Education and Training and In-service Training Institutes according to UNESCO-IBE (2009, p. 44). In addition to these existing institutions, The District Institute of Education and Training was launched in the 8th plan as part of National Policy on Education (NPE) and, as of 2009, has been established in most districts in the country. At and even more the local level, the EFA campaign has launched over 28,507 sub-district block resource centers (BRCs) and cluster resource centers (CRCs) also to improve capacity building among teachers (UNESCO-IBE, 2009)

The explosion of overlapping schemes appears to be focused on bureaucratic expansion rather than enhancing the standard of the training itself. Tellingly, it is a quantitative increase rather than the quality, usefulness, and effectiveness of the teaching institutions that UNESCO focuses its attention on in their reports, thereby encouraging further bureaucratic expansion in India. Furthermore, it is the quantitative, rather than qualitative description of the teacher training centers that is included in government and international organization reports on the sector. The overriding question of the usefulness for the practical improvement of teacher skills and methods is conspicuously absent in the reports and exacerbates the problem. Surely, a simpler more streamlined teacher training system would be both more accountable and easier for the teachers themselves to navigate. Just this conclusion was reached in a regional review of the state of the educational sector in 2005 conducted by Govinda & Biswal. Their report found that despite the Indian government's effort in expanding teacher-training faculties, the challenge to provide a higher quality education remained "enormous" (Govinda & Biswal, 2005).

Despite Govinda's conclusions above, there is little to suggest that meaningful changes in addressing qualitative teacher training issues are likely to change. In Muraldharan's (2012) widely publicized plan for reforming the educational sector in India, he explicitly does not include expanded teacher training "in its current form" (p. 23) into his suite of proposed reforms. He bases this on the grounds that in no research to date has found positive correlations between the increased teacher training and improved student outcomes, and that despite the quantitative expansion of teaching training centers there is nothing to suggest that the quality or curriculum of the training centers will be improved (p. 23). Oddly however, Muraldharan's student output centered recommendations, do not go the obvious next step to suggest that the teacher training outputs themselves be improved qualitatively. Instead Muraldharan (2012) suggests, again based on his empirical research, that instead of investing in teacher training, more be invested in teacher performance based incentives measurement and management reflecting something of a more market-based approach to teacher improvement (p.30).

Given the poor teacher training outcomes from state schemes, the NGO and academic sectors have made some inroads in improving teacher training. Mathew (2005) mentions the involvement of The Aga Khan Foundation and the Akshara Foundation in Bangalore, India on developing teacher competency and other cases where respected academic institutions such as the National Institute for Education, Planning and Administration), and universities have been involved with improving teacher quality of the teachers. According to the UNESCO-IBE 2009 report,

"The NCERT has recently formulated the Teacher Education Curriculum Framework. Under the joint initiative of the Ministry of Human Resource Development, the NCTE and the Indira Gandhi National Open University (IGNOU), a six-month programme "certificate in primary education" has been developed by IGNOU and recognized by NCTE, for the training of the untrained in-service teachers of Northeastern states in distance mode. Several states have already benefited from this program" (UNESCO-IBE, 2009, p. 44).

Kumar's (2004) analyses of the success of the HSTP Government-NGO collaboration in the 1970s suggests that the success of the programs was partly due to the programs affiliation to high status universities and facility including the Tata Institute of

Fundamental Research, the Indian Institute of Technology, and other respected faculty members. The finding suggests the potential benefits of closer collaboration between respected higher education institutions and improvements in teacher training. In addition, the exceptional success of the HSTP project underlines the lack of institutional linkages between the research agenda in higher education, and everyday needs facing primary school teachers.

The low pay and status that Myrdal saw accorded to teachers and weakened development in Southern Asia sadly remains. Roy et al (2003) found that teachers in India are,

“underpaid, and overburdened with non-teaching duties, being a captive pool for all manner of government tasks”. Furthermore, according to a 2009 UNESCO report, Indian teachers’ motivation is sapped by the fact that promotions are primarily given according to seniority, and that promotions within the teaching profession are relatively limited compared to other sectors (p 43).

There are a few green shoots in the status and pay in India at least in the policy. According to UNESCO (2009),

“Indian states follow national guidelines for salary scales, and parity in pay exists between government and private schools. On top of the base salary, teachers’ are compensated for different assignments deemed more stressful including working in tribal, and remote areas, islands and other factors. In addition, teachers also receive medical reimbursement, housing allowances, and retirement benefits. The report also states that in Assam, Bihar, Gujarat, Maharashtra and Tamil Nadu, female teachers in rural areas are given accommodation. Furthermore, trained teachers are paid only slightly higher than for untrained teachers with the maximum salary roughly three to four times higher than the starting salary” (p. 42).

In the quote above the private-public teacher pay parity and the pay supplements given to teachers working in socially disadvantaged areas are consistent with meager government attempts to address spatial and social inequalities. However, this progressive attempt to address educational inequality and access to teachers is undermined in that the pay is allocated under the assumption that such places are “stressful” and, thus, inherently undesirable.

The teacher training institutions in India follow the national quota policy in education departments for SCs, STs, and OBCs. According to UNESCO as of 2009, 15% of posts in the educational department and teaching education institutions are reserved for SCs and 7.5 % are reserved for STs (p. 42). Reserving positions for disadvantaged groups in the education sector can be an effective way for these groups to improve equity in the educational sector. However, unfortunately, this quota system also weakens the social status of the teaching profession given the social prejudices of the larger society. It is also telling that the quota system reserves spaces for those at the bottom of the social hierarchy. If the goal were to raise the social respect for the teaching profession, a quota system for the higher castes and parts of society would be a more logical, though unlikely, solution given elite purgatives.

In India, the expansion of education access into more remote areas has coincided with the increase in the number and reliance on even more untrained and skilled para-teachers to teach in the 'alternative' schools often in the most disadvantaged areas of the country. Unlike Myrdal's hope that best teachers would be dispatched, either through individual modernization zeal or state coercion to the most disadvantaged areas, the remote areas of India often have the lowest quality teachers in the least modern facilities. This exacerbates inequalities in the educational system.

10.4 The Para-teachers debate

Although not central to Myrdal's argument, the intense debate in India over the use of para-teachers encapsulates many of the problems facing the contemporary Indian education system. As such, it is a useful avenue to evaluate Myrdal's fears and prescriptions regarding the educational system. First, the demand for para-teachers underscores the Indian government and international community's prioritization of rapid quantitative expansion of teachers in the school system and general focus on "butts in seats". Secondly, the demand for para-teachers highlights the inability of many (mostly northern) states to stem the population explosion that begets the need for more teachers. Third, the promotion of the para teacher shows the lack of national investment in qualitative teacher training.

The expanded use of untrained para-teachers also weakens the perception of the teacher as a public intellectual and a professional.

10.4.1 Vague Definition of Para Teachers

The definition of the term para-teacher itself is not standardized and has come to be used to describe, in vague terms, all teachers not considered a regular teacher. As such, para-teachers may or may not have a contract of some sort with the state or, with a private school, and para-teachers in India should not be confused with the type of trained assistant teachers often found in developed countries. Instead, Indian para-teachers are the principle (often only) classroom teachers. Further complicating the definition of the term para-teacher, NCAER (2008) found that para-teachers received widely varying degrees of pre-classroom training ranging from seven to 60 days between states. In research conducted by Pandey and Rani (2007) and Pandey (2006), it was found that what little training was provided to para-teachers was disconnected from the realities of large TPRs and multi-grade classrooms in schools. Kingdon & Sipahimalani-Rao (2010) suggest that the ambiguity in the planning documents on what defines para-teachers needs to be standardized and addressed before procedures can be developed to integrate them most effectively into the educational system.

10.4.2 Spatial Component of the Para-Teachers Issue

A report authored by Kingdon & Sipahimalani-Rao (2010) found that the bulk of the expansion of para-teachers was occurring in Uttar Pradesh and Bihar and *only* para-teachers have recently been hired in Madhya Pradesh. Interestingly, they did not find a similar expansion of para-teachers in southern India, which they attribute mostly to the lower population growth rates- a finding consistent with Myrdal's understanding of the multi-causal links in the educational system. It is also noteworthy that the expansion of the para-teacher in India has also coincided with the massive expansion of teacher training centers as described in Section 10.3.1, further evidence of an ad hoc nature and disjointed nature of the educational system integration consistent with the 'soft state' and a lack of coordinated planning.

As is consistent with a spatially unequal educational system, the mostly untrained para-teachers are often dispatched to more remote locations with the least educational tools and infrastructure. Kingdon & Sipahimalani-Rao (2010) found that schools which with locally sourced para-teachers often had poorer infrastructure as well as multi-grade classrooms, and were more often in remote rural areas. This finding is very much in line with Myrdal's understanding of inadequate attention given to educational backwaters, and counter to his earnest suggestion that the best teachers be dispatched to those areas most in need of the highest quality trained teachers.

10.4.3 “Trained” and Para-Teacher Comparisons

India's push to expand the educational system quantitatively without commensurately expanding educational budgets began expansion of the use of para-teachers began in Himachal Pradesh and Rajasthan in the 1980s (Kingdon & Sipahimalani-Rao, 2010). A trend in the literature has been to compare the performance and attitudes of “trained” and para-teachers, and a survey of the findings is worth including. The proponents of the expanded use of para-teachers point to their cost-effectiveness in lowering PTRs, reducing the number of single teacher schools, and increasing accountability to local *panchayats*. On the other hand, their drawbacks include the (inherently) low professional training, lower educational achievement, and frictions between teachers due to a dual salary structure (Kingdon & Sipahimalani-Rao, 2010). In a comparative study of para-teachers and regular teachers conducted by Govinda and Josephine (2004), it was found that locally sourced para-teachers were able to increase the accessibility of schools to the poor and marginalized and created better “community linkages” and that para-teachers were more effective than regular teachers in class preparation, English teaching and more efficiently using the blackboard. In contrast regular teachers were found to be more committed, had better parent-teacher relations, and were better at identifying students with special needs.

In a study conducted by the Edcil (2008) found that teacher absenteeism was lower among para-teachers than among regular teachers by relatively broad margins of 17.9% in Andhra Pradesh, 2.2% in Madhya Pradesh, and 9.3% in Uttar Pradesh. Similar results were found by Sankar (2008) who found that absentee rates in Bihar, where para-teachers are

hired permanently, were the same as regular contract teachers. In an earlier study by the same author in 2008, Sankar was surprised to find that in Bihar students taught by para-teachers did significantly better than regular teachers on subject tests, despite their lack of training and abysmal compensation.

In another two studies on similar issues, Rena et al. (2002) and Rampal and Bhagat (2003) found that in West Bengal, para-teacher alternative schools had lower teacher absenteeism, higher parental satisfaction and higher child attendance rates than government schools with regular teachers. Leclercq (2003) and Edcil (2008) both found that the type of teacher made no difference in student outcomes in Madhya Pradesh. Looking at a much larger data set of 360 schools, Sankar (2008) found that children taught by para-teachers had lower learning levels, but that these differences were the same as regular teachers when the socio-economic factors of the students were considered.

Given the lack of a clear discernable benefit to employing “trained” regular teachers, many (if not all) of the researchers looking at the future of para-teacher hiring have concluded that the use of para-teachers be expanded. For example, Muralidharan’s (2012) study concluded that the slight difference between the para and regular teachers warranted an increased reliance on contract para teachers. Muralidharan’s suggestion that contract teachers be evaluated and integrated into a performance linked tenure track system was also made by Kingdon & Sipahimalani-Rao (2010) and Pritchett & Murgai (2008). Govinda (2007) goes slightly further in suggesting that to meet the increasing need for teachers cost-effectively, India should recruit all teachers on a short-term contract. He basis this suggest on the grounds that, “such appointments would not entail a burden on the state as teachers are dispensed with every term; [and] that they are paid much less in comparison to regular teachers” (Govinda, 2007, p. 23).

10.4.4 Coming to the Wrong Conclusions on Para-Teachers

Govinda’s policy recommendation that the state should to hire more short term contract teachers to minimize the costs goes against Myrdal’s recommendation that states should improve the professionalization and pay of teachers in order to raise their social status. Furthermore, Govinda’s proposal runs counter to the empirical evidence that the

higher pay, professionalization, and social status of teachers in East Asia had on improving the educational sector through which human capital was developed. In short, Govinda's suggestion that the number of teachers is increased at low costs through para teachers reflects a familiar shortsighted approach to improving the profession. It is also another example of the constant pressure to improve the quantitative number of teachers in India instead of addressing quality concerns.

Importantly, in none of the research is the opposite conclusion reached: that trained teachers do not perform significantly better than para-teachers because the training that "trained" teachers receive is neither practical nor applicable. Nor are other issues such as teacher status, pay, and motivation incorporated into the research. The idea that increased reliance on cost-effective untrained or semi-trained para-teachers is a long-term educational solution in India is difficult to swallow if the goal is to improve student outcomes. Moreover, to suggest that market-based incentives linking para-teacher pay to performance without inviting massive corruption is equally naïve.

Furthermore, in the whole discussion it should also be remembered the whole dilemma stems from a state that has chronically underinvested in education. Thus, the debate between teacher types can also be seen as a red herring for a larger budgetary and political failure (to say nothing of corruption).

10.5 Spatial Distribution of Teaching Issues

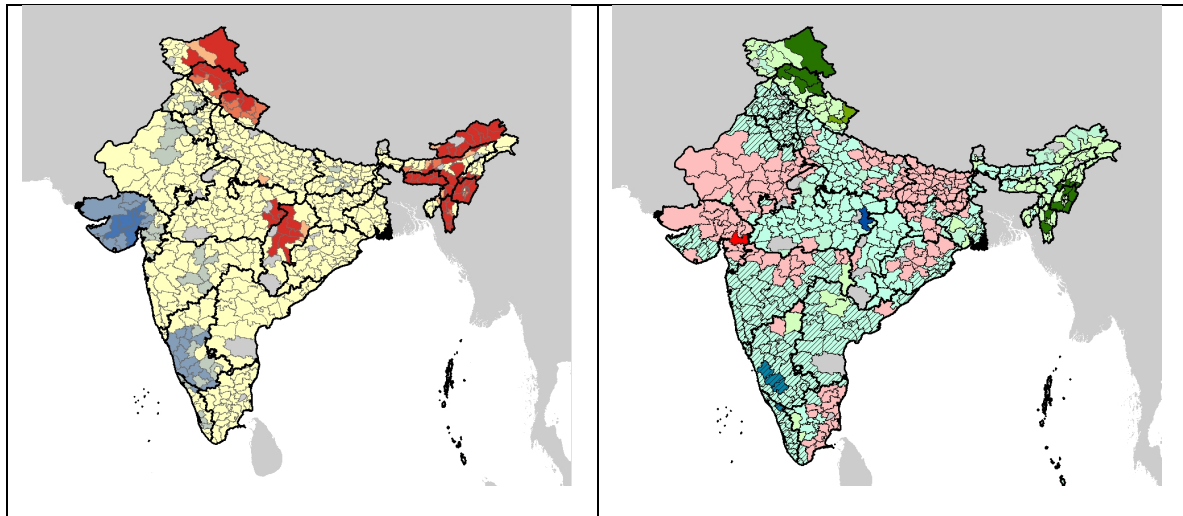
The remainder of the chapter examines the spatial relationships of the issues described above where data is available. Reflective of the larger lack of concentration on qualitative issues, such as teacher quality or teacher training levels at the district level, most of the maps below rely on quantitative data. However, by triangulating this quantitative data of different teacher related issues with the student capabilities rates, it becomes possible to deductively identify those areas have stronger or weaker teacher quality. The conclusions reached in this section are summarized in Section 10.6.

10.5.1 Spatial Relationship Between Total Teachers per 100,000 Population and Average ASER Capabilities Rates

While Myrdal didn't specifically mention the ideal number of teachers per 100,000 populations, it was one of the few specific indicators that he felt needed to be collected in order to evaluate the government commitment to improving access to the educational system (Chapter 7). However, as the discussion below shows there is little to suggest that the ratio of teachers per 100,000 populations (at least at the district level) has a strong relationship in educational outcomes, as there is only a weak spatial when districts with low populations are excluded from the analysis.

In Figure 10.1, there are three clearly delineated hotspots of higher teachers per capita. The first two occur in the northeastern states and the far northern states of Jammu & Kashmir, Himachal Pradesh, and Uttarakhand. These show strong degrees of state saturation and boundedness (with the partial exception of Assam). Looking at the total population map in Figure 10.2 below, it is also clear that these hotspots of high per capita teachers exist in some of the most sparsely populated parts of the country. Thus, these areas don't have an abnormally large number of teachers, but simply have lower population in general. The third and more unusual hotspots of teachers per 100,000 population, is in central Chhattisgarh and along the shared border with eastern Madhya Pradesh. This hotspot is significantly smaller than the two previously mentioned hotspots, but is of a very strong intensity. Unlike the other two hotspots, this occurs in an area where there are high, low, and medium population districts.

Figure 10.1 (left) Getis-Ord G_i^* hotspots of teachers per 100K population (O); and (right) overlay map with ASER achievement rates hotspots (C)



Higher than average total teachers per 100,000 population (O+) and higher than average ASER capabilities rates (C+)

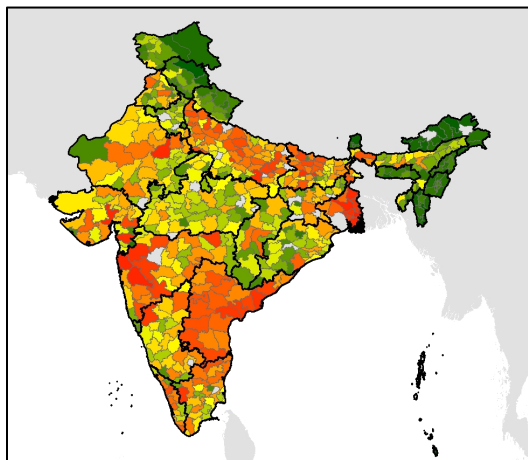
Classification	No. of Districts	% of all Districts
All O+C+ Districts	92	17
O_w+C_w+	0	0
O_m+C_m+	2	0
O_e+C_e+	13	2
Lower than average total teachers per 100,000 population (O-) and lower than average ASER capabilities rates (O+)		
All O-C- Districts	165	31
O_w-C_w-	1	0
O_m-C_m-	0	0
O_e-C_e-	0	0
Higher than average total teachers per 100,000 population (O+) and lower than average ASER capabilities rates (C-)		
All O+C- Districts	115	21
O_w+C_w-	0	0
O_m+C_m-	0	0

$O_e+C_e^-$	1	0
Lower than average total teachers per 100,000 population (O-) and higher than average ASER capabilities rates (C+)		
All O-C+ Districts	164	31
$O_w-C_w^+$	0	0
$O_m-C_m^+$	4	1
$O_e-C_e^+$	0	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Similar to the Northern and Northeastern hotspots described above, the two low teachers per capita cold spots in Figure 10.1 are both state-bounded and especially so in Gujarat. In Gujarat, there is a strong state saturation and a noticeable lack of spillover effects of lower per capita teachers in the surrounding states. What few unclassified districts there are in Gujarat occur in the state's lower performing tribal areas along the Madhya Pradesh border. In contrast, the more intense cold spots occur in the central districts of the state. This gives evidence that quantitative teacher numbers in Gujarat are low even by national Indian standards, and adds to the evidence that economic growth in Gujarat is not being created with a broad base of human capital. This finding is more damning of the states education system when it is remembered from the previous map (Figure 9.4) that these are the same dominated by government-administered schools.

Figure 10.2 Raw population values (green lower population districts red higher population districts)



Source: Data from Government of India Census 2010 and map generated by author

In addition to the large Gujarat cold spot of per capita teachers, a second cold spot of note in Figure 10.1 occurs in all but the northernmost districts of Karnataka. This second cold spot has both less state boundedness (there are also per capita teacher cold spots across the state border in Kerala), and considerably less state saturation than the cold spot in Gujarat. Also, unlike the more tightly clustered hotspots in the map, there are also a larger number of small, less intense and unsaturated cold spot clusters occurring throughout the much of Maharashtra, Rajasthan, Punjab, Kerala, and Bihar—all in areas, which have higher than average populations.

The overlay of higher teacher per 100,000 population ratios and higher student capability rates does appear to have a tightness of fit between the two issues. There are only thirteen O_e+C_e+ districts and two O_m+C_m+ districts in the classification, all of which occur in the higher achieving Northwestern states, in Jammu & Kashmir, and in northern Himachal Pradesh. But it should be remembered that these districts also have the lowest populations in India. This may suggest that the administrative capacity, budgets, or other factors in high population states may be too weak to support to large numbers of teachers in highly populated districts despite having larger populations—in other words evidence of soft states. However, there are also isolated unclassified $O+C+$ districts scattered throughout the high population districts in Tamil Nadu, northern Karnataka, northern Andhra Pradesh and West Bengal. These districts add evidence that verify the Myrdal's proposal from Section 10.2.3 that armies of teachers would be needed, and have not been

met quantitatively, and more indirectly, that lowering population growth is vital to educational improvement. Despite the high number of significant overlapping districts, the *O+C+* classification occurs in only 17% of all Indian districts, and in the subsequent three classifications there are far fewer overlapping significant districts which somewhat weakens the claim.

The *O-C-* classification of districts with lower scores and lower total teacher per capita occurs in a comparatively high 31% of all districts, however the only statistically significant overlapping district occurs in Vadodara, Gujarat and even here its is only a weak overlapping hotspot. This shows that a high number of teachers per 100,000 population may be a significant factor for higher capabilities rates, as explained above, but has little explanatory power for districts with lower educationally performing districts. The location of the single hotspot in Vadodara Gujarat is significant, in that it occurs in the one of districts with the highest tribal percentages of the population in, which may have an effect on the poor performance in the region.

Just as the combination of fewer than average teachers (*O-*) and lower scores show little overlap, the *O+C-* classification of higher teachers per 100,000 population and lower student capabilities features those areas where poor capabilities rates cannot be clearly attributed to lower numbers of teachers at the district level. This classification may be useful in identifying Indian regions that may have more adequate numbers of teachers per capita, but that might be of poor quality given a lack of transference from the number of teachers to better student outcomes. The *O+C-* classification is rare with only a 21% of all districts and a single (albeit intense) overlapping district in Shahdol in eastern Madhya Pradesh.

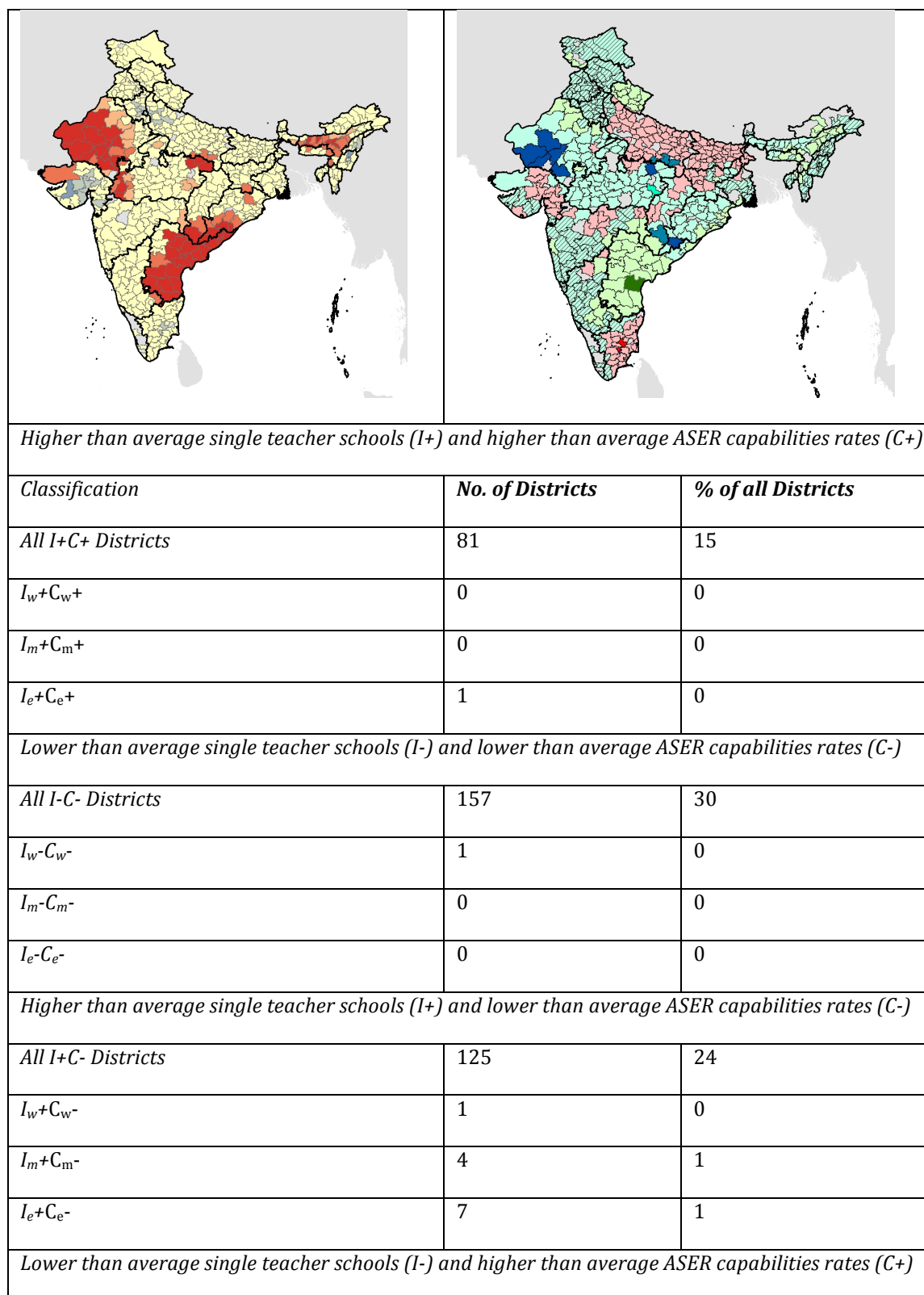
The *O-C+* classification highlights districts with have lower teacher per capita ratios and better student outcomes, and can be used to identify areas of potentially higher quality teachers. This classification occurs with strong state saturation in the higher educationally achieving states neighboring states of Punjab and Haryana. The *O-C+* classification also occurs in the Haryana bordering districts in Uttar Pradesh and Rajasthan; throughout the Southwestern coast especially in southern Karnataka and northern Kerala where the overlapping *O_m-C_{m+}* districts are located; as well as in Coastal Odisha, Andhra Pradesh, and the peninsular districts of Gujarat. Cumulatively, these show that higher educational

outcomes don't necessarily rely simply on having more teachers. This is consistent with Myrdal's policy suggestion that quantitative expansion was insufficient for meaningful reform and that improving teacher quality should not be ignored. However, the lack of significantly overlapping districts in the classification does not give strong evidence that this is a common occurrence especially compared to the far more numerous significant overlapping *O+C+* districts described above. Yet, it should be remembered that this discussion is on the relative performance in India rather than absolute performance, and even the highest achieving states, the levels are still in fact, very low at the international scale, thus it would not be prudent to dismiss the need for more teachers outright.

10.5.2 Spatial Relationship between Single Teacher Schools (*I*) and Average ASER Capabilities Rates (*C*)

The hotspot distribution of single teacher primary schools in India, as shown in Figure 10.3, and the relationship between single teacher schools and student achievement highlight a key finding in this chapter. This section shows that the success or failure for a single indicator (in this case single teacher schools) is insufficient to explain educational outcomes universally throughout India. Instead, this subsection shows that regionalism plays an important role and that similar performance (good or bad) in the same indicator can be related to very different student skills outcomes depending on other cultural and historical factors in a state. This finding also demonstrates the importance using state and district data rather than relying on nationally aggregated figures when assessing educational trends especially in a country as large as India.

Figure 10.3 (left) Getis-Ord GI* hotspots of percent of single teacher primary schools (*I*); and (right) overlay map with ASER achievement rates hotspots (*C*)



<i>All I-C+ Districts</i>	165	31
<i>I_w-C_w+ </i>	0	0
<i>I_m-C_m+ </i>	0	0
<i>I_e-C_e+ </i>	0	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

As the hotspot map in Figure 10.3 above shows very clearly, there are extreme hotspots of higher than average single teacher schools occurring in the socially and historically different states of Rajasthan and Andhra Pradesh. In Andhra Pradesh, there are extreme hotspots throughout the state. Also, along the borders of Andhra Pradesh cross-border spread effects seem to into Kolar and Chikballapura districts in southeastern Karnataka. To the immediate north, there is also a continuation of districts with a high percentage of single teacher schools in the very low achieving districts of southern Chhattisgarh in Bijapur and Dakshin Bastar Dantewada (*I_e+*) and Baster (*I_m-*); and more interestingly in the Andhra Pradesh bordering districts across Odisha. In these areas there are a number of districts with very low rates of single teacher schools (*I_e-*) in Malkangiri, Koraput, Rayagada, and Gajapati, which are themselves ringed by other *I_m-* districts in Nabrangapur, Kalahand, Kandhamal and Ganjam.

Similar to Andhra Pradesh, Rajasthan also has a strong state saturation of *I_e+* districts with a territorially wide but numerically few districts *I_e+* hotspots along (but not crossing) the Gujarat border. The hotspot stretches northward in the state but weakens significantly in districts along the northern border with Haryana. The Rajasthan hotspot also extends into a high concentration of single teacher schools in Madhya Pradesh into two of state (and India's) lowest performing regions in terms of average ASER capability rates. Unlike the state saturation in Andhra Pradesh or Rajasthan, single teacher hotspots in Madhya Pradesh occur in two district hotspots. The first occurs along the border with Gujarat with a strong cluster of single teacher schools with *I_e+* districts in Ratlam, Dhar, Barwani, *I_m+* districts in Alirajpur, Indore, and *I_w+* districts in Ujjain and West Nimar. The second deep cluster of single teacher schools in Madhya Pradesh occurs along the Uttar Pradesh border in Satna, Rewa, Sidhi, and Singrauli (all *I_e+*) all of which are adjacent to

similarly classified districts across the Uttar Pradesh border in Chitrakoot, Allahabad and Manipur.

There are far fewer and less intense cold spots than hotspots for districts that have significantly low numbers of single teacher schools. This means that there is less variation at the lower end of the spectrum with few districts having significantly lower percentages of single teacher schools compared to the national average. Counter intuitively, these areas do not occur in the areas with the highest degree of universal education in India. There are scattered cold spots denoting fewer percentages of single teacher schools in the higher educationally performing Nagaland, Manipur and Haryana, however there are also cold spot clustering in the lower achieving states of Gujarat and in Uttar Pradesh, albeit with weaker intensity. Of these cold spots, the districts in Uttar Pradesh are the most surprising given the extremely low capabilities rates in the state generally.

The overlay map shows that the combination of a high than average percentage of single teacher schools and higher than average capability rates cover only 81 (15% of all) districts, an exceptionally low number in the study. This shows that single teacher schools are, unsurprisingly, an unlikely path to success in improving the educational system as a whole. However, a closer look at the spatial distribution of the *I+C+* districts in Andhra Pradesh paints a more nuanced picture. The state saturated concentration of *I+C+* districts in Andhra Pradesh and in Uttarakhand stand in strong contrast to the state saturation of high percentage of single teacher schools and very low capability rates in Rajasthan (however both are below the 1.65 std. dev. threshold). Remembering from Section 8.4 that Andhra Pradesh may be the most rapidly improving state educationally, it can be said with some confidence that a high percentage of single teacher schools need not be a limiting factor for improving capability rates in India so long as the quality of the teachers, or other related factors are being sufficiently met.

Outside of Andhra Pradesh and Uttarakhand, there are also *I+C+* districts along the border with Andhra Pradesh in every the state except across the southern border with Tamil Nadu. There are also *I+C+* districts in Nanded, Chandrapur, and Gadchiroli districts in Madhya Pradesh; Bijapur and Dakshin Bastar Dantewada in Chhattisgarh; and along the

coastal districts of Odisha and even into Purba, Medinipur, in West Bengal. All of these areas are middling districts in terms of performance, thus it is not inconceivable to suggest that these districts may have improved teaching quality before quantitatively expanding the number of teachers and schools and have a strong chance for even more improvement with quantitative expansion of the teaching force.

The *I-C-* classification shows areas of lower than average single teacher schools combined with lower than average student outcome skills rates, essentially showing that areas low performance cannot reasonably be attributed to the having a higher than average number of single teacher schools. The *I-C-* classification occurs in twice the number as the *I+C+* classification above, though only occurs in one statistically significant overlapping district in Tiruchirappali, Tamil Nadu in the center of a state. The fact that these *I-C-* districts occur in the lowest performing areas of India, especially in Uttar Pradesh and Bihar does show the limitations of attributing lower than average performance on the prevalence of single teacher schools, especially when considering that Andhra Pradesh and Uttarakhand have higher student capability rates despite having more single teacher schools. If it is remembered from Figure 9.4 that Uttar Pradesh and Bihar are also states with the highest percentage of government schools, there is further evidence for the 'softness' of those state governments.

The *I+C-* areas in the overlay map in Figure 10.3 show areas in which there is both a higher than average percentage of single teacher schools and lower than average skills, an intuitive finding. The classification occurs in 125 or 24% of Indian districts, however it also occurs in higher than average overlapping significant districts compared to the other overlays classifications in this subsection. Importantly, the overlap between higher than average single teacher schools and lower than average scores is strong, and has intense and moderate overlaps in three of the four lowest performing areas in the country: western Rajasthan; southern Odisha – eastern Chhattisgarh; and along the Uttar Pradesh – Madhya Pradesh border. However, while there is tightness of fit between higher percentages of single teacher schools and lower outcome rates, the opposite has a weaker relationship. This adds to the finding that the spatial methodology used in this research is more effective

in identifying the factors that contribute to poor educational performance than for better performance.

The most notable cluster of high rates of single teacher schools and lower student outcomes occurs in the low average capabilities corner of southern Rajasthan. There are I_e+C_e - Districts in Barmer, Jalor Udaipur, Pali and Jodhpur, with the other $I+C$ - districts in the state extending across nearly all of Madhya Pradesh. Madhya Pradesh also hosts two other significant hotspots in the east in Dindori, Madhya Pradesh (I_w+C_w -) along the Chhattisgarh border, and in Satna (I_m+C_m -) along the Uttar Pradesh border, which itself borders a three I_m+C_m - districts in Chitrakoot, Allahbad and Mirzapur in southeastern Uttar Pradesh. However, despite these many overlaps one doesn't see the same I+C- classification in the very low performing districts along the Uttar Pradesh- Nepalese border.

The final classification of $I-C+$ districts identifies areas with the expected combination of lower than average single teacher schools and higher than average capabilities rates. This classification exists in 165 (31% of all) districts, one percent more than the $I-C$ - districts, but surprisingly there aren't any significant overlapping districts. Despite the lack of significant overlaps, however, the classification does occur in all of the highest educationally performing areas: including the higher performing districts along the western coast, the Haryana, Punjab, Himachal Pradesh and Jammu & Kashmir northern performance areas and also the Myanmar bordering high performance areas.

10.5.3 Spatial Relationship Between Primary Schools with No Female Teacher (N) and Average ASER Capabilities Rates (C)

In the hotspot map below in Figure 10.4, the red areas show districts without female teachers in schools with more than two teachers (N). This subsection shows that the presence of female teachers in schools does appear to have a notably tight spatial relationship with both lower and higher outcome rates. As such it should be seen as one of the more most persuasive factors in explaining the educational outcomes. That said, there is also a strong degree of regional variation to this finding. Finally, the map also shows that the hot and cold spots appear to fit within state boundaries which suggests, somewhat

surprisingly, that teacher gender preferences in hiring appears to be dependent on state policies.

The cold spots in Figure 10.4 show districts with a higher than average number of schools with female teachers in non-single teachers schools. These cold spots are more clearly defined along state boundaries than the hotspots in the map, though both are more state-centric than other teaching related factors discussed in this chapter. These cold spots are especially intense, state-saturating and state delineated in the two southern states of Kerala (completely N_{e-}) and Tamil Nadu which is mostly composed of N_{e-} districts. This strong similarity between the two states is reminiscent of the cold spots in the map of the decadal economic growth rate in Figure 9.2. In both cases, similarities in the neighboring states in one factor still relates to divergent educational outcomes in the two states. This highlights the complexity of the relationship between different factors and student outcomes, and at a larger level, the weakness of a simplified cumulative causation model in the educational sector that assumes that progress in one area will translate into progress in another.

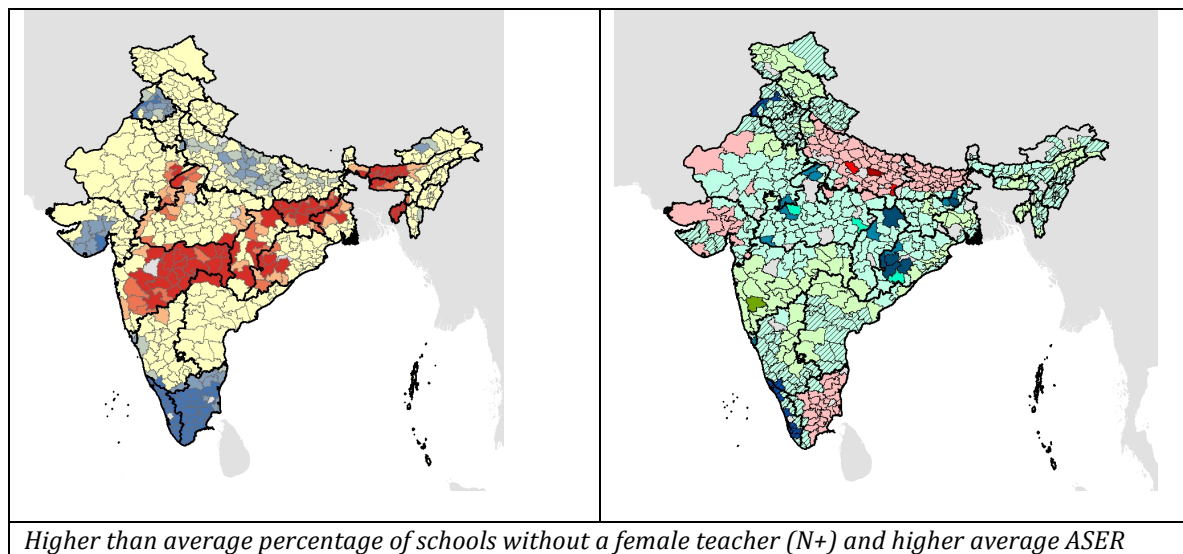
In addition to the intense cold spots in Kerala and Tamil Nadu, there is also strong cold spot saturation, but with less intensity in Punjab, the far north, and to a lesser extent throughout much of central Uttar Pradesh, central Bihar, and in a widespread swath of cold spot districts in peninsular Gujarat. However, these cold spots all clearly lack both the degree of state saturation and intensity found in the southern states of Kerala and Tamil Nadu described above, and again highlight the strong degree of intrastate diversity in the education sector in Gujarat.

The hotspots of more schools without a female teacher exist primarily in the central states of India in a similar distribution to those in the sex ratio map in Section 9.6. The largest hotspot occurs in Maharashtra, a state nearly saturated in N_{e+} classified with the exception of two slightly less intense N_{m+} districts, and unclassified districts along the coastline. The intense hotspot in Maharashtra also extends into districts along the state border several neighboring districts in neighboring the neighboring states of Madhya Pradesh (three border districts) and in Karnataka and Adilabad (N_{e+}) in Andhra Pradesh.

The same swath also extends to the east and continuously through western Chhattisgarh and into the most poorly performing tribal areas in southern Odisha. The checkered state hotspots in Chhattisgarh meet with very intense N_{e+} hotspot in Jharkhand that extends into north West Bengal and into western Assam and Meghalaya, as well as a complete saturation of N_{e+} hotspots in Tripura as well. Returning to the west of India, there are also districts with low percentages of female teachers in Alirajpur (N_{w+}), Barwani (N_{m+}) and Ratlam (N_{w+}), in tribal districts in Madhya Pradesh along the Gujarat border.

When the female teacher hotspots map is overlaid with the student outcomes map (C) in Figure 10.4, it becomes clear that the lack of female teachers are likely an important limiting factor in restricting student educational outcome rates. A remarkably low 19% of the districts in the country have both higher than average numbers of schools without female teacher and higher than average student capability rates, and there is only a single statistically significant overlapping district of the two factors occurring in western Maharashtra ($N_{m+}C_{m+}$). The $N-C-$ classification shows areas that contradict the hypothesis that districts with lower than average numbers of female teachers have higher educational outcomes. Like the $N+C+$ classification above this classification occurs in a relatively few 122 districts (23%) and in the three statistically significant hotspots all in central Uttar Pradesh in Unnao (N_w-C_w-), Sultanpur (N_m-C_m-), and Chandauli (N_w-C_w-).

Figure 10.4 (left) Getis-Ord GI* hotspot of percent of schools with no female teacher ($tch \geq 2$) in primary schools (N); and (right) overlay map with ASER achievement rates hotspots (C)



<i>Capacities Rates (C+)</i>		
Classification	No. of Districts	% of all Districts
<i>All N+C+ Districts</i>	103	19
N_w+C_w+	0	0
N_m+C_m+	1	0
N_e+C_e+	0	0
<i>Lower than average percentage of schools without a female teacher (N-) and lower than average ASER Capacities Rates (C-)</i>		
<i>All N-C-Districts</i>	122	23
N_w-C_w-	2	0
N_m-C_m-	1	0
N_e-C_e-	0	0
<i>Higher than average percentage of schools without a female teacher (N+) and lower average ASER Capacities Rates (C-)</i>		
<i>All N+C- Districts</i>	162	30
N_w+C_w-	3	1
N_m+C_m-	9	2
N_e+C_e-	6	1
<i>Lower than average percentage of schools without a female teacher (N-) and higher average ASER Capacities Rates (C+)</i>		
<i>All N-C+ Districts</i>	155	29
N_w-C_w+	0	0
N_m-C_m+	2	0
N_e-C_e+	11	2

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Unlike the more widely distributed $N+C+$ classification described above, the $N-C-$ districts are grouped into three coherent regions. Nearly all of $N-C-$ districts are lie within in Uttar Pradesh and Bihar. A second cluster occurs in the vast majority of districts in Tamil

Nadu; and the third swath runs across the central districts of Gujarat and in Jaisalmer and Bikaner districts in Rajasthan along the Pakistani border. These classifications again show that the poor state of education in Uttar Pradesh, and to a lesser extent in Tamil Nadu, Bihar, and in the peripheral districts of Gujarat, cannot be attributed to a lack of female teachers.

In contrast to the $N+C+$ and $N-C-$ classifications above, the $N+C-$ and $N-C+$ classified districts occur in both more districts, and have a much higher number of overlapping and intense statistically significant overlapping districts. The $N+C-$ classification identifies regional clusters with a low percentage of schools with a female teacher and lower student capabilities rates. It can be found in 162 (30%) of districts and has a very high number statistically significant overlapping districts (18) of which six are the most intense N_e+C_e- degree. These significant districts are weakly clustered into clear geographic clusters, the largest and most intense of which occurs in the exceptionally low achieving tribal region of inland Odisha. Here there are four N_e+C_e- districts in Nuapada, Kalahand, Kandhamal, and Balangir districts. These districts themselves border an N_m+C_m- district in Bargarh, and an N_w+C_w- district in Rayagada. This cluster makes up one of the largest clusters of significant overlapping clusters found in any factor considered in this study and attests to the strength of the relationship between a lack of female teachers and poorer student outcomes.

Other clusters of statistically significant overlapping districts areas with a combination of a low percentage of female teachers and lower than average capability rates also occur in the northeastern corner of Jharkhand in Deoghar and Godda districts (both N_m+C_m-), and in Dumka (N_e+C_e-). In addition, Madhya Pradesh has six significantly overlapping districts. This high number of statistically significant overlapping districts is unusual in the state that in most of the maps generated for this thesis shows very few statistically significant overlapping districts despite its low student outcomes.

The final $N-C+$ classification of those districts with higher percentages of schools with a female teacher combined with higher than average student scores shows similar overlap to the previous $N+C-$ classification with a similar 29% of all districts, though there are slightly fewer statistically significant overlapping districts (13); eleven of these are

most statistically outlying N_e-C_{e+} classified districts. Most the overlapping statistically significant districts occur in the most highly achieving districts in the count especially along the western coast, most notably in Kerala (eight N_e-C_{e+} districts), but also in Dakshina, and Kannada, Karnataka as well as in Southern Goa. The second significant cluster occurs in the high educationally performing state of Punjab along the Pakistan border in Ferozpur and Jalandhar (both N_e-C_{e+}) and in Faridkot (N_m-C_{m+}). Apart from the significant overlapping districts, the $N-C+$ classification also occurs in 60 percent of the $C+$ districts in both the higher performing and in of the improving districts of Andhra Pradesh and in Jammu & Kashmir. Other $N-C+$ districts are also found in throughout Haryana and in the higher achieving states in the Northeastern states, as well as in the five stronger districts of Gujarat.

Combining the four classifications in the subsection, there is strong evidence in every classification that the presence of female teachers in schools appears to be an important factor in raising capability rates, or conversely that higher capability rates are an influence in raising the number of female teachers—the former being more likely. In either causal direction, the finding strongly supports Myrdal’s conjecture that equality in the teaching profession will have a strong effect on improving mass education outcomes. This subsection also added evidence to some of the reoccurring themes in the spatial discussions. First, that the low educational performance of both Uttar Pradesh or Tamil Nadu cannot be explained by a lack of female teachers. Second, that there is a high degree of internal variation of educational outcomes in the development state of Gujarat.

10.5.4 Spatial Relationship Between Government Primary TPR (V) and Average ASER Capabilities Rates (C)

This subsection shows that there appears to be a strong and consistent relationship between lower government TPR rates and higher average ASER capabilities. Although there is some regional variations to the findings presented, there is certainly less than in other educational factors tested. As such, Myrdal’s claim that larger numbers of teachers, or lower birth rates, are likely essential elements in improving educational outcomes is validated (Section 10.2). It is also shown, that despite the need for more high quality

teachers, India has not yet been able to meet the quantitative need for teachers despite the overwhelming policy schemes and designed to do so.

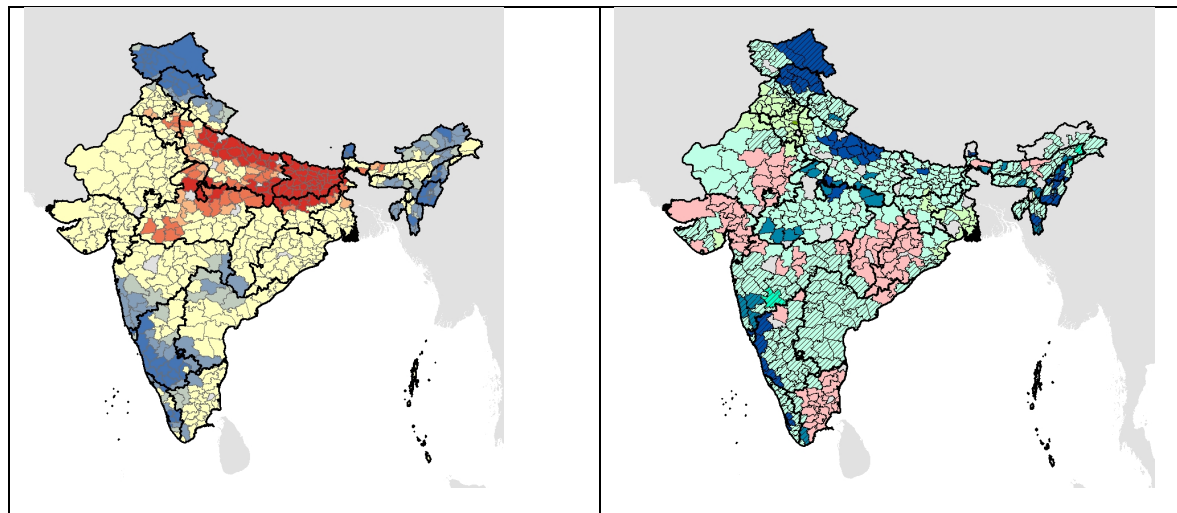
The hotspots map of government primary school Teacher Pupil Ratios in Figure 10.5 shows a wide spatial diversity of outcomes across India with both intense hot and cold spots. First, the hotspot map shows clear evidence that TPRs are consistently lower in the far northern, southern, and northeastern corners of India. Secondly, government primary TPRs appear to be another educational indicator that is strongly state delineated. In particular, there are high degrees of cold spot saturation in the northeastern states of Jammu & Kashmir, Himachal Pradesh, Uttarakhand; and strong hot spots saturation in Uttar Pradesh, and Bihar. However, there is also evidence of less state centric delineation in the in the southern states which display a strong degree of cross state regionalism and intrastate divergence, even in the usually uniformly classified Kerala. For their part, hotspots of deep intensity and breadth of high TPR ratios exist in Uttar Pradesh, and Bihar along both states' border with Nepal and along the states' southern borders with Madhya Pradesh and Jharkhand respectively.

The usually low educationally performing, but often uniformly classified, state of Madhya Pradesh also has a significant five-district V_{m+} hotspot cluster in the state's southwest is smaller and less intense than the high intensity hot spots in the north of the state and in neighboring Uttar Pradesh. There are also smaller hotspots of five districts (three V_{m+} , two V_{w+} districts) in the usually higher performing state of Haryana and in neighboring Punjab, although this cluster is both less large and intense than other hotspots in the map. It is also worth noting the states without hotspots in of high TPR ratios in Tamil Nadu Gujarat, Rajasthan, or Odisha, states which that often have hot or cold spots in the other education issues examined in research.

The combination of higher than average TPR rates and higher than average educational capabilities is among common classifications in this study found and only occurs in 56 (10% of) districts and in only one statistically significant overlapping district in Panipat, Haryana (V_{m+}). Despite the lack of statistically significant overlapping districts, it is worth noting where the $V+C+$ classified districts are to locate those areas that have

been able to have higher than average student outcomes while also having higher than average TPR rates. These combinations of characteristics are likely areas that may have higher quality teachers. The largest cluster of $V+C+$ districts saturates Haryana and most of Punjab.

Figure 10.5 (left) Getis-Ord G_i^* hotspot of TPR ratios in government primary schools (V); and (right) overlay map with ASER achievement rates hotspots (C)



Higher than average government primary TPR rates ($N+$) and higher average ASER Capacities Rates ($C+$)

Classification	No. of Districts	% of all Districts
<i>All $V+C+$ Districts</i>	56	10
V_w+C_w+	0	0
V_m+C_m+	1	0
V_e+C_e+	0	0
<i>Lower than average government primary TPR rates ($N-$) and lower than average ASER Capacities Rates ($C-$)</i>		
<i>All $V-C-$ Districts</i>	98	18
V_w-C_w-	0	0
V_m-C_m-	0	0
V_e-C_e-	0	0

Higher than average government primary TPR rates ($V+$) and lower than average ASER capacities rates

<i>(C-)</i>		
<i>All V+C- Districts</i>	186	34
$V_w+C_w^-$	0	0
$V_m+C_m^-$	15	3
$V_e+C_e^-$	15	3
<i>Lower than average government primary TPR rates (V-) and higher than average ASER capacities rates (C+)</i>		
<i>All V-C+ Districts</i>	203	37
$V_w-C_w^+$	3	1
$V_m-C_m^+$	12	2
$V_e-C_e^+$	29	5

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

The *V-C-* classification shows districts with lower TPR ratio clustering and low average capability scores. This weak combination of factors has a weak spatial relationship and only occurs in 98 (18%) of all Indian districts without any overlapping statistically significant districts again. This further shows that the combination of lower TRPs and lower capabilities are also rare. The classification is useful for our study insofar that it identifies those areas which may have particularly poor teachers or other factors which buck the otherwise strong trend of an inverse relationship between TRP ratios and average ASER achievement scores.

In stark contrast to the aforementioned *V+C+* and *V-C-* classifications above, the *V+C-* and *V-C+* classifications both have very tight fitting overlays. The *V+C-* classification of higher TPRs and lower scores occurs in 186 (34%) of all districts including 30 significant districts. This very high number of statistically significant overlapping districts are equally divided between fifteen $V_m+C_m^+$ and fifteen $V_e+C_e^-$ districts. Geographically, the vast majority of these significant overlaying districts (12 of the 15 $V_e+C_e^-$ and one of the $V_m+C_m^-$) occur along the Uttar Pradesh border with Nepal. Moreover, three of the overlapping districts (one $V_e+C_e^-$ and two $V_m+C_m^+$) occur along Uttar Pradesh's southern border with Madhya Pradesh which itself has three $V_m+C_m^+$ districts and one $V_e+C_e^-$ district.

Even closer than the association of higher TPRs with low student outcomes, is strength of the relationship between low average TPR and higher than average student outcome rates which has the tightest fit of the layers included in the study. Forty-four districts have significant overlapping districts of which over half (29) are the most intense V_e-C_e+ districts. Moreover, there are intense, clustered, and widespread statistically significant overlapping districts in all of the highest achieving regions in the country. The findings of this subsection do not fit the findings of an ADB study on the educational lessons of the East Asian Miracle (ADB, 1994, pp. 6-7), which suggested that during their development periods, the East Asian countries of Japan, South Korea, Taiwan, and Singapore, student to teacher ratios were actually quite high even when compared to countries with much weaker economies, often around 40 to 1 in the primary sector and 30 to 1 at the secondary level. However, the ADB report also suggests that downsides to the high student to teacher ratios were mitigated by the high levels of teacher remuneration and level of socio-economic status relative to both per-capita income and comparable pay in other OECD countries.

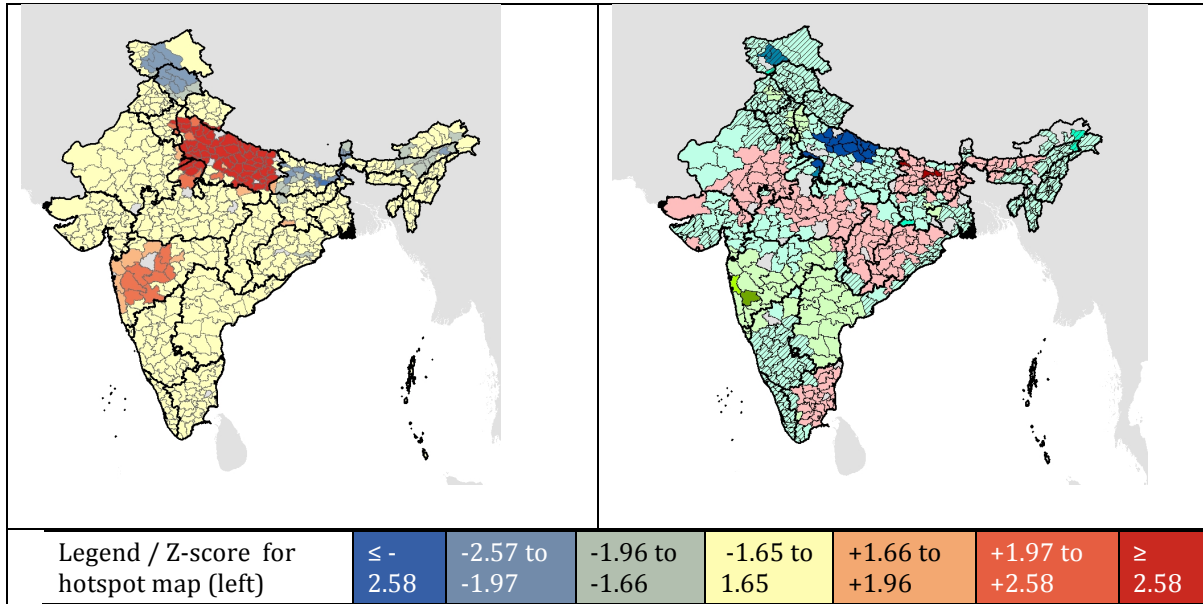
10.5.5 Spatial Relationship between Private Primary TPR (W) and Average ASER Capabilities Rates (C)

Compared to the tightness of fit between the government primary school TPR ratios and the average ASER capabilities rates in the section above, there is much less spatial variation in TPRs in general (more unclassified districts, and fewer intense districts) and a weaker tightness of fit in the private school TRP rates. In the hotspot map of private primary school TPR in Figure 10.6 there are important differences from government TPR rates covered in the previous Section 10.5.4. Most evidently, there are fewer, less intense, and less broad hot spots and cold spots. In particular, the deep cold spots of low TPR ratios that stretched from southwestern Maharashtra, through coastal and southern Karnataka and Kerala in the previous map are completely absent and replaced by unclassified districts. The same is also true of the unusually low TPR cluster in three-state border area in Andhra Pradesh, Chhattisgarh, and eastern Maharashtra. In both the far northern and far northeastern districts, the deep expansive and state saturating cold spots are either absent from the previous map, or are considerably less intense. In Maharashtra, there is a “flipped”

district in which a cold spots of low government primary TPRs and high TPRs in primary schools, while there is an opposite flip in Bihar with very high government primary school TPR ratios and very low TPR ratios in private primary schools. This suggests that there is a wide gulf between the public and private schools in the state, in a factor that appears to be a vital component in improving capability rates. Finally, the particularly high TPRs in private primary schools is more state saturated and state bounded in Uttar Pradesh, a state that was showed in Section 9.5 to be dominated by government schools. Comparing the spatial overlays between the government and private primary school TPRs in Figure 10.5 and Figure 10.6 It can be seen that there is indeed a much weaker tightness of fit as there are far fewer significant overlapping districts. The exception to this is the *W+C*- cluster in Uttar Pradesh which, as is somewhat irrelevant considering the relatively low reliance on private primary schools in the state.

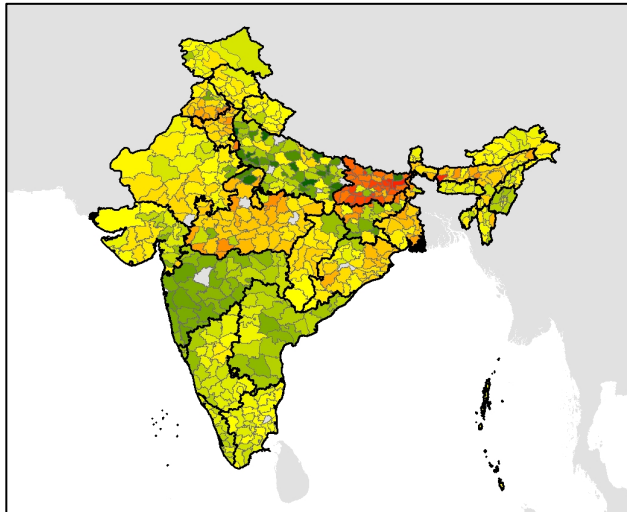
For comparisons sake, Figure 10.7 shows the difference between the government and private primary school TPR ratios. In the map, it is possible to see several spatial differences. Most immediately evident is just how much of an outlier Bihar is in terms of the difference between government and private school TPRs. Secondly, the state saturation and boundedness in the southern states of Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu and Kerala show the wide difference in terms of educational equality. The map also shows high degree heterogeneity in TPR ratio difference between districts in the lower performing states of Uttar Pradesh, Assam, and Jharkhand, as well as in the uneven developmental state of Gujarat.

Figure 10.6 (left) Getis-Ord GI* hotspot of private school TPR (*W*); and (right) overlay map with ASER achievement rates hotspots (*C*)



Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Figure 10.7 Government primary TPR minus private primary TPR Green Low, Red high



Source: Data from Government of India Census 2010, and map generated by author

10.5.6 Spatial Relationship Between Percent of Contract Teachers (CT) and Average ASER capabilities rates (C)

Unfortunately, the lack of hot and cold spots in the contract teacher map in Figure 10.8 give us little evidence of the difference between contract and non-contract teachers at least in terms of spatial differences using the methodology employed in this research. In fact, the number of districts beyond the ± 1.65 z-score threshold is lower in this map than

in any other map in the series. Furthermore, there are very few cold spots in the map and no intense cold spots to speak of. This shows that differences in the percent of contract teachers between districts is uniform throughout India with the exception of a few outlying districts that have significantly higher percentages of contract teachers based on the dataset. That said, the most intense clusters of districts that rely on contract teachers show neither state boundedness nor state saturation.

Because there are few hotspots and no cold spots the overlay maps of the percent of contract teacher hotspots, there are accordingly only seven overlapping significant districts across all four classifications. The relationship between the more contract teachers and better outcomes makes up more than half of the overlapping significant districts, though only one is of the highest intensity in Manipur. The classification of lower than average percent of contract teacher and lower scores makes up the majority of districts with (32%), but has no overlapping *(CT)-C+* overlapping districts. Likely, due to the lack of strong variation, the overlay map in Figure 10.8 shows a complicated geography with few states having a degree of saturation with most states having districts of two or three different classifications in the same state.

10.6 Chapter Summary with Reference to Research Questions

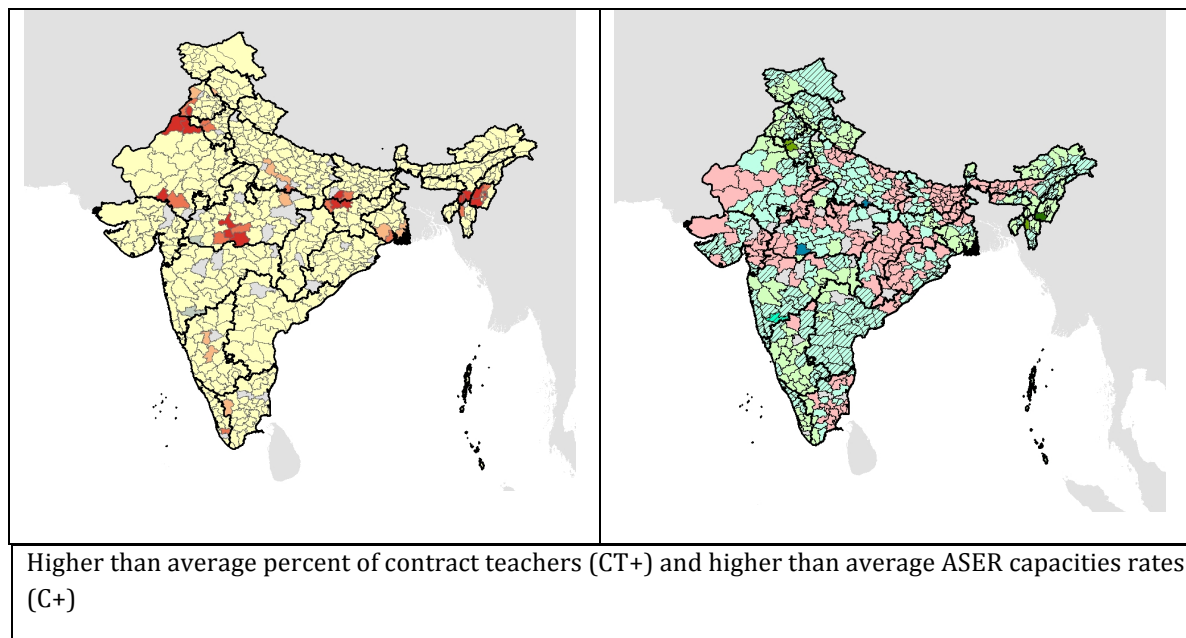
In the first section of this chapter Myrdal's normative policy suggestions for improving the education system through the teaching profession was summarized. Sadly, his pessimism was well founded as shown by more recent research (Section 10.3) on the topic of teacher quality as Indian teachers are often demoralized to the point to which absenteeism is a major problem. Furthermore, it was shown that the profession has made little headway in attaining the degree of social status Myrdal had hoped. With regards to Research Question 2.4, on whether Southern Asian states have prioritized those areas of teacher training and new methodologies which Myrdal suggested, the answer appears to be a resounding no- at least at the national level.

In the second spatial analysis half of chapter (Section 10.5), maps were generated to show the spatial distribution and relationships of different teacher related factors to student outcomes. Broadly speaking, this section confirms Myrdal's assumption that

qualitative improvement of teacher quality (Section 10.2) needs be addressed before the quantitative expansion of the number of teachers. With regards to the relationship between teachers per 100,000 population and student outcomes in 10.5.1 (and in response to Research Questions 2.1 and 3.7.1 in particular), it was shown that the per capita teachers tend to be higher in lower population areas, and that lower per-captia teachers are not a decisively a limiting factor for districts with the highest basic education outcomes. However, the indicators does appear to be an important factor in districts with second-rate educational outcomes.

The second map in the chapter on single teacher schools is included to answer Research Question 3.7.2 and adds evidence that single teacher schools don't necessarily perform more poorly in aggregate than other schools in terms of student outcomes. Furthermore, this section adds further evidence to the scheduled caste and tribe discussions from the previous chapter that regional and state context can lead to different outcomes. In the case of single-teacher schools Rajasthan and Andhra Pradesh had similar rates, but in differed widely in student outcomes.

Figure 10.8 (left) Getis-Ord GI* hotspot of percent of contract teachers (CT); and (right) overlay map with ASER achievement rates hotspots (C)



Classification	No. of Districts	% of all Districts
All (CT)+C+ Districts	118	22
(CT) _w +C _w +	0	0
(CT) _m +C _m +	3	1
(CT) _e +C _e +	1	0
Lower than average percent of contract teachers (CT-) and lower than average ASER capacities rates (C-)		
All (CT)-C- Districts	171	32
(CT) _w -C _w -	0	0
(CT) _m -C _m -	0	0
(CT) _e -C _e -	0	0
Higher than average percent of contract teachers (CT+) and lower than average ASER capacities rates (C-)		
All (CT)+C- Districts	103	20
(CT) _w +C _w -	0	0
(CT) _m +C _m -	2	0
(CT) _e +C _e -	0	0
Lower than average percent of contract teachers (CT-) and higher than average ASER capacities rates (C+)		
All (CT)-C+ Districts	135	26
(CT) _w -C _w +	1	0
(CT) _m -C _m +	0	0
(CT) _e -C _e +	0	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics and map generated by author

Section 10.5.3 on multi-teacher schools with a female teacher showed a surprising degree of tightness of fit between student outcomes and a high degree of state boundedness. As such, the issue appears to be among the most decisive factors with

regards to student outcomes rates tested in this research. This again lends support the larger finding that the relationship between social inequalities and educational outcomes in India (in this case teacher gender) can lead to opposing outcomes given regional differences in both local contexts, and given the state boundedness of the issue, state policy which either weakens or exacerbates social inequalities. This gives support to Myrdal's conception of the importance of the state in addressing social inequalities (Research Questions 3.7 and 3.8), and also a rare example of circular causation in the education sector as inequality, state policy, and education outcomes all appear to be aligned in the similar directions.

The relationship between TPRs and student outcomes, like the teacher gender factor above, also showed a strong and consistent relationship between higher TPRs and higher student outcome rates and visa versa with little domestic regional variation. This suggests that India would be wise to put more resources into lowering TPRs and thus investing in quantitative numbers of teachers. In the same section, the chapter also examined the difference between government and private TPR rates and student outcomes. These relationships varied substantially by state with exceptionally wide gulfs in the struggling state of Bihar and less so in Maharashtra and Andhra Pradesh. Finally, underscoring the need for more empirical evidence on the relationship between contract teachers and student outcomes, this research was unable to provide meaningful support for the impact on para teachers on student outcomes given the lack of spatial difference in the section on contract teachers at the district level for which data is available.

On the larger level, in reference to Research Question 2, over whether Myrdal's policy suggestions in the educational sector have been addressed by the states with regards to teachers and the teaching profession, it can be definitively answered that India had neither hired the army of teachers Myrdal saw as needed (given the generally very high TPRs and low teachers per 100k); trained them adequately (given the low student achievement rates in general); or allotted them a higher social status or professionalism (based on the persistence of teacher absenteeism and low pay). With regards to Research Question 2.2, there is no readily available qualitative data on the teaching profession or of teacher training with the exception of a discussion of the policies themselves at the

national level. Thus, the collection of more qualitative data could be useful for future evaluations. As for Research Question 2.4 on whether India has prioritized teacher training, the most vibrant debate on the topic is whether the state should rely on completely (or nearly completely untrained teachers). This is hardly the type of discussion a high functioning educational system would be having. Despite these, unfortunate conclusions however, the chapter also pointed to regions and states in India that have gone farther in addressing teacher related issues than others.

Chapter 11 Spatial Relationships between Educational Infrastructure, Schools, Facilities, and Educational Outcomes

11.1 Introduction

Despite the policy priority for expanding educational infrastructure in the immediate Indian post-independence period, school construction was not a major feature of Myrdal's analysis of the problems facing the South Asian educational system. In fact, as this chapter will show, much of what he wrote about the quantitative and even qualitative condition of the physical facilities was that concentrating on facilities was something of a red herring compared to the importance he put on increasing the number and quality of teachers as described in the previous chapter. Although Myrdal did not concentrate on infrastructure, looking at the state of educational infrastructure is itself a useful conduit by which to assess the state's ability to implement the educational policies and programs that the Indian government set for itself and to test Myrdal's concept of the 'soft state'. Methodically, this task is not as difficult as attempting to assess the teacher related issues because there is much more data on educational facilities and educational resources at the Indian district level than there is for teacher related issues. By overlaying the educational facility data with student outcome data collected by the ASER NGO from Chapter 8, it is possible to show that the quantity and quality of facilities do not appear to be a critical factor in determining student outcomes. In addition, this chapter concludes that the relationship between physical educational infrastructure and student outcomes vary considerably from region to region and from state to state, but again, much less than in other sectors.

In terms of this chapter's relationship to the larger Research Questions and its organization, it fulfills a similar function as the two previous chapters: first outlining Myrdal's specific goals for the educational sector (in this case physical infrastructure) against some of the main arguments in the subsequent discourse to Research Question 2. Research Question 3.10 is answered in the second half of the chapter

11.2 Myrdal and Subsequent Scholarship on the Quantitative Expansion of Primary Schools in India

Following decolonization, the lion's share of the educational budget for basic skills was allotted to the expansion of access to primary schooling. This overarching policy goal was articulated in the aforementioned Karachi Plan of 1959. Myrdal also makes it clear that that purgative of the state was to expand access to a Western-type of children's education as the primary policy objective in the immediate post-colonial state:

"There has been a tendency in all the South Asian countries to think primarily in terms of quantitative targets, such as the number of pupils enrolled in a certain category of schools, and less often in terms of qualitative improvements. All these countries have attached great importance to raising the literacy rate of their populations. To achieve this objective, they have relied almost exclusively on an increase in primary school enrollment; adult education has been given a relatively low priority. The Indian Constitution of 1950 bravely stipulated that within ten years time, compulsory, free education should be the rule for children up to 14 years of age. In 1951 the Indonesian government set as its goal universal elementary schooling by 1961. The other countries did not make such explicit commitments, but there is no doubt that their goal was, and is, to increase the elementary education substantially and as rapidly as possible. In the so-called Karachi Plan of 1959, the ministers of education of the Asian member states of UNESCO agreed on the provision of not less than seven years of compulsory, universal, and free schooling as a target for 1980" (Myrdal 1968, p. 1658).

On this policy, Myrdal is uncharacteristically complimentary of the Southern Asian State and called its efforts to build schools and expand access to basic education in remote areas as "valiant" (Myrdal, 1968, p. 1809). Myrdal adds that this goal of expanded access to education was an component of development, at least rhetorically. He also suggests that the quantitative expansion of the inherited education system was also the policy option of least institutional resistance-- it did not require taking on entrenched interests and institutional conservatives both in the educational sector and in the greater society (Myrdal 1968 p.1685). As such, the radical reformist elements in the plan were gradually diluted of their most modernizing components in favor of a simple quantitative expansion of schools and teacher hiring (Myrdal, 1968, p. 1685)--consistent with the Myrdal's conception of the 'soft

state'. However, while progress has been made, in Section 11.4, it is shown that the Indian state has not been able to meet even this relatively modest policy goal of school building.

Although he was impressed by the attention given to the quantitative expansion of primary education, Myrdal also saw that secondary and tertiary education were being expanded more rapidly than necessary, largely due on the pressure from the upper classes who benefited from increased government resources dedicated higher education. Instead, Myrdal suggested that more attention and resources should instead be placed on a reforming the primary education system; adult and vocational training; training teachers to the point to which he suggested that expanding a broken system would do little good:

"It would appear more justifiable to halt the increase in, or even to contract, enrollment in the secondary and tertiary schools. The enormous amount of mis-education at these levels is caused not only by the scarcity of properly trained teachers, and generally low quality standards, but by the wrong orientation of schooling" (Myrdal, 1968 p. 1816, italics in original).

Myrdal was not alone among his contemporaries in the development community that expansion of an unreformed education system was a policy mistake. He cites similar conclusions made by the Indian Educational Commission, and UNESCO that were concerned with the "delusion of quality as result of the rapid expansion" (Myrdal, 1968 p. 1815). He also sides with a The World Confederation of Organizations of the Teaching Profession (WCOTP) who added that the rapid expansion of an unreformed educational system had already resulted in a host of maladies including: poorly trained and poorly paid teachers; overcrowding; shortened school days; weak curriculum development; and a dearth of educational materials (WCOTP, 1962). Myrdal feared that the overextension of an unreformed and underfunded primary school education system would eventually lead to exacerbated geographic inequality of educational opportunity between urban and rural areas (Myrdal, 1968 p. 1816). This fear was consistent with his larger conception of the geographic aspects of his cumulative and circular causation model.

11.2.1 Myrdal on Facilities and Educational Infrastructure

In addition to the issues of qualitative and quantitative expansion of the educational system, Myrdal also had much to say regarding the facilities and services needed in the schools in order to implement the most basic of modern teaching pedagogies. Looking at the schools in the region at the time, he was surprised at the lack of educational teaching materials writing,

“that textbooks, blackboards and writing slates were often lacking, and that in general “conditions such as these are not conducive to the use of effective teaching methods, even where the quality of teachers high,” (Myrdal, 1968 p. 1729) and later, “The availability of all kinds of teaching aids is limited everywhere in South Asia; the situation is worse in the poorest countries, and in all countries in the rural districts” (Myrdal, 1968 p. 1732).

Also on the topic, he found that despite claims that universal education was free, this did not account for private costs of basic educational equipment,

“[in the educational system] social services as school transport and school midday meals are not generally provided. In the rural districts the low standards of schools and long distances may be deterrents to enrollment and regular attendance... Proper equipment is usually lacking; the classes are frequently overcrowded; and the teachers are often uninspiring and indifferent and may have been poorly trained” (Myrdal, 1968 p. 1727).

Finally, Myrdal’s general view of the importance of qualitative over quantitative improvement in the educational system was reflected in the statistics being collected by the government on the quality of the schools then being built as shown in the quote below.

“There are no statistics about the quantity and quality of the school buildings and other physical facilities in South Asian primary schools. Nor should we attach too much importance to school buildings, particularly in rural districts. As Nehru and others have pointed out, with the warm climate... it would often be sufficient to set off school premises and provide simple shelter from the sun and rain... Where school buildings are necessary, they can be constructed from local materials and should not cost very much. In most countries the governments have appealed to the local community to take over the burden of building schools, sometimes with a small subsidy” (Myrdal, 1968 p. 1729).

Subsequent to the publication of *Asian Drama*, there is more access to the data on the availability or unavailability of basic educational tools and equipment in India with much of

it collected and available at the district level. In the last subsections of this chapter, this data is analyzed to assess the impact of availability of educational facilities on student outcomes. Interestingly, the Indian state collects qualitative data on the condition of both schools and classrooms, although no such data exists on the quality of the teachers or the quality of the education provided!

11.2.2 Quantitative Expansion of Primary Schools Since 1968

Myrdal's understanding of both the benefits and pitfalls of the policy of quantitative expansion of access to primary school have largely come to fruition. The international community and Southern Asian countries themselves have prioritized school attendance over results-based indicators. This quantitative policy preference is regularly articulated by the international development community in the form of MDG 2 and the Dakar declaration, in the government policies, and budgets, as well as the larger amounts of quantitative data collected by the Indian government. A priority for quantitative expansion of education system is seen in the World Educational Forum's goals to expand early childhood care and education, youth primary education, youth and adult literacy and gender, whereas the 6th and final goal of the agenda is to improve the quality of education (UNESCO, 2004).

With regards to India in particular, Govinda's (2007) case study on the country's progress under Education for All campaign (EFA) concluded that the Indian government has been focused almost exclusively on expanding access to primary education. However, this supply-side approach had ignored qualitative issues, and has subsequently led to, "critical issues of regional imbalances and social inequality" (p.30), two issues Myrdal understood to be vitally important to the improvement of the educational systems in particular and to development. Furthermore, Govinda (2007) concluded that increased attention needed to be given to,

"the [educational] delivery system; strengthening the management of schools and teaching-learning processes in the classroom, and their impact on learning levels...it is clear that states which have addressed such issues in the last decade have registered greater progress than those which have invested their attention only on reporting quantitative progress by utilizing resource provide by the Center. The two have to go hand in hand; quantitative progress without attending to processes and

outcomes would only lead to unviable and unproductive structures in the long run, eventually burdening the poor and increasingly inequalities” (Govinda, 2007 p.30).

The quote above largely vindicates Myrdal’s understanding of the need to balance quantitative and qualitative aspects of the educational sector, as well his prediction that the failure to do so would likely result in spatial and social inequalities of educational achievement.

11.2.3 Expansion of Access to the Disadvantaged

In addition to the expansion of educational access in general, the importance of expanding educational access to the more disadvantaged of society, especially women and the poor generally, and to SC and ST groups in South Asia have also been internalized by the developmental community and into the rhetoric of the South Asian political elite. The Govinda (2007) case study on India showed that since the 1986 National Policy on Education, there has been a genuine drive to improve the weak educational state of the Indian educational system. However, these general improvements have not been realized equally throughout the country concluding, “several parts of the country are on the threshold of achieving universal enrolment of children in primary schools, even while a few regions continue to be in a near crisis condition” (Myrdal, 1968 p. 3).

The policy directive to boost the enrollment figures has encouraged state and local governments to expand farther into the hinterland to provide primary school access to the most remote and disadvantaged groups under the Education Guarantee Scheme (EGS) and the Shiksha Karmi Schools. However, in this rush to expand educational access governments in India have often turned to ‘alternative schools’ of very low quality in terms of construction and teacher quality and that, “the lowest quality [is going to] those who should get the best” (Roy, Lourdes, & Khan, 2003, p. 3). The inequalities in educational access between the (already weak) normal schools and the even weaker “alternative school’s have also been criticized at length by Druze and Sen (2002); Gosh (2002), LeClercq (2003); Kumar, Manisha & Saxena (2001).

11.2.4 Continued Focus on Quantitative School Expansion

Like Myrdal thirty years earlier, Chandramohan (2002) has taken a critical eye to the government's quantitative focus in on the expansion of access to primary education. However, unlike Myrdal, Chandramohan's focus is on the importance of budgeting and on the quantitative expansion of the primary system rather than a qualitative improvement of the existing system, or institutional improvements (such as teacher training) which Myrdal found to be essential. Furthermore, Chandramohan's discussion on educational prioritization and funding is constrained by a thematic concentration focused on the quantitative expansion of the primary sector and the need for more basic education in a zero-sum completion for government resources. Chandramohan's discussion of the need for changes is appropriately critical, but it pales in comparison in the scale of reform needed found in Myrdal's earlier study. It is also worth noting that his critique on the Indian education system shares an appreciation of the multifaceted strategy to education reform similar to Myrdal's circular causation, as well as the need to recommit resources on expanding basic education over expanding elite tertiary schools. However, he simultaneously adds that the reform is only possible if quantitative budget expenditure is restricted. Chandramohan's comments also do not suggest any qualitative improvements of the system, or an expansion of non-formal education techniques that Myrdal offered. Nor is there any suggestion that government should focus on primary education in areas underperforming regions with particular attention.

11.2.5 Lessons from Northeast Asia

It is also instructive to look to the example set by the northeast Asian states' as they reformed their education systems into the high achieving models they have recently become. A 1994 Asian Development Bank report on the role of education in the East Asian Economic growth model, found that there is a, "robust statistical association between primary level enrollment rates and subsequent high growth" (ADB, 1994, p. 23). The report adds credence to idea that universal education is a requisite to all for the high-economic growth by showing that in the NIE economies primary school enrollments by the 1960s had already reached nearly 100 percent. In contrast to these high primary school numbers, the educational planners in NIE countries, the report adds, consciously kept secondary and

tertiary education enrollment rates much lower at between four and ten percent similar to those found in developing Asian countries currently. Only gradually did they raise enrolment rates in government tertiary and secondary schools commensurate with subsequent higher per-capita GDP growth rates (ADB, 1994, p. 6). This dogged focus on the primary sector, even to the detriment of post-basic education in the very successful economies of Northeast Asia, largely vindicates Myrdal's unorthodox suggestion that secondary and tertiary education should not be expanded until universal primary education had been achieved rooted in budgetary, bureaucratic, and egalitarian concerns.

11.2.6 Facilities and Technologies

The policy to expand quantitatively the number of schools has also masked the quality of the facilities being built. According to Govinda (2007),

“one-fourth of the total number of primary schools in the country are very small with only one teacher and/or one classroom and generally located in small habitations. It is in this context that modifying traditional distance and population norms and opening schools in small habitations has yielded positive results by bringing in more children to school. But building small schools also raises the question of their long-term viability as they are also invariably under-equipped. Field observations have also showed that if proper care is not taken, this may also lead to legitimization of social divisions through schooling, as often such small habitations are inhabited by marginalized groups living on the fringes of the main village with a full-fledged school” (Govinda, 2007, p. 17).

In the quote above one can see that concentrating primarily on the quantitative expansion of schools, masks and likely exacerbates social and spatial inequalities while masquerading as progress.”

11.3 Spatial Relationships between School Facilities and Student Outcomes

The remainder of this chapter tests Myrdal's views on the importance (or unimportance as it turns out) of school and school facilities and their relationship to educational outcomes using a spatial analysis technique. To some extent, many of these factors are not dissimilar to the factors in the previous chapter, and address the same

research questions. In particular, this section examines the following factors at the district level:

- Schools per 100,000 population;
- Primary schools per 100,000 population;
- Primary schools with less than 50 students;
- Percentage of schools built since 2003;
- Percentage of schools in good condition;
- Percentage of schools with blackboards;
- Percentage of schools with toilets;
- Percentage of government schools with kitchen sheds

11.3.1 Spatial Relationship Between Primary Schools per 100,000 Population (*E*) and Average ASER Capabilities Rates (*C*)

The schools per 100,000 population map in Figure 11.1, like teachers per 100,000 population (Section 10.5.1), is a useful indicator by which the degree to which the states have been able to quantitatively expand the access to schools at least at the district level can be assessed. The low numbers of both hot and cold spots in Figure 11.1 shows that there is higher degree of equity in terms of access to schools in India than there are in the student outcomes. This suggests that for primary schools a more uniform basic minimum number of schools per 100,000 populations has largely been met—at least at the district level. It is likely, however, that access to schools below the sub-district level is almost certainly more unequally distributed.

Spatially, the hotspots in the schools per 100,000-population map are more scattered and are both less regionally differentiated than the teachers per 100,000 map. This shows evidence of the impact that the infrastructure policy focus at the both the national and international level have had in reaching equity as described in the first section of this chapter. What hotspots there are occur in states with very different circumstances. First, the strongest hotspots in terms of intensity and geographical area occur in a loose cluster of states in northern Andhra Pradesh, southern Chhattisgarh, and the far eastern districts of Maharashtra. A second less geographically wide, but more intense cluster

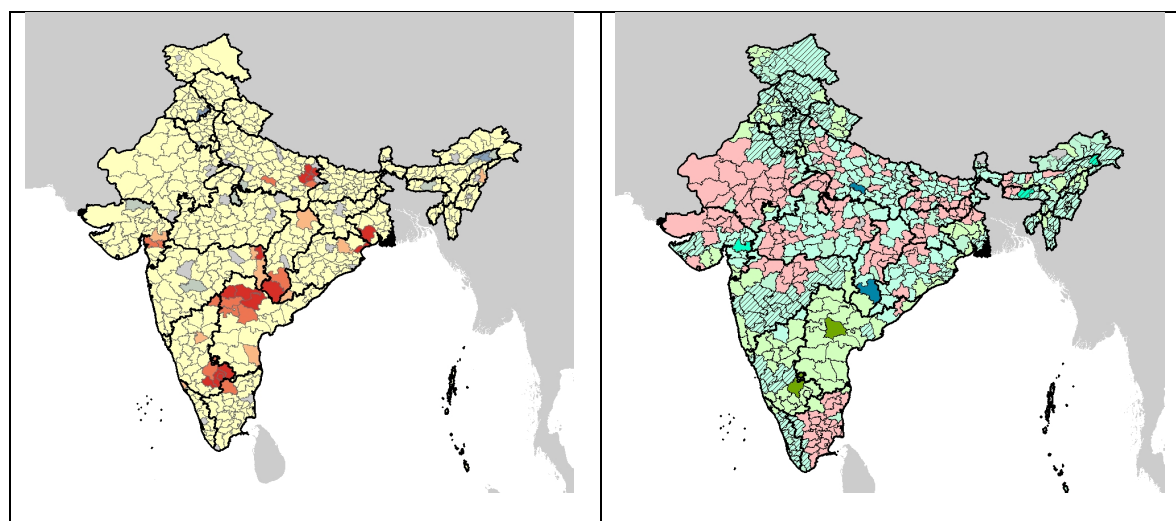
occurs in southwestern corner of Karnataka around Bangalore, and to a much lesser extent in eastern Uttar Pradesh, and western Gujarat. The two small cold spots occur in a small cluster in northeastern Assam and in the southwestern corner of Punjab.

Looking at the overlapping map in Figure 11.1, there is a few statistically significant overlapping districts in the map than in any of the classifications again attesting to the relative uniformity of school distribution across India. The resulting checkerboard map of different classifications is most clearly evident in the mix of *E-C-* districts (lower than average schools per 100,000 and lower than average capability rates), and *E+C-* classified districts (higher than average schools per 100,000 population and lower than average outcomes) that occur throughout much of the low educationally performing states of Madhya Pradesh, Uttar Pradesh, Jharkhand, Odisha, and Chhattisgarh. There is a similar checkerboard of *E+C+* and *E-C+* classified districts in the higher educationally achieving states in the south, northeast, and far north. Only in Andhra Pradesh is there see anything approaching state saturation of *E+C+* districts, and only in Rajasthan and Tamil Nadu is there significant state saturation of *E-C-* classified districts.

In the states closest to reaching universal student basic skills competence in Kerala, Haryana, Mizoram, and Manipur, and to a lesser extent Haryana, there is some state saturation of higher performance matched with *fewer* than average schools per-capita. Although, there are no overlapping districts in these states, this finding gives some evidence as to the relative irrelevance of quantitatively expanding schools as a means of improving outcomes. On a more positive note, the relative spatial equity in schools per 100,000 population does show that the state and the international community are, at least to some degree, capable of achieving their educational policy aims.

Compared to the total number of schools per 100,000 populations, the number of primary schools per 100,000 population in Figure 11.2 below shows even fewer and smaller hot and cold spots of less intensity and even fewer overlapping districts than the total number of schools map. The more equal access to schools as determined by schools per 100,000 population by definition lowers the absolute value of the z-scores in the hotspot map which, in turn, limits in all the number in number of significant overlapping districts in every classification to combined total of three.

Figure 11.1 (left) Getis-Ord G_i^* hotspot of schools per 100,000 population (E); and (right) overlay map with ASER achievement rates hotspots (C)



Higher than average schools per 100,000 population ($E+$) and higher than average ASER capacities rates ($C+$)

Classification	No. of Districts	% of all Districts
All $E+C+$ Districts	101	19
E_w+C_w+	0	0
E_m+C_m+	2	0
E_e+C_e+	0	0
lower than average schools per 100,000 population ($E-$) and lower than average ASER capacities rates ($C-$)		
All $E-C-$ Districts	149	28
E_w-C_w-	0	0
E_m-C_m-	0	0
E_e-C_e-	0	0
Higher than average schools per 100,000 population ($E+$) and lower than average ASER capacities rates ($C-$)		
All $E+C-$ Districts	135	25
E_w+C_w-	1	0
E_m+C_m-	2	0
E_e+C_e-	0	0
Lower than average schools per 100,000 population ($E-$) and higher than average ASER capacities rates ($C+$)		

All E-C+ Districts	150	28
E _w -C _w +	2	0
E _m -C _m +	0	0
E _e -C _e +	0	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

With reference to Research Question 3.10.1, access to primary schools per 100,000 population is not a factor that strongly influences regional differences in ASER capabilities scores. That is not to say that the number of schools is adequate or inadequate, but just that there is a distinct lack of spatial differentiation between and within states.

Looking at the overlay map in Figure 11.2 there is a complex geography of the unclassified districts. The green $Y+C+$ districts of higher number of schools per 100,000 population and higher ASER capability rates are almost exclusively a southern phenomenon. Andhra Pradesh and southern Karnataka are both nearly saturated in $Y+C+$ classified districts. The higher number of schools per 100,000 population districts exist across much of Andhra Pradesh may have some association with raising capabilities outcomes in the state, however the lack of overlapping districts does not give strong evidence to this possibility.

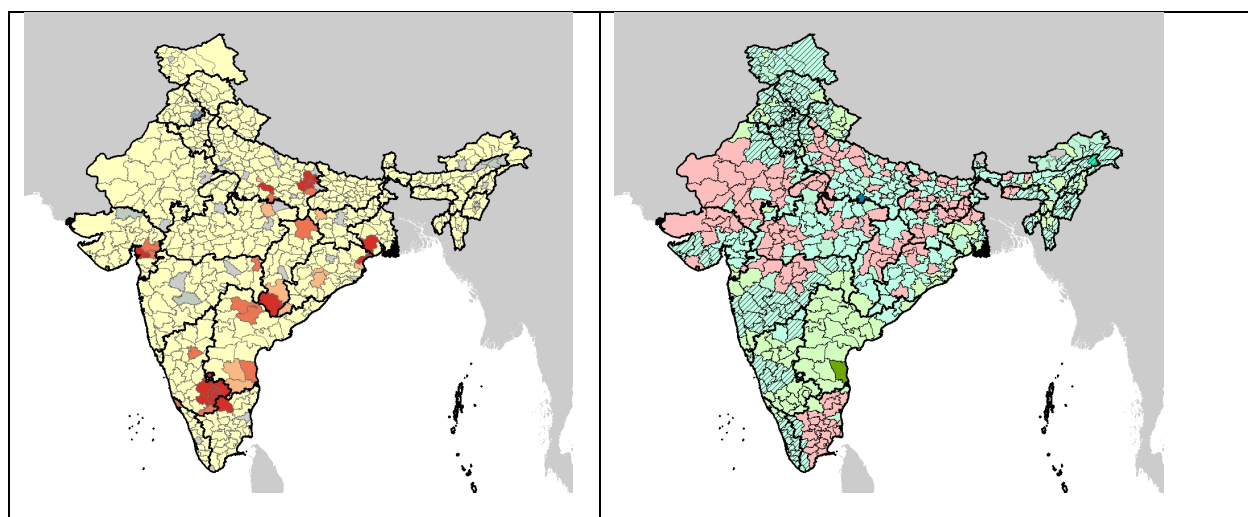
11.3.2 Spatial Relationship Between Percentage of Schools with less than 50 Students Primary (U) and Average ASER Capabilities Rates

As shown in Sections 10.9 and 10.10 in the previous chapter, TPRs have a strong spatial relationship with higher and lower ASER capability scores. This subsection looks at the similar issue of school size by looking at the hotspot and overlay map of the percentage of schools with fewer students and capabilities rates. Doing this it is possible to see similarly strong evidence of the link between school size and outcomes. The hotspot map in Figure 11.3 shows a high number of strong intensity hot and cold spots suggesting large spatial differences in the number of smaller schools in India. The map below also shows a complex geography of the issue with a wide mix of both state centric, regional, and cross-state hotspots. Strong state saturation and state boundedness can be seen in both the northern hot and cold spots in the northern and northeastern states, but there is see less

state saturation and more sub-state regionalism with less state boundedness in the southern states.

Spatially, the hotspots of smaller schools occur along western seaboard in Maharashtra; west and southwestern Karnataka, Goa, but are conspicuously absent for the most part in Kerala with the exception of Alappuzha and Pattanamtitta, Kottayam and Idukki districts in the south of the state. There are also more schools with less than fifty students along the Kerala border in Tamil Nadu and the northern border with Andhra Pradesh than along the northwestern coast.

Figure 11.2 (left) Getis-Ord G_i^* hotspot of primary schools per 100,000 population (E); and (right) overlay map with ASER achievement rates hotspots (C)



Higher than average primary school per 100,000 ($Y+$) and higher than average ASER capacities rates ($C+$)

Classification	No. of Districts	% of all Districts
All $Y+C+$ Districts	94	18
Y_w+C_w+	0	0
Y_m+C_m+	2	0
Y_e+C_e+	0	0
Lower than average primary school per 100,000 ($Y-$) and lower than average ASER capacities rates ($C-$)		
All $Y-C-$ Districts	152	28

$Y_w-C_w^-$	0	0
$Y_m-C_m^-$	0	0
$Y_e-C_e^-$	0	0
Higher than average primary school per 100,000 (Y+) and lower than average ASER capacities rates (C-)		
All Y+C- Districts	132	25
$Y_w+C_w^-$	0	0
$Y_m+C_m^-$	1	0
$Y_e+C_e^-$	0	0
Lower than average primary school per 100,000 (Y-) and higher than average ASER capacities rates (C+)		
All Y-C+ Districts	156	29
$Y_w-C_w^+$	1	0
$Y_m-C_m^+$	0	0
$Y_e-C_e^+$	0	0

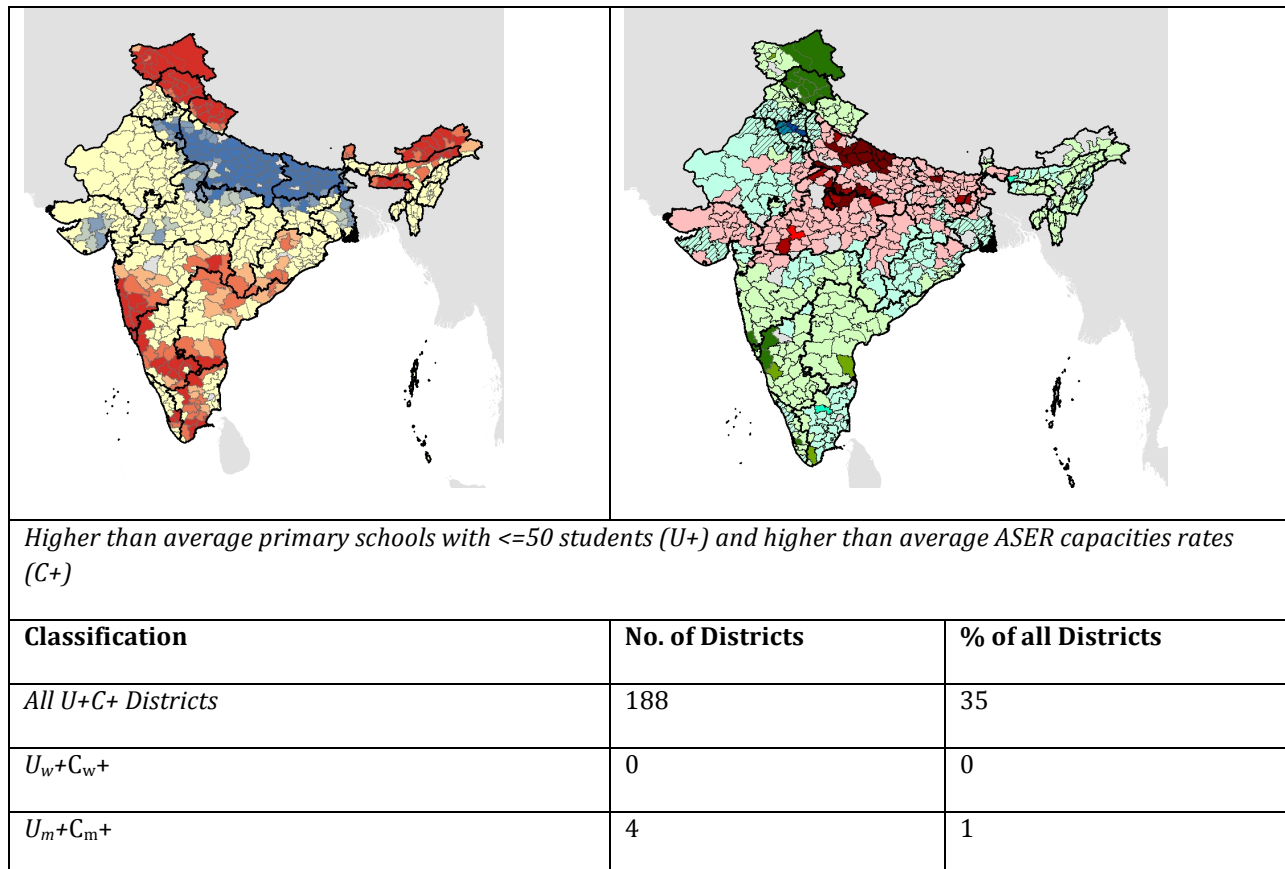
Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Every district of Jammu & Kashmir, Himachal Pradesh, and Uttaranchal are classified U_{e+} , but interestingly there is only one hotspots district in the otherwise unclassified Punjab. For their part, the northeastern states also show an unexpected geography with complete state saturation of hotspots in Meghalaya, near complete coverage in Arunachal Pradesh, and also along the bordering districts of Assam. This would suggest that the recent building boom in Arunachal Pradesh (Figure 11.6) has done an adequate job of keeping TPR rates low. Like the higher educationally high performing state of Kerala, in Punjab, there are also unclassified districts in the higher achieving northeast states of Mizoram, Manipur, Nagaland, and even Tripura. This implies that while the association between higher educational outcomes and schools with less than fifty students is strong, it does not occur in the highest achieving states in India.

In the overlay map in figure 11.3, one can see that there is very strong fit between higher student capabilities and schools with less than fifty students. The classification has 188 districts (35% of the total) and nineteen statistically significant overlapping hotspots,

fifteen of which are at most intense U_e+C_e+ level. Considering the intensity and high number of these intense overlapping districts, one should consider small schools to be an important factor for the higher educational outcomes. This is especially true for Himachal Pradesh, which accounts for nine of the fifteen U_e+C_e+ overlapping hotspots. This area also has a large and state centric cluster of overlapping U_e+C_e+ districts in Jammu & Kashmir, northwestern Karnataka (Uttar Kannand, Belgaum), in Southern Maharashtra (Sidhudurg), North Goa, and in southern Kerala (Kottavam). Compared to the strong clustering of the intense overlaps, the U_m+C_m+ overlapping districts are more distributed throughout the country with islands in Tirunelveli Kattabo, Tamil Nadu; and in Nellore, Andhra Pradesh and in Anantang, Kashmir. It is also noteworthy that none of the significantly overlapping districts occur in any of the northeastern states, which again suggests that the region has achieved its higher educational outcomes based, on what look to be, qualitative improvements.

Figure 11.3 (left) Getis-Ord G_i^* hotspot of percent of schools with less than fifty students (U); and (right) overlay map with ASER achievement rates hotspots (C)



U_e+C_e+	15	3
<i>Lower than average primary schools with ≤ 50 students (U-) and lower than average ASER capacities rates (C-)</i>		
<i>All U-C- Districts</i>	190	35
U_w-C_w-	1	0
U_m-C_m-	13	2
U_e-C_e-	17	3
<i>Higher than average primary schools with ≤ 50 students (U+) and lower than average ASER capacities rates (C-)</i>		
<i>All U+C- Districts</i>	93	17
U_w+C_w-	2	0
U_m+C_m-	0	0
U_e+C_e-	0	0
<i>Lower than average primary schools with ≤ 50 students (U-) and higher than average ASER capacities rates (C+)</i>		
<i>All U-C+ Districts</i>	71	13
U_w-C_w+	0	0
U_m-C_m+	2	0
U_e-C_e+	2	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

The relatively few $U-C+$ classified districts show districts with larger schools (in terms of student populations) but higher educational outcomes, and only occur in 71 districts and four significant overlaps, two of which are above the highest 2.58 std. dev. threshold. Notably all four overlapping districts are in Haryana. The two U_e-C_e+ adjacent districts both in Haryana (Jind and Sonapat) themselves border the two U_m-C_m+ districts in Hisar and Fatehabad. This suggests that Haryana may offer something of a model on how to keep basic skills rates high without the costs associated with keeping TPRs low.

Just as the $U-C+$ classification highlights the exceptional case of both Himachal Pradesh and Haryana, the $U-C-$ classification very clearly singles out the strong spatial correlation between high school populations and poor student achievements in Uttar

Pradesh and Madhya Pradesh. The expected combination of larger classes with weak scores also has a strong spatial correlation with 190 $U-C$ - (35% of all) districts. Of the seventeen U_e-C_e - districts, thirteen lay along the Uttar Pradesh- Nepal border. A second smaller cluster of poor performing districts occurs along the Uttar Pradesh border with Madhya Pradesh with seven U_e-C_e - districts, a U_m-C_m - district, and a single U_w-C_w - district in Dewas districts on the Madhya Pradesh side of the border. The final U_e-C_e - district is in Muzzaffarpur, Bihar.

11.3.3 Spatial Relationship Between New school construction since 2003 Hotspots (H) and Average ASER Capabilities Rates (C)

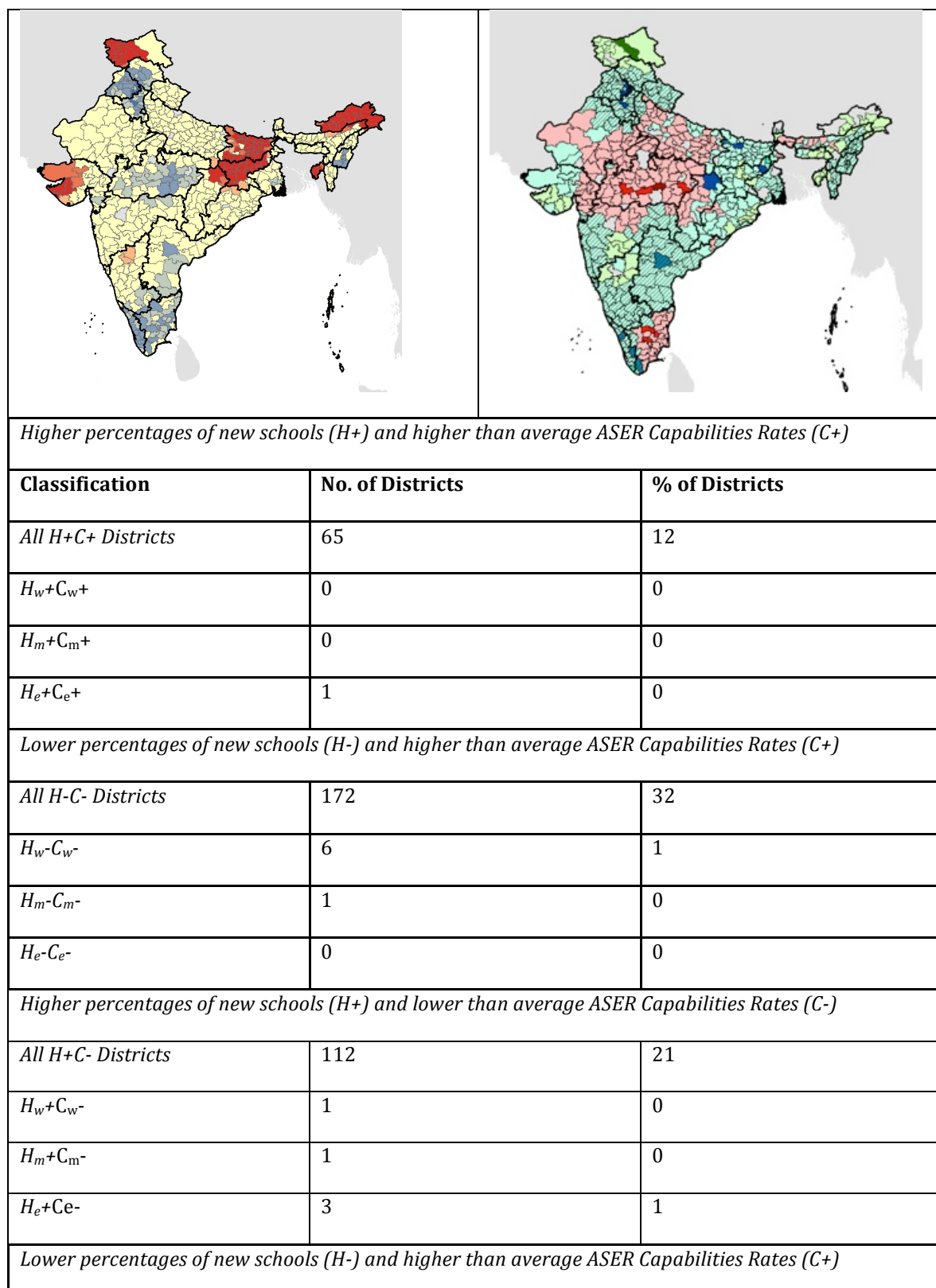
Changing gears slightly, the next four subsections examine the nature of new school construction in India as an attempt to test the states' ability to address the problems of the educational system. The first two maps in the series examine the spatial relationship between new school construction, classroom condition, and ASER capability rates, the next looks look at the relationship between new schools and classrooms in need of repair, classrooms with more than 50 students, and schools in good condition.

One simple way to test the commitment of state governments to improve educational access and scores is to identify where schools have recently been built between 2003-2011. The Getis-Ord G_i^* Hotspots map in Figure 11.4 shows the spatial distribution of the percentage of government schools opened between 2003 and 2011 as a percentage of the total number of schools in the district. The hot and cold spots in the map are particularly state bounded and state saturating. This may mean that state policies are key to determining school building patterns and differ widely between states. There are five clearly delineated hotspot clusters of districts of rapid recent school construction in Western Kashmir; Western Gujarat; Tripura; Arunachal Pradesh; and in all but five of the districts in Bihar and Jharkhand and adjacent districts in northern Odisha and Chhattisgarh. Of these the clusters, those in Jammu and Kashmir, Arunachal Pradesh, and Tripura all occur in areas with lower than average district populations (Figure 10.2), where as the clusters in Bihar, Jharkhand and Gujarat occur in some of the most populated parts of the country. Furthermore, the clusters is in Bihar, Jharkhand, Arunachal Pradesh, and Tripura, and to a lesser extent in Jammu & Kashmir, all show very strong state saturation as

well as clearly defined state boundedness with some spread into neighboring states. This strong border delimitation is particularly stark along the Bihar-Uttar Pradesh and Jharkhand-West Bengal borders which show very intense hotspots adjacent to unclassified areas across state borders. Furthermore, Gujarat also bucks the wider national trend of state saturation of recent school construction in that it has only one single cold spot in Navsari district.

The cold spots highlight those parts of India, which have lower than average percentages of new government schools as a percentage of total schools. These occur in more states than the hotspots in the same map, but are both less saturated and less intense. The cold spots are also more widely distributed than the hotspots and occur throughout the southern states from Southern Karnataka, Kerala, Tamil Nadu, and into much of central Andhra Pradesh. Although the widest geographical swath exists in the southern states, the highest number, and most intense cold spots occur in the northern states in eastern Punjab, northern Haryana, southern Himachal Pradesh, and in Manipur. Finally, there is also see a broad but weak cold spot across the breadth of Madhya Pradesh. In addition to the statistically significant hot and cold spots in the percentage of government schools having been built between 2003 and 2011, it is also worth noting the lack of discernable clusters of school building in the poorest performing states in Indian especially in Odisha, Rajasthan, Uttar Pradesh, or inland Maharashtra.

Figure 11.4 Getis-Ord G_i^* hotspot (left) and hotspot overlay map of government schools opened between 2003 and 2011 (H) and ASER achievement rates (right)



<i>All H-C+ Districts</i>	194	36
<i>H_w-C_w⁺</i>	1	0
<i>H_m-C_m⁺</i>	5	1
<i>H_e-C_e⁺</i>	3	1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Overlaying the hotspot map of new schools from Figure 11.4 with the average ASER achievement map several patterns emerge. First, that there are few statistically significant overlapping districts with a higher percentage of new schools and higher basic skill competency rates. Only one district (Kargil, Jammu & Kashmir) has significant overlaps, and only 65 (12%) of districts have both positive Z-scores in to 172 (32%) of districts that have negative Z-scores in both maps. Thus, the recent building boom of schools has not yet translated into higher ASER achievement rates, and by extension, building schools should only be seen as the first step in improving student outcomes.

The opposite classification of lower than average percentage of new government schools and lower than average schools capability rates (*H-C-*) is far more prevalent and occurs in in three distinct clusters across India. These can be considered areas that, for whatever reason, haven't attempted to improve their low student skill rates with significant school construction. Unsurprisingly this classification occurs in some of the most educationally stagnate parts of the country. Spatially, the largest of the three clusters spans a wide breath covering the low achieving central districts of Madhya Pradesh, Uttar Pradesh, as well as much of Rajasthan, the eastern half of Gujarat and much of Northern Maharashtra including a string of significant overlapping clustered districts in central Madhya Pradesh covering Dewas, Hoshangabad, and Dindori from Jabalpur (all *H_m-C_m-*) and Jabalpur. The second cluster occurs in Tamil Nadu, which has three significant overlapping districts, in Salem, Perambalur and Tiruchchirappalli districts, and follows the established pattern of similar classifications of districts occurring in Tamil Nadu and in the lower performing central states of India. The third *H-C-* cluster doesn't have any significant overlapping districts, and occurs in Northern West Bengal and Assam.

The more intuitive results of having a higher percentage of new government schools with lower than average C rates occurs more frequently with slightly more overlapping significant districts than the $H+C+$ classification. This classification locates districts, which have undergone a recent rapid school construction boom, but have not yet been able to match school construction with better ASER capability outcomes. The significant overlapping districts in his classification occur along both sides of the Jharkhand- Bihar hotspot cluster and in Surguja district in the far north of Chhattisgarh, while the lone H_w+C_w- in Sahigarh, Jharkhand. These districts should be seen as areas that have recently begun to take education more seriously, and have committed resources to school construction.

The final classification ($H-C+$) shows areas with low levels of construction of new schools and higher capability rates. These districts occur in the more firmly established educational areas in India with 194 (36% of all) districts. The classification also has the highest number of statistically significant overlapping districts found in the subsection with nine significant districts in the far south. Three of these significant districts are in Kerala, and the final is in Tirunelveli, Tamil Nadu. A second group of significant overlapping districts is in Punjab and, Haryana, which are part of a larger cluster extending into Himachal Pradesh, Uttarakhand, into the Haryana bordering districts of Rajasthan, and even in northeastern Uttar Pradesh. The third highest performing area in terms of occurs in the high performing northeastern states of Manipur, Nagaland, and Mizoram, and while these states are uniformly $H-C+$, none have statistically significant overlapping districts. Finally, Jammu & Kashmir has focused on recently expanding the number of schools, where as Andhra Pradesh has recently improved its educational outcomes without expanding the number of schools.

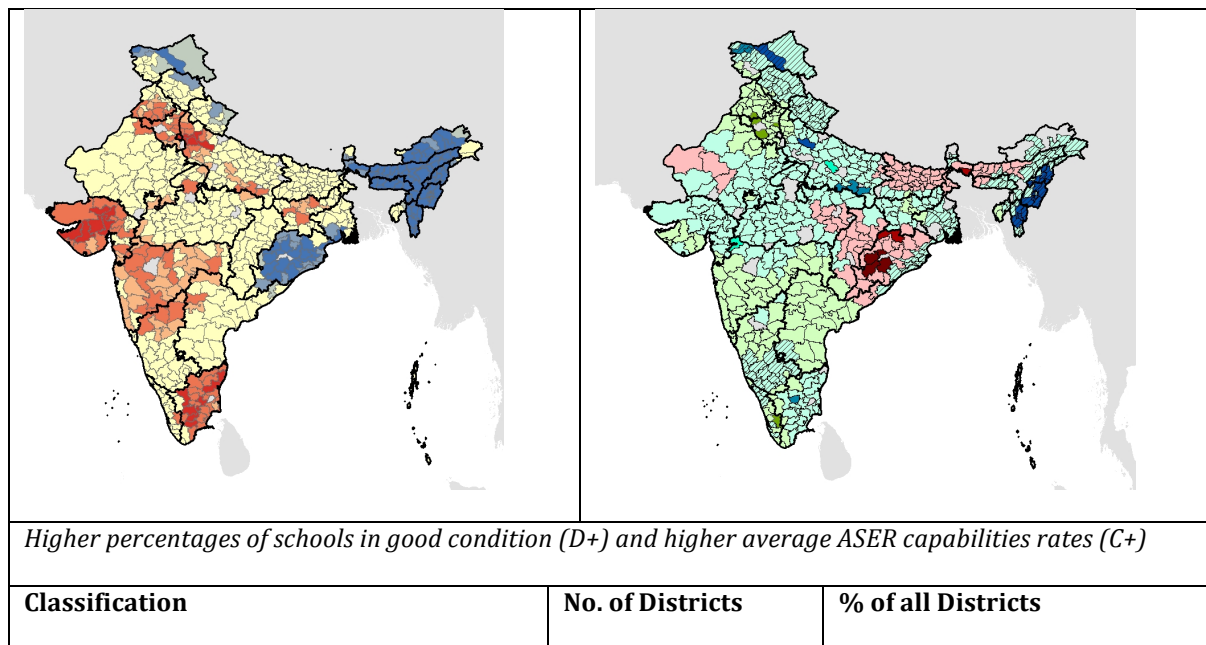
11.3.4 Spatial Relationship Between Percent of Primary Classrooms in Good Condition (D) and Average ASER Capabilities Rates (C)

The map in Figure 11.5 shows the hotspots of classrooms considered to be in good condition. Along with the other factors in this chapter, the percentage of primary classrooms in good condition can be used to assess the states' commitment to education as a whole, and to identify spatial inequalities on the issue between (and within) states. As

shown below, there is only a weak spatial connection between higher percentages of schools in good condition and higher ASER capabilities rates. This is especially true when compared to the teacher related issues discussed in the previous chapter.

The spatial distributions of the hotspots in Figure 11.5 show a wide variation of outcomes. There is tight state saturation and delineation in the case of Tamil Nadu, but also uncharacteristically in Gujarat, Maharashtra, and to a lesser extent Jharkhand – all states which have been shown in other issues to have more spatially inequality in educational features. The map also shows a clear state centric hotspot centered in Haryana spreading into the districts of all its neighboring state of Punjab, and into Uttar Pradesh especially in Ghaziabad, GBN, Bulandshahar, Budaun, and Jyotiba Nagar, and across the border in Hanumangarh, Rajasthan. In addition to this “greater Haryana” cluster of schools in good condition, there is also what appear to be spillover effects spreading southward from the Maharashtra border into northern Karnataka. There are also several small cluster and “island” clusters of schools in good condition along Madhya Pradesh’s shared borders with both Rajasthan and Uttar Pradesh. Even in the very low performing districts of Alirajpur and Barwani along the Gujarat border are both are classified as D_w+ .

Figure 11.5 (left) Getis-Ord G_i^* hotspot of percent of primary classrooms in good condition (D); and (right) overlay map with ASER achievement rates hotspots (C)



<i>All D+C+ Districts</i>	135	25
D_w+C_w+	0	0
D_m+C_m+	5	1
D_e+C_e+	0	0
<i>Lower percentages of schools in good condition (D-) and lower than average ASER Capabilities Rates (C-)</i>		
<i>All D-C- Districts</i>	92	17
D_w-C_w-	0	0
D_m-C_m-	2	0
D_e-C_e-	4	1
<i>Higher percentages of schools in good condition (D+) and lower than average ASER Capabilities Rates (C-)</i>		
<i>All D+C- Districts</i>	192	35
D_w+C_w-	2	0
D_m+C_m-	4	1
D_e+C_e-	1	0
<i>Lower percentages of schools in good condition (D-) and higher average ASER capabilities rates (C+)</i>		
<i>All D-C+ Districts</i>	122	23
D_w-C_w+	0	0
D_m-C_m+	2	0
D_e-C_e+	17	3

In Tamil Nadu , there are strong hotspots of schools in good condition across the state most notably in Kancheepuram and Viluppuram, Karur, Erode, Tiruppur, Dindigul, Madurai, and Virudhunagar districts (D_{e+}). Interestingly, these D_{e+} districts in the western part of the state all border against unclassified districts along the Kerala border. Together, this diverse geography on the topic weakens the argument that schools in good condition are necessary for districts to match the highest rates of student achievement.

Moving to the overlay map, the expected combination of a high percentage of schools in good condition and higher capabilities rates does not show a tight degree of fit.

The D_m+C_m+ classification covers 135 (or 35% of all) districts, and a paltry five statistically significantly overlapping hotspot districts, none of which are the most intense overlapping D_e+C_e+ level. All of the D_m+C_m+ districts are in Kerala. Additionally, the combination of lower than average schools in good physical condition and higher than average student achievement rates only occurs slightly fewer districts than the $D+C+$ districts. However unlike the previous classification there are many more (17) intense strong overlapping D_e-C_e+ districts found in four clusters around the country. The concentration of these significant overlapping districts reminds us again of the regional nature of educational issues and weakens universal claims as to which factors translate into better student skills outcomes. Second, this follows the logic that states with higher educational capabilities often also have more mature education infrastructure, which in turn logically makes maintenance more difficult. The relationship between a higher than average percentage of schools in good condition and lower student achievements rates is a rare occurrence, and accounts for only 17% of all districts with only six statistically significant overlapping districts. The bulk of the $D+C$ -classified districts occur in Odisha which, with the exception of Koch Bihar.

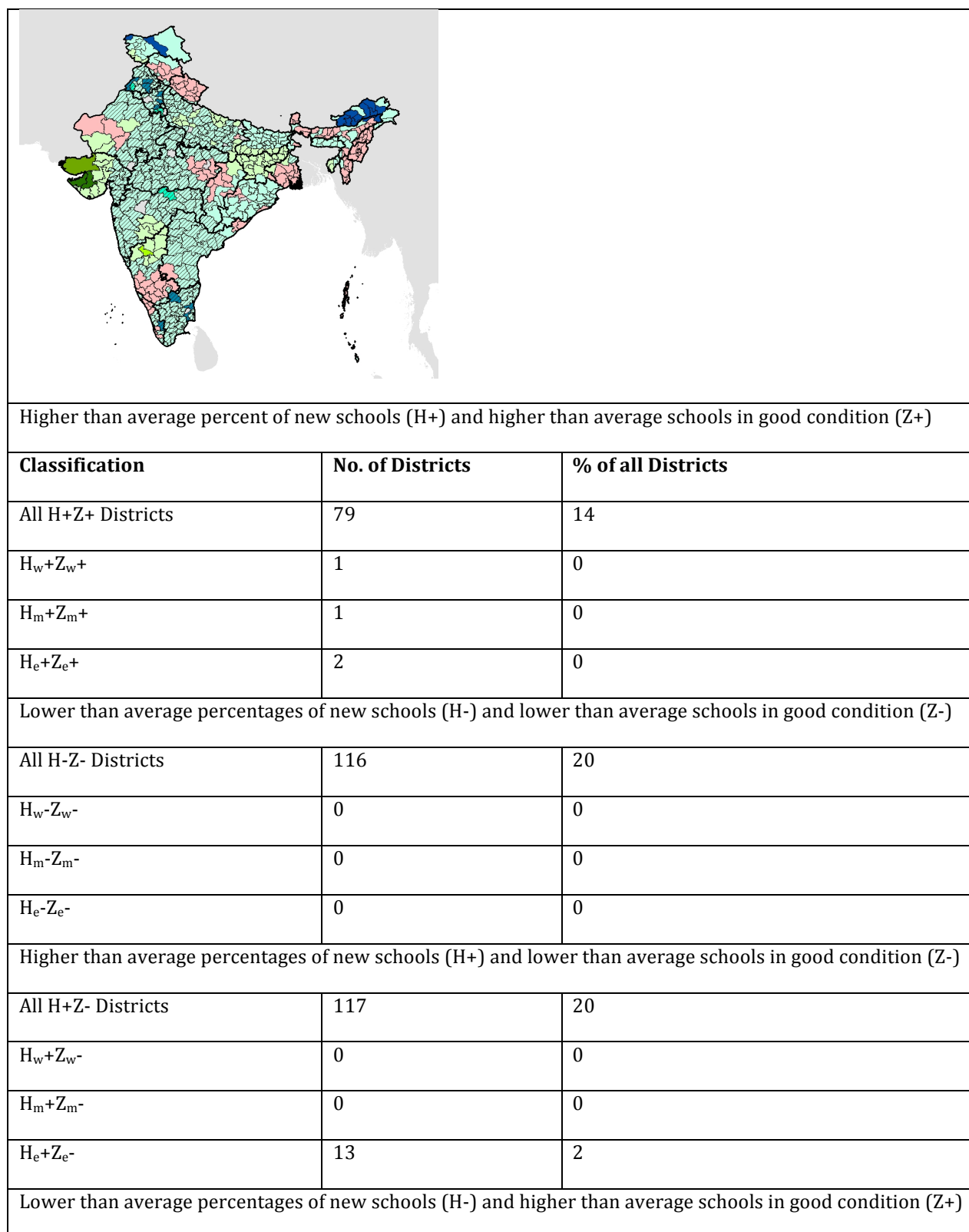
Finally, the $D+C-$ classification shows areas that have higher than average schools in good condition and higher than average capabilities scores. In are areas where the lower educational outcomes cannot logically, be attributed to lower percentages of schools in good condition. The $D+C-$ classification occurs in 35% of all districts, twice as many as those states in which lower scores are associated with a lower percentage of schools in good condition, though there is only one more significant overlapping district. Unlike the $D-C$ -classification, the significant overlapping districts in this classification are more dispersed. The only extreme districts occurs in Budaun in Uttar Pradesh, however Uttar Pradesh also has D_m+C_m- districts in adjoining Chitrakoot, Allahbad, and Mirzapur along the Uttar Pradesh-Madhya Pradesh border and a second isolated D_w+C_w- hotspot district in Unnao in the center of the state. The remaining overlapping districts in the classification occur in Nandurbar, Maharashtra (D_w+C_w-); and in the troubled three-state areas between Gujarat, Madhya Pradesh and northern Maharashtra; and a D_m+C_m- district in Namakkal, Tamil Nadu.

The imperative to increase quantitative access to schools, and the associated school construction boom, begs the important question as to the quality of the schools being built. The intuitive combination of a higher percentage of new schools and higher than average percentage of schools in good condition is a surprisingly rare occurrence and only exists in 79 (14% of all) districts and only statistically so in four overlapping districts. The two H_e+Z_e+ districts occur in neighboring districts in Western Gujarat in Jamnagar and Rajkot, and are adjacent to the single H_m+Z_m+ district in neighboring Kachchh, and a final H_w+Z_w+ hotspot in Bagalkot, Karnataka. Before praising the educational prowess of the Gujarat state government for rapidly building schools in good condition, it should be remembered from Section 9.5 that majority of the schools in the state are private schools.

The $H-Z-$ classified districts have both low percentages of school construction and low percentage of schools in good condition and only occur in 116 or 20% of all districts without any significant hotspots between. Logically, this classification shows that some districts and states that have better school maintenance schemes than the national average. These occur in both higher educationally achieving areas of the country in very different circumstances, specifically in nearly every high educational performing district in the small northeastern states of Mizoram, Manipur, and Nagaland as well as in all of the districts of Sikkim, Uttarakhand.

The combination of a high percentage of new schools and a lower number of schools in good condition is a good indicator to identify areas that are not building schools meant to last, or are not performing adequate maintenance. There are 117 districts (20%) with this classification. Similar to the previous map in Figure 11.5, the vast majority of most extreme statistically significant overlapping districts occur in a contiguous cluster centered in Arunachal Pradesh and northeastern Assam a state experiencing a rapid educational infrastructure boom, perhaps in response to conflicting territorial claims on the area from China.

Figure 11.6 Spatial overlay of schools opened between 2003 and 2011 (*H*) and schools in good condition (*Z*)



All H-Z+ Districts	268	46
H _w -Z _w +	4	1
H _m -Z _m +	10	2
H _e -Z _e +	0	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

The *H-Z+* classification of lower than average percentages of new schools but higher than average schools in good condition occurs in 268 (46%) districts. The classification is also the predominate classification of the four. This suggests more that established, less quantitatively growing school systems are also better able to maintain schools compared to districts that have had a recent school building boom. This is a shared classification in much of Kerala, especially in Idukki district (*H_m-Z_m+*), and throughout Tamil Nadu where there are three *H_m-Z_m+* districts in Darmapuri, and also in the neighboring coastal districts of Duddalore and Thanjavur.

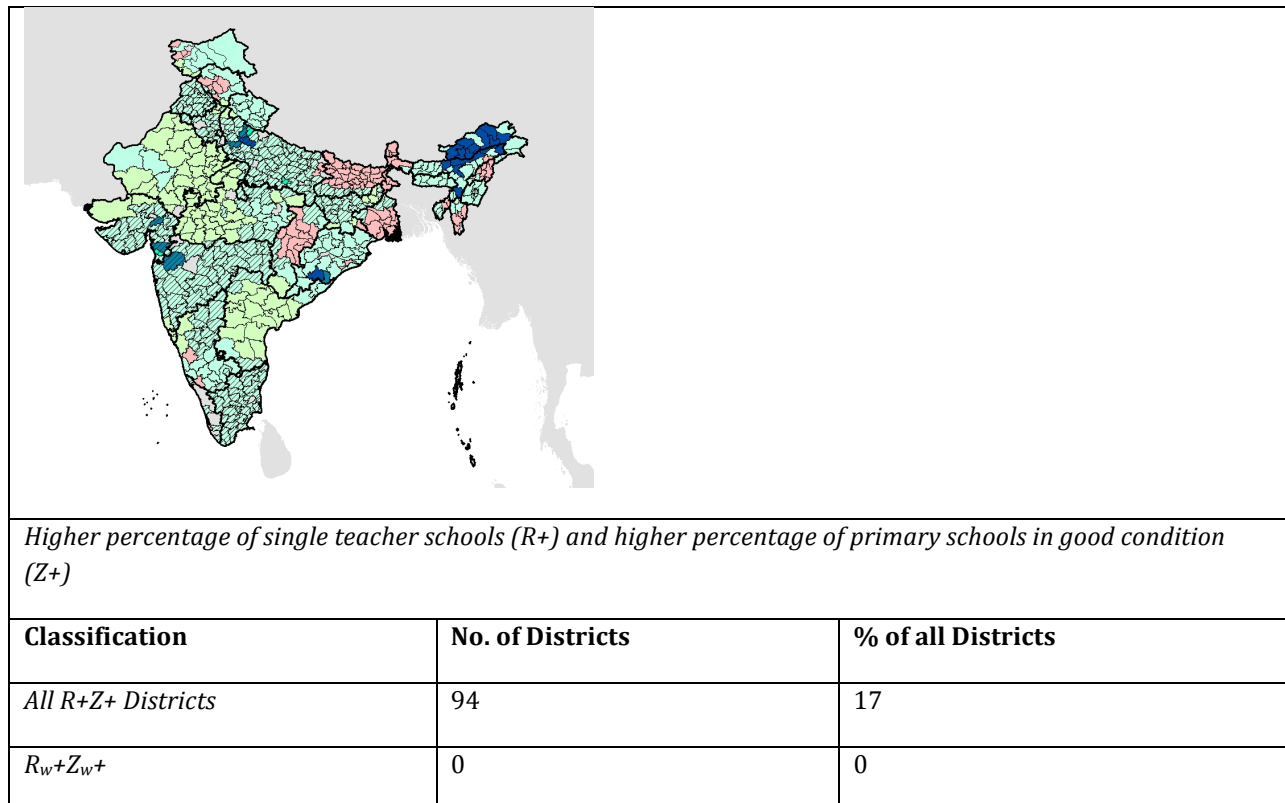
11.3.5 Spatial Overlay of the Percentage of government schools with a single teacher (*R*) and Schools in good condition Primary (*Z*)

Given the importance of single teacher schools for improving educational outcomes as discussed in the previous chapter, it is also worth looking at the spatial relationship between higher percentages of single teacher schools and schools in good condition to test whether the new schools being built recently are likely to be both single teacher and in bad physical condition. The combination of higher numbers of single teacher schools and a higher percentage of schools in good condition is a rare occurrence and only covers 94 districts (17%), of which none are statistically significant overlapping districts. Spatially from Figure 11.7, these occur in Andhra Pradesh, Rajasthan, and to a lesser extent in the northern coastal districts of Karnataka, as well as in some “island” scattered throughout India. The combination of a lower percentage of single teacher schools and lower percentage of schools in good condition is also rare, occurring in only 88 (16% of all) districts, again, without statistically significant overlapping districts. This weak relationship occurs in both high and low educationally achieving states of Bihar, Mizoram, Nagaland, West Bengal, Chhattisgarh, and to a lesser extent in Himachal Pradesh and

Karnataka. As the following two classifications show, it is far more likely that single teacher schools are also likely to be those in poor condition.

The $R+Z$ - classification of higher percentages of single teachers schools and primary schools in good condition is far common, covering 135 districts (24%). This is nearly double the previous two classifications combined. Spatially, all but two of the significant overlapping districts occur in Arunachal Pradesh and the Arunachal Pradesh bordering districts of northeastern Assam. The final classification of the opposite situation, lower percentage of single teacher schools and higher percentage of primary schools, also occurs in a wide variety of states from Tamil Nadu, to the few non-null districts in Kerala, but also across nearly all of Maharashtra, and Gujarat, Uttar Pradesh, Haryana, Punjab, and Jharkhand. Putting the classifications on this issue together it is possible to see that Myrdal's fear that single teacher schools are also likely to be the least maintained is held at least at the aggregated district level. However, this case does not seem to be tightly spatially correlated geographically.

Figure 11.7 Getis-Ord G_i^* hotspot (left) and hotspot overlay map of government schools with a single teachers (R) and primary schools in good condition (Z) (right)



$R_{m+}Z_{m+}$	0	0
$R_{e+}Z_{e+}$	0	0
<i>Lower percentages of single teacher schools (R-) and lower percentage of primary schools in good condition (Z-)</i>		
<i>All R-Z- Districts</i>	88	16
$R_{w-}Z_{w-}$	0	0
$R_{m-}Z_{m-}$	0	0
$R_{e-}Z_{e-}$	0	0
<i>Higher percentages of single teacher schools (R+) and lower percentage of primary schools in good condition (Z-)</i>		
<i>All R+Z- Districts</i>	135	24
$R_{w+}Z_{w-}$	0	0
$R_{m+}Z_{m-}$	1	0
$R_{e+}Z_{e-}$	17	3
<i>Lower percentages of single teacher schools (R-) and higher percentage of primary schools in good condition (Z+)</i>		
<i>All R-Z+ Districts</i>	244	43
$R_{w-}Z_{w+}$	3	1
$R_{m-}Z_{m+}$	5	1
$R_{e-}Z_{e+}$	1	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

At this point, the chapter moves from the relationship between school facilities to educational tools and student outcomes. In particular, these final sections look at the presence of common toilets, blackboards, and kitchen sheds and their relationship to student outcomes.

11.3.6 Spatial Relationship Between Spatial Overlay between Percentage of Common Toilets (L) and Average ASER Capabilities Rates (C)

Looking at the overlay map between the districts with higher than average percentage of schools with common and toilets and higher than average ASER capability

rates in Figure 11.8, one can see that there is considerable overlap in the two factors. The classification appears in fifteen overlapping districts including in eight L_e+C_e+ districts, by far the highest of any of the classifications on the issue. Spatially, the districts are widely distributed ranging, but Kerala contains all but one of the most intense L_e+C_e+ overlapping districts. Andhra Pradesh is another area that has higher percentages of schools with common toilets and higher scores. Andhra Pradesh also shows both state saturated and boundedness with the exception of the northernmost outlying districts of Vishakhapatnam and Vizianagaram, districts that have been shown to be consistent laggards in the state. Taken together, this shows that common toilets are more likely in states with more established educational systems in the country, and need not be a limiting factor for higher student outcomes. This does not however mean that having sex divided toilets are not needed, unlikely to encourage school attendance rates, or are otherwise an independently important issue, only that there is little evidence that percentage of shared toilets is not shown to be limiting factor in higher student capability scores at the national level.

The opposite L-C- classification of lower percentages of common toilets and lower than average ASER rates occur in slightly fewer districts than the $L+C+$ classification above, but also has one less overlapping significant districts. That said, however, the classification does stretch across a very wide, nearly continuous area across the central latitudes of the country from Gujarat in the west across much of Madhya Pradesh, Chhattisgarh, eastern Uttar Pradesh, and covers nearly all of Bihar and Jharkhand. For their part, the overlapping districts are clustered in far southeastern corner of Uttar Pradesh and in individual districts in Bihar and Jharkhand.

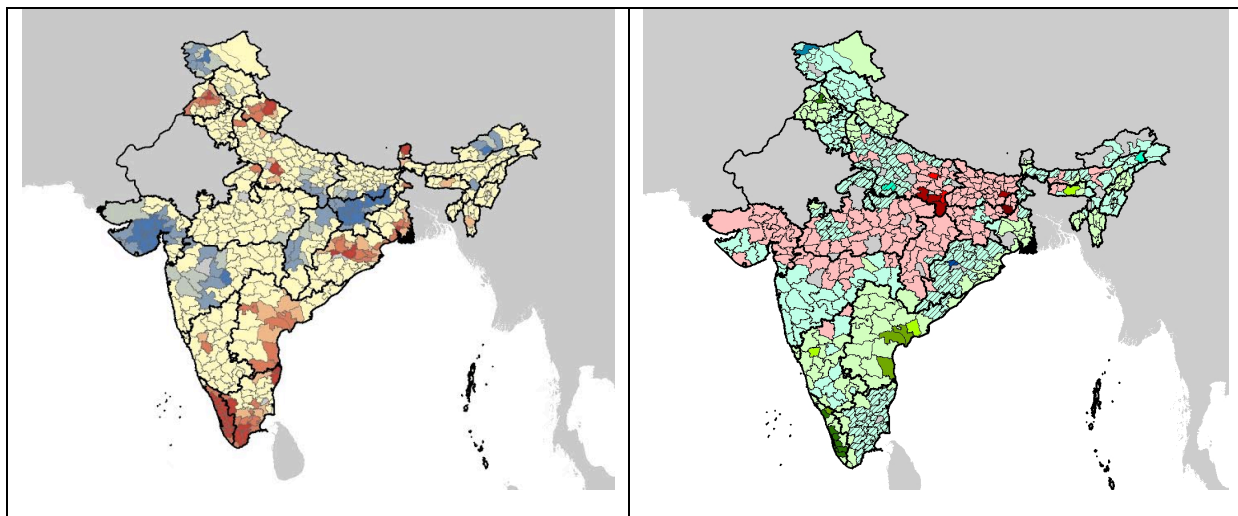
Compared to the $L+C+$ and L-C- districts above, the districts with higher percentages of common toilets and lower average ASER capability rates, and districts with lower percentages of common toilets and higher scores are both slightly less common in terms of the percentage of districts with that classification and the number of overlapping districts. From this, there is added evidence that the issue of common toilets does appear to have some impact on student outcomes, but still not enough to say definitively that the issue of common toilets should be considered among the most important factors for development. The first of the two, higher parentages of common toilets and lower scores occurs in 22%

of all districts with far less state saturation or boundedness than in other classifications above.

11.3.7 Spatial Relationship Between Percent of all schools with a blackboard 2011 (BB) and Average ASER Capabilities Rates (C)

Closely related to the construction of new schools, is the issue of equipping of those schools with basic teaching equipment such as blackboards. Blackboard schemes have been a well-publicized part of India's educational improvement plan and were mentioned by Myrdal in Section 11.2 as a fundamental teaching tool. This subsection shows, with some regional exceptions, that most schools in India lack this basic educational tool. Given the changes in educational technology that have occurred since the 1960s, most notably the use of personal computers, it would be instructional to conduct similar analysis on the availability of these classroom tools in India. However, this is not possible for several reasons. First, given the lack of low-technology educational tools, it is unlikely that more advanced tools are widely available in Indian classrooms, especially at the primary level. Secondly, the blackboard schemes themselves have been touted as a cornerstone project for the state. This alone makes testing their actual availability in schools a useful avenue to test the state's ability to meet its own goals. Finally, the issue of computers (or other advanced educational technology) are not included in the spatial analysis for the simple reason that the data at the district level was unavailable.

Figure 11.8 Getis-Ord G_i^* hotspot (left) and hotspot overlay map of percent of schools with common toilets (L) and ASER achievement rates (C) (right)



Higher than average percent of common toilets (L+) and higher than average ASER capabilities rates (C+)		
Classification	No. of Districts	% of all Districts
All L+C+ Districts	142	27
L _w +C _w +	3	1
L _m +C _m +	4	1
L _e +C _e +	8	2
Lower than average percent of common toilets (L-) and lower than average ASER capabilities rates (C-)		
All L-C- Districts	164	32
L _w -C _w -	2	0
L _m -C _m -	4	1
L _e -C _e -	1	0
Higher than average percent of common toilets (L+) and lower than average ASER capabilities rates (C-)		
All L+C Districts-	113	22
L _w +C _w -	1	0
L _m +C _m -	1	0
L _e +C _e -	0	0
Lower than average percent of common toilets (L-) and higher than average ASER capabilities rates (C+)		
All L-C+ Districts	100	19
L _w -C _w +	1	0
L _m -C _m +	0	0
L _e -C _e +	1	0

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

As show in Figure 11.9, the most intense hotspots showing high percentage of schools with blackboards occur in nearly every district of West Bengal, and to a lesser extent in bordering Assam, Meghalaya, and in the expanding educational facilities in Arunachal Pradesh. Outside of this northeastern cluster, there are weaker clusters in both size and intensity in Uttar Pradesh and Uttarakhand in the north. There are also BB_m+ classified districts around the eastern part of Madhya Pradesh and in the bordering

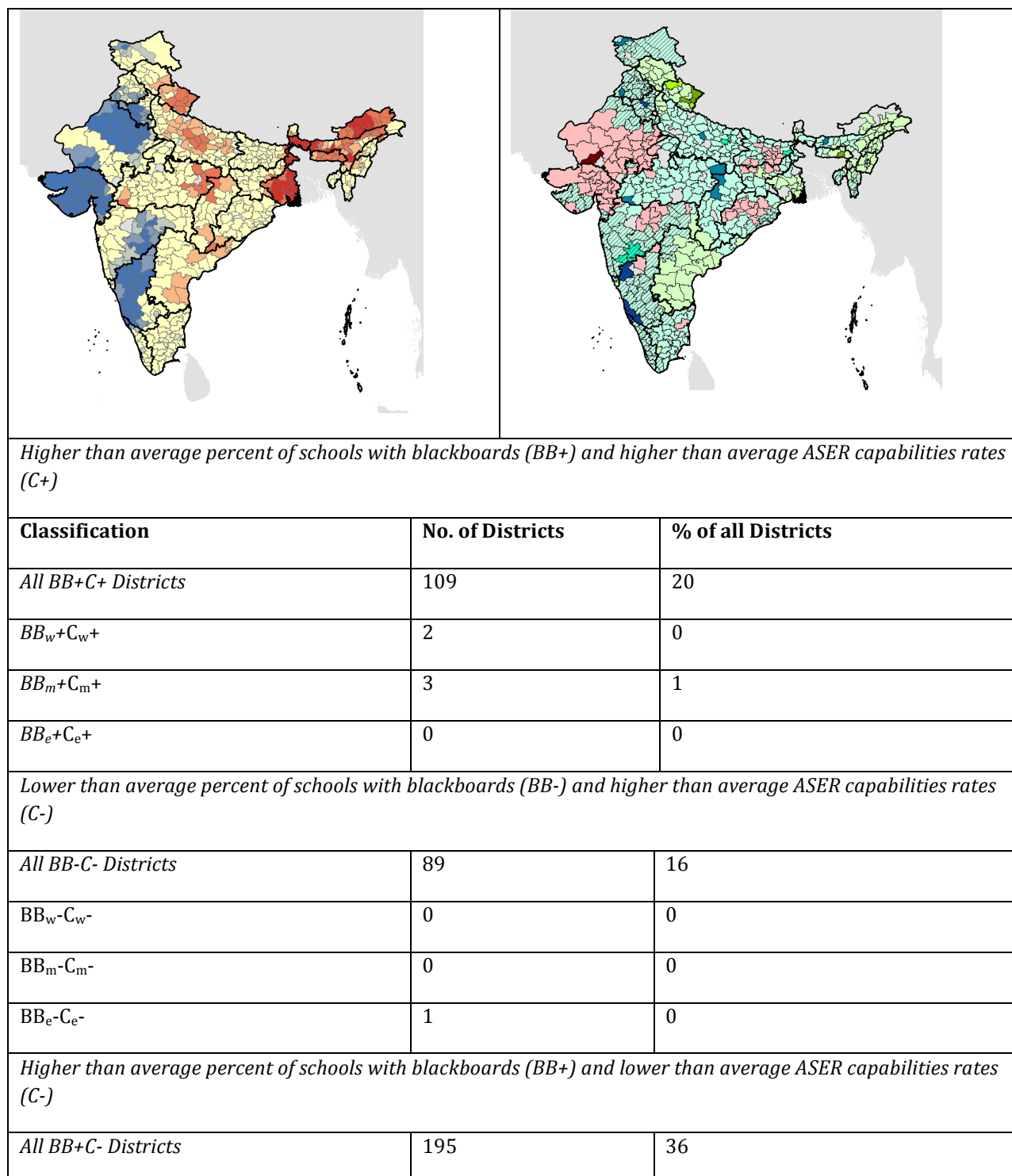
districts of Koriya and Bilaspur (BB_{m+}) and in Surguja (BB_{w+}) in Chhattisgarh. Hotspots of schools with blackboard are also present, though rather weakly so, in some of the poorest performing districts in the country especially in Barwani, and Dar in Madhya Pradesh (BB_{m+}), though notably not in the state's lowest educationally performing district of Alirajpur. Finally, there are also hotspots in the educationally poor performing districts across southern Odisha, and in neighboring Vishakhapatnam and Vizianagaram, Andhra Pradesh.

Areas in the country with lower than average percentage of schools with blackboards are also clearly identifiable in Figure 11.9. This is especially true in Gujarat which is almost uniformly BB_e- , though strangely, not in the low performing Dohad district along the Madhya Pradesh border which is an unclassified districts. The neighboring state of Rajasthan also has deep blackboard cold spots in both the districts near the Gujarat border but also in the usually stronger performing northern states next to Haryana. Haryana and to a lesser extent Southern Punjab are also states with notable blackboard cold spots. Cold spots of districts without blackboards also occur in the educationally distinctive states of Kerala and Tamil Nadu, and in the lower performing states of Bihar and Jharkhand in the far north.

The intuitive association between higher percentages of schools with blackboard and better than average student skills rates occur in 109 (20%) of all Indian districts. These districts exist in above average regions, but not in the highest achieving in India. The classification only has five statistically significant overlapping districts, three of which occur in Uttarakhand, and are part of a greater unclassified $BB+C+$ swath covering Himachal Pradesh and in the Haryana bordering districts in northern Uttar Pradesh, though explicitly, not in Haryana or Punjab. The low number of overlapping blackboard districts appear to have a weaker spatial overlap with student outcomes when compared to the common toilets issue as discussed in subsection 11.4.6. Fewer districts have both a lower than average number of schools with blackboards and higher C scores ($BB-C-$) than $BB+C+$ classification above, and occur in only 89 districts (16%). Of these districts, the single statistically significant overlapping district occurs in Jalor in Rajasthan. This suggests that the availability or unavailability of blackboards does not appear to have a very strong

impact on achievement scores, a finding that is supported by the following *BB+C-* and *BB-C+* classifications below.

Figure 11.9 (left) Getis-Ord G_i^* hotspot of percent of schools with a blackboard (*BB*); and (right) overlay map with ASER achievement rates hotspots (*C*)



$BB_w+C_w^-$	3	1
$BB_m+C_m^-$	6	1
$BB_e+C_e^-$	0	0
<i>Lower than average percent of schools with blackboards (BB-) and higher than average ASER capabilities rates (C+)</i>		
<i>All BB-C+ Districts</i>	150	28
BB_w-C_w+	2	0
BB_m-C_m+	2	0
BB_e-C_e+	6	1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics generated by author

Districts with higher number of blackboards and lower than average scores were the most common of the four classifications. This means that either blackboards are being installed in the most educationally underperforming districts, or (more likely) that there is only a weak relationship between the blackboards and higher student achievement rates. Compared to the low number of overlapping $BB+C+$ and $BB-C-$ districts above, there are nine clustered $BB+C-$ districts occurring in various parts of the country from Barwani in the in far western Madhya Pradesh ($BB_m+C_m^-$) and along the Madhya Pradesh-Chhattisgarh border in a three state cluster (all $BB_m+C_m^-$). The remaining overlapping districts occur in islands or small clusters in Uttar Pradesh, Bihar and Meghalaya.

It was mentioned earlier in this subsection that the $BB+C+$ classification occurs in districts with middling rates of student outcomes. In contrast, the $BB-C+$ classification exists in the highest performing districts in India, especially along the western seaboard from Tirunelveli and Kanniyakumari, Tamil Nadu along the coast into Valsad, Gujarat. Statistically significant overlapping districts also occur further south along the border of Kerala and Karnataka (four BB_e-C_e+); and along the Karnataka-Maharashtra border from Belgaum (BB_e-C_e+); and into Kolhapur and Sangli districts in Maharashtra. Other significant overlaps are found in the far north in Jammu & Kashmir (Bandipora and Baramulla both BB_m-C_m+); and in islands in Haryana and Punjab. Of the four classifications in this subsection, this provides the clearest evidence that the existence of a blackboard does not

seem to be a limiting factor in student outcomes, a surprising outcome. It also shows that even in the highest achieving states, there is much room for improvement with the proper use of even basic educational tools.

11.3.8 Spatial Relationship Between Percent of Government Schools having Kitchen-shed Primary (GK) and Average ASER Capabilities Rates (C)

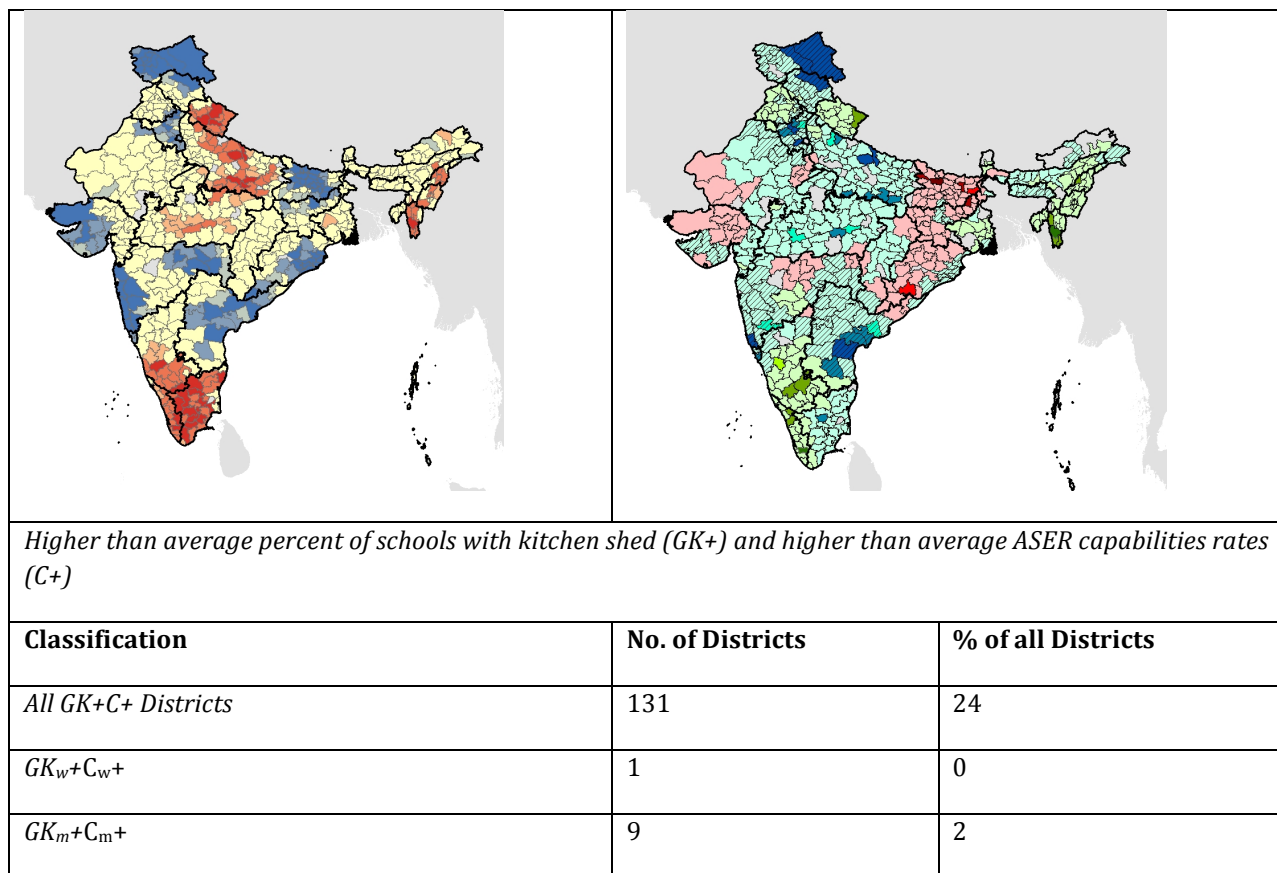
The Indian government and several Indian states have pushed for the expansion of mid-day meals for students as part of a concerted effort to encourage the poor to attend schools in larger numbers, and also to simultaneously address the interrelated problems of child hunger and ignorance. This connection between related issues of human development, and the active role of government in addressing them strongly echoes Myrdal's conception of both cumulative causation and his suggestion that the state take an active role in addressing the concerns of the poor. The issue of kitchen sheds another issue that presents a useful test of the various states' ability to implement their policies, and, by extension, the state'. Although data for the numbers of mid-day meal served was unavailable, it was possible to collect district data on the percentages of schools in a district with kitchen-sheds. This data is a proxy indicator for the mid-day meal program, but is limited in its potential because it is impossible to ascertain whether the kitchen sheds are being used or not, or if the food is nutritious (or delicious).

The hotspots map in Figure 11.10 shows that there is much less state centricity in the kitchen-shed issue than is found in other maps in this series. The hotspots of areas with significantly higher percentages of government schools with kitchen sheds prominently occurs in the southernmost states of Kerala and Tamil Nadu, and also in equal intensity across the southern half of Karnataka. It is also worth noting that unlike other maps, which show a greater concentration of better outcomes in coastal districts in the southern states, in this map there is evidence of the opposite with more intense hotspots occurring in the inland districts. Outside of this strong southern hotspot, there are also hotspots in Uttarakhand and in the northeastern states of Mizoram, Manipur and Nagaland. Compared to the hotspots, the cold spots in Figure 11.10 cover both a wider area and comprise more dispersed hotspots throughout very different parts of the country. This

distribution differs from the usual divide between the so-called Hindi belt and the other states in other hotspot maps.

Moving to the overlapping map on the right in Figure 11.10, the $GK+C+$ classification of areas with a higher than average percentage of kitchen sheds and higher than average student capacities scores occur in 131 (24%) of all districts with thirteen overlapping hotspots. Of this high number of statistically significant overlapping districts, the most intense GK_e+C_e+ hotspots occur in Pathanamthitta, Kerala and in Lunglei, Mizoram, two of the highest achieving districts in India but in very different social contexts. The remaining significant overlap districts occur in four states (Mizoram, Kerala, Karnataka) and are not particularly tightly clustered. The Mizoram cluster is the largest of these and has four adjacent significant districts: a (GK_e+C_e+); and three adjacent (GK_m+C_m+) districts which saturate much of the state.

Figure 11.10 (left) Getis-Ord G_i^* hotspot of percent of government schools having kitchen-shed primary (GK); and (right) overlay map with ASER achievement rates hotspots (C)



GK_e+C_e+	2	0
<i>Lower than average percent of schools with kitchen shed (GK-) and lower than average ASER capabilities rates (C-)</i>		
<i>All GK-C- Districts</i>	114	21
GK_w-C_w-	2	0
GK_m-C_m-	3	1
GK_e-C_e-	1	0
<i>Higher than average percent of schools with kitchen shed (GK+) and lower than average ASER capabilities rates (C-)</i>		
<i>All GK+C- Districts</i>	168	31
GK_w+C_w-	3	1
GK_m+C_m-	7	1
GK_e+C_e-	2	0
<i>Lower than average percent of schools with kitchen shed (GK-) and higher than average ASER capabilities rates (C+)</i>		
<i>All GK-C+ Districts</i>	128	24
GK_w-C_w+	3	1
GK_m-C_m+	6	1
GK_e-C_e+	7	1

Source: Data from Government of India Census 2010, ASER Center 2012 and statistics and map generated by author

For its part, Kerala, a state which usually has fewer hotspots for facilities in other factors discussed in this section, has two adjacent GK_m+C_m+ districts in the northern part of the state in Wayanad and Malappuram that are not adjacent to the GK_e+C_e+ district in the south of the state. Karnataka also has two adjacent GK_m+C_m+ districts in Tumkur and Hassan, and an island GK_w+C_w+ district in Haveri. Finally, there are two more statistically significant overlapping districts in Pithoragam, Uttarakhand along the Nepalese and Chinese borders.

The $GK-C-$ classification of schools with lower than average numbers of kitchen sheds and lower capabilities scores shows a weaker spatial correlation than the $GK+C+$

above. This makes up 114 (20% of all) districts, only six of which are significant overlapping districts. Spatially, all but one of the significant overlapping districts occurs in Bihar. For its part, the $GK+C-$ classification shows the districts that have the wider availability of kitchen sheds than average, but also have lower student achievement rates. The classification has twelve significantly overlapping hotspots, two of which are the most intense GK_e+C_e- districts. The high number of overlapping districts in the classification attests to the various schemes of facilities building attempted to raise school attendance, especially in Uttar and Madhya Pradesh, and Tamil Nadu. However, despite consistently having more adequate facilities than the national average, student skills rates in these states are significantly lower than in other parts of the country. By deduction, one can conclude that what is lacking in these states are not quantifiable improvements, but qualitative improvements in teacher or administrative quality as Myrdal had suggested.

Spatially, with the exception of the $GK+C-$ districts in Tamil Nadu, the $GK+C-$ districts exist in a dispersed distribution and occur mostly in small clusters and in one-district "islands". The two most intense overlapping districts of high numbers of kitchen sheds and lower capabilities rates (GK_e+C_e-) districts are the adjacent districts along the Nepalese border in Bahraich and Sitapur, Uttar Pradesh. The $GK-C+$ classification shows that the areas that have higher than average achievement despite having lower than average percentages of kitchen sheds. This combination occurs in 128 (24%) districts with sixteen overlapping districts, and the highest number of the most intense overlapping districts in the classification. Both Jammu & Kashmir and Tamil Nadu are both nearly saturated with $GK-C+$ districts and have clusters of significant overlapping districts, which include intense GK_e-C_e+ districts. This suggests that the improvements in the two states, especially in the higher achieving coastal districts in Andhra Pradesh and two westernmost districts of Jammu & Kashmir, can not be explained by having higher percentages of schools with kitchen sheds. In addition to the hotspots in Jammu & Kashmir and Andhra Pradesh, there are also large concentrations of overlapping hotspots in the higher achieving state of northern Haryana as well as along the coastal border of Goa and Sindhudurg, Karnataka.

11.4 Chapter Summary with Reference to Research Questions

The first half of this chapter summarized Myrdal's view from 1968 that the Indian government was too focused in quantitative expanding an unreformed educational sector at the expense of qualitative improvements. It was then showed that this focus on building schools has subsequently continued under various national and internationally led education schemes that focused on school attendance, the most influential of which as the inclusion of the 2nd MDG goal. While this policy focus has increased access to basic education facilities to more isolated and disenfranchised parts of Indian society, Section 11.4 shows that the quality of that education is so low that there is little equivalency between access to schools and higher student outcomes. As such, it is possible to say that Myrdal's view (and an answer to Research Question 2.1) that India has wrongly prioritized quantitative expansion of schools instead of paying adequate attention to issues that appear to have a tighter relationship to student outcomes as discussed in Chapter 10. In the second half of the chapter, original empirical analysis was conducted to test the issues above with regards to spatial inequality of access to schools and educational facilities. This was conducted to answer Research Question 3, and sub-Research Questions 3.10.1 – 3.10.5.

Section 11.3 in this chapter added evidence to the tight relationship between TPRs and with lower populations aged 0 to 6 with student outcomes as discussed Section 9.7. It was also found that there is a similar tightness of fit between schools with fewer students and better outcomes, which when combined reinforces Myrdal's view of the strong link between education outcomes and demographic changes. This chapter also looked at whether or not the expansion of access to basic facilities such as blackboards, gender separated toilets, or kitchen sheds had and impact on student outcomes in Sections 11.3. This found that there appears to be only a fleeting connection between the presence of these facilities and basic student outcomes.

Chapter 12 Comparative Educational Inequality in Southern Asia

12.1 Introduction

This chapter moves away from India and analyses the spatial dimensions of educational inequality in the other Southern Asian states in Myrdal's original study in Pakistan, Bangladesh, Philippines, Malaysia, Thailand, Sri Lanka, and Indonesia. The chapter begins with a discussion on the availability and accessibility of education data for countries in the study area and relates these issues to Myrdal's theoretical discussion made in previous chapters. After this, the competence of the educational sector in Southern Asian are assessed with reference to Myrdal's 'soft state' concept, by examining the availability and timeliness of meaningful indicators in the educational sector, and the ease by which this data is accessible (Research Question 2.2). From here, the educational outcomes in the region ascertained from the internationally administered TIMSS, PERL, and PISA tests are briefly reported. Finally, the spatial dimensions of educational issues are presented using a similar methodology as in the Indian-focused chapters above (where the data permits). This is done in order to answer Research Question 2.3. Finally, the rational for not including Myanmar or Singapore into this discussion are addressed in Chapter 1.

12.2 Availability of Literacy and Education Data

As discussed in Chapter 7, Myrdal implored Southern Asian governments to collect more meaningful data on the educational sector than simple quantitative attendance data. With the information revolution and the standardization of indicators discussed in Chapter 2, there is currently much more educational data being collected and accessible. However, despite the increase in the amount of data available, there are significant methodological differences in the collection of literacy rates from one country to another. For example, in India, literacy data is collected from age seven and is available at the district level, where as in Myanmar literacy data at the provincial level was only available for ages 14 to 45, and only available in national aggregate in the Multiple Indicator Cluster Survey (MICS) survey. As such, meaningful comparisons between countries are more methodologically problematic than the published official literacy rates suggest. Because of this, the author's

original intention of creating a unified Southern Asia regional map of educational issues had to be sidelined. Instead, this chapter looks at the availability of data available and the spatial distributions of each state individually and compares them to states in the region to find regional Southern Asian patterns in the national data. Presently, however, it is worth first discussing availability of basic literacy data, and the ability to which there is transparency, accuracy, and full territorial coverage of educational data in the countries included in this study.

Regions not included in the data: A fundamental limitation in the collection of literacy data for this research is the lack of data from those parts of the countries rebelling against the national state government. This lack of literacy data is most apparent in the northeastern Tamil speaking areas of Sri Lanka and even more extensively in the tribal districts of Pakistan where there are many districts unable to report data. The lack of census data on basic education across large parts of countries underscores the states' inability to maintain its sovereignty over its territory. As such, according to Myrdal's modernization goal's (*G* and *H* as described in Table 3.1), these areas are symptoms of the 'soft state'. Also, areas lacking data are also often adjacent to areas with low performing districts, thus the omission of rebellious districts in the data likely skews the data higher than if the rebelling districts were included into national calculations. Of course, the

Another issue that that became clear in writing this chapter was the lack of continuity in the names and territories of the districts themselves. Most notably in Pakistan, India, and Indonesia the administrative borders between districts and provinces in the country are not yet fixed, and have been subdivided, combined, and renamed with surprising regularity. Like the high presence of null districts, this also reflects a lack of settled political administration, and weakens the ability to find patterns of change in educational issues over time. A related issue has also been the lack of standardized names and spellings at the district and regencies level. This issue is most evident in India and Pakistan, where religious nationalism has led to the renaming of states, cities, and districts often towards reflecting Hindu and Muslim roots respectively.

Accessibility of data: In addition to the lack of data from some sub-national regions, the accessibility of the data is also uneven across countries. In no country in the region was the data easily accessible online or well organized in a way that would be helpful for the laymen to understand. Often the data was scattered across multiple departments and ministry websites in byzantine mazes of folders and subfolders opaquely titled. This was made more problematic with the regular use of an alphabet soup of unnecessary acronyms that made navigation to the data, and the descriptions of that data exceedingly difficult. All of this undermines the usefulness and transparency of the information itself, relegates its use to technocratic planners, and hides uncomfortably poor results. In the Philippines, for example, a more advanced data query based system (Datastat) was being promoted as an advanced clearinghouse for sectorial government data, across several government websites, however the system was completely unusable throughout the research period. Furthermore, government data is occasionally stored in exotic file formats requiring special programs to access the data, when simple PDF, or Microsoft Excel formats would suffice and improve accessibility. The ease of data availability from the ASER Center and Indian National Census data were exceptions to the rule and were intuitive, and easy to find and process digitally.

Notably, data on educational outcomes (especially in adult literacy rates) was usually segregated from quantitative schooling data, which in turn was separated from student outcomes data. This segregation of data was especially apparent between child and adult education statistics because the two are rarely collected by the same agencies. This again underscores the gap of attention between the type of non-traditional mass education movements that Myrdal advocated for, and the continued dominance of more traditional and colonially inherited child centric schooling education. In a related note, in none of the countries was there any assessment of adult educational outcomes or skills with the exception of self-reported literacy rates at the subnational level. Thus, in response to the adult education component of Research Question 2.4, the lack of teacher training statistics underscores a region wide inattention to the topic of adult education in general. Though it should also be noted that Southern Asia was by no means alone in sidelining adult

education, but it did, as Myrdal suggested, have the opportunity to pioneer new educational methods after achieving sovereignty.

Another glaring aspect of the segregation of data was the lack of integration of budgeting data into the educational statistics. This further weakened government transparency in the education sector. In terms of data collection the research could not help but think that the inability to access simple state budget data at subnational levels was in some way a deliberate attempt to obfuscate subnational regional differences in the respective countries, though this could not be proven.

In a related accessibility issue, government run education websites usually had broken hypertext links to documents reports and data that were consistently unable to be accessed. This was especially true in the lower educationally performing countries of Pakistan and Bangladesh but was also a problem in accessing data from the higher performing Philippines and Sri Lanka. Indonesian and Thai data was more easily available, but lacked updated data. In the Thai case, the educational and census data from 2000 was available free and online collected, but the researcher was surprised to find that the census data from the 2010 census was unavailable as of 2013. This shows either a disconnect between data collection and state planning, a lack of urgency in census tabulation, or the restriction of census data to the public. In any case, this reflects softness in state planning and community planning.

The difference between the type and quality of the data accessibility between government and NGO collected data was also notable. NGO reports at both the regional level (i.e. the ASER Centre data) and at the international level (the OECD sponsored PIRLS and TIMSS exams in particular) were both more detailed in their data collection methodologies and were easier to access for the non-professional public than government data. Again, this points to a general incompetence in the government administration of the education sector in Southern Asia and is consistent with the relationship between Myrdal's 'soft state' and the rise of the NGO professionalism described in Chapter 6.

Accessibility of spatial data Education data at the aggregated national level was easily available from several sources including international organizations (the World Bank

in particular) and national governments, however data at the sub-national level was unavailable at the international data clearinghouses and only sparsely available from national sources. In the Philippines and Thailand, provincial data (as the maps will show in Section 12.5) was unnecessarily aggregated into regions of grouped provinces. This grouping further obfuscates the usefulness of the data and limits accountability at the local level. This was particularly egregious in the case of the Philippines where Regions bound several provinces together, somewhat arbitrarily, making provincial comparisons difficult, and had the particularly unfortunate consequence of lowering the number of entries to below the threshold ($n=30$) needed to generate the same hotspot maps as in the previous chapters on India.

12.2.1 TIMSS, PERL, for Southern Asian Countries

As the quality and access educational data and the importance of basic skills are becoming more important in an information economy, there has also been a greater demand for more rigorous measurements of educational outcomes. This turn of attention to skills and outcomes, and away from school attendance, has also been furthered by the globalization of education in general, and the increasing need to be able to compare educational standards for assessment and policy reform. In this context, the internationally administered TIMSS and PIRLS tests have emerged as the most recognized and most rigorous of the educational skills tests currently conducted. Unfortunately for this research, these standardized and methodologically sound tests have only recently been administered outside of the developed world, and have been even less extensively administered in Myrdal's Southern Asian study region. However reviewing the results of participating regional countries can give us a sense of the educational performance in the region compared to other developing regions.

The TIMSS and its partner test the PIRLS were developed by the International Association for the evaluation of Educational Achievement (IAEA) in association with the Lynch School of Education, Boston College as well as the US Center for Education Statistics (USCES) and the World Bank. Methodologically, the tests select nationally representative samples of 4,000 students from each country (or non-sovereign territory) from 150-200 schools at both the 4th and 8th grade level. The TIMSS test assesses outcomes in three

content domains and three cognitive domains at both grade levels. In contrast to the lack of literacy and outcome data that Myrdal longed for at the time of his writing, the existence and professionalism of these test and the methodological attention to detail in administering the test are remarkable.⁴

For the purposes of this research, it is worth noting that the skills tested are higher order skills than what Myrdal considered as functional literacy as discussed in Section 8.3. From the ASEAN countries Indonesia, Malaysia, Singapore, and Thailand have participated. From this lack of participation in the region, one might assume that only high income countries have participated in the study, however much lower income countries from other regions have participated. These recently participating countries include several from Africa (Botswana, Ghana, Morocco, Tunisia, South Africa), Latin America (Chile, Honduras), Central Asia (Azerbaijan, Georgia, Kazakhstan), and an especially large contingent from the Middle-east (Bahrain, Israel, Kuwait, Lebanon, Oman, Palestinian, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen). Given this long list, one can only conclude that the governments of South Asia sensitivity over showing their poor performance has overridden the desperate need for the data that participation in such a study would bring. Finally, it is also worth noting that the results of the test are given at the national level masks larger domestic spatial inequalities in the outcomes between regions. Only in the Philippines does the government publish a subnational regional breakdown of TIMSS and PERL scores, though again this is subdivided into regional rather than provincial results.

The results of the 2011 TIMSS testing show the diversity of educational outcomes in the region. In the 4th grade test, the city-state of Singapore was the highest of the 63 countries and territories tested with an overall average scale score of 606 (out of a perfect 1000 and benchmarked to score of 500). For its part, Thailand scored below average at 458 placing it between Chile and Armenia; Malaysia averaged 440 and found itself between Lebanon and Georgia; and Indonesia at 386 was the fifth-lowest of all areas tested and was on par with Palestine, Saudi Arabia and Syria. Indonesia's scores were actually so low that the country was included into the group of countries whose results could not be

⁴ The methodological and full outcomes of the test are methodically available on the website <http://nces.ed.gov/TIMSS/>

confidently comparable with other countries. The wide range of scores in Southern Asian in the 2011 test highlights the deep degree of educational inequality in the region between countries. This is especially so if one includes Singapore in the discussion. The low scores on these tests also shows that Southern Asian countries have not, for the most part, matched their economic successes of the last thirty years with broad based educational success.

12.2.2 Temporal Changes in International Education Tests in Southeast Asia

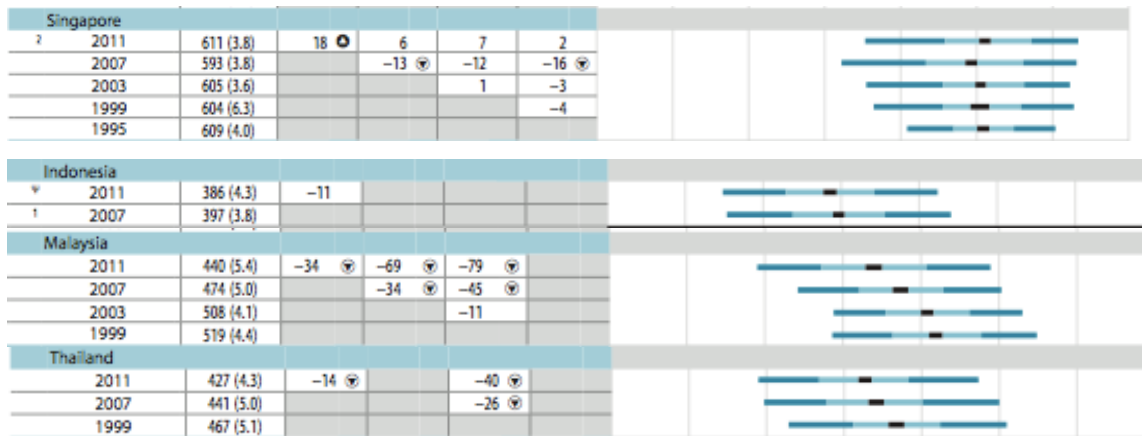
The fact that the Progress in International Reading Literacy Study (PIRLS) test has been conducted in four waves and that some countries in the study region have participated in several rounds makes it possible to see temporal trends in the data. This was not possible to do in the Indian discussion in Chapters 8-11 because of a lack of reliable temporal data at the district level. Specifically, from Tables 12.1 and 12.2 one can see that that Singapore’s PIRLS scores have risen considerably through the four waves. In addition to this excellent performance in Singapore, it should also be noted that the distribution of scores has also narrowed considerably especially among the lower scoring cohorts. This suggests that not only are average scores increasing in Singapore, but that outcomes are more becoming more equal in the city. Although, one should not extrapolate too much from this result, given Singapore’s unique geographic and demographic characteristics, this is consistent with Myrdal’s view equality would correlate with higher scores (Chapter 7).

Table 12.1 PIRLS 2011 data for fourth graders for Singapore

Country	Average Scale Score	Differences Between Years				Mathematics Achievement Distribution
		2007	2003	1999	1995	
Singapore						
² 2011	606 (3.2)	6	11	16	0	
2007	599 (3.7)		5	9		
2003	594 (5.6)			4		
1995	590 (4.5)					

Source: IAEA, 2012

Table 12.2 PIRLS 2011 data for eighth graders in Singapore, Indonesia, Malaysia, and Thailand



Source: IAEA, 2012

In contrast to Singapore’s regular improvement, Indonesia’s scores decreased from 397 to 386 between 2007 and 2011. The range of scores has also shrunk but less so than in Singapore. Even more dramatically than Indonesia, Malaysia’s score on the test has fallen between waves. The country fell 79 points between 2011 and the first year of testing in 1999, and as such, has had the fastest decline in scores among any of the countries tested in the history of the survey. In addition to this very rapid decline in score, Malaysia also fell below the 500-point benchmark with a commensurate widening distribution of scores between higher and lower achieving students. Similarly, Thailand has also slid 40 points since its initial test in 1999, although the distribution of scores in the between the kingdom’s highest and lowest performing students appears to be mostly consistent across waves.

In terms of gender disparity, in the fourth grade both Singaporean and Thai girls scored higher than boys though only in Thailand was the gender difference statistically significant.

Table 12.3 Gender difference in PIRLS test in the fourth grade

Country	Girls		Boys		Difference (Absolute Value)	Gender Difference	
	Percent of Students	Average Scale Score	Percent of Students	Average Scale Score		Girls Scored Higher	Boys Scored Higher
2 Singapore	49 (0.6)	608 (3.6)	51 (0.6)	604 (3.5)	4 (3.0)		■
Thailand	49 (0.9)	465 (4.8)	51 (0.9)	451 (5.6)	14 (4.4)		■
International Avg.	49 (0.2)	490 (0.5)	51 (0.2)	491 (0.6)			

Source: IAEA (2012)

Table 12.4 PIRLS gender difference in the eighth grade

Country	Girls		Boys		Difference (Absolute Value)	Gender Difference	
	Percent of Students	Average Scale Score	Percent of Students	Average Scale Score		Girls Scored Higher	Boys Scored Higher
² Singapore	49 (0.7)	615 (3.7)	51 (0.7)	607 (4.5)	9 (3.5)		■
International Avg.	50 (0.2)	469 (0.6)	50 (0.2)	465 (0.7)			

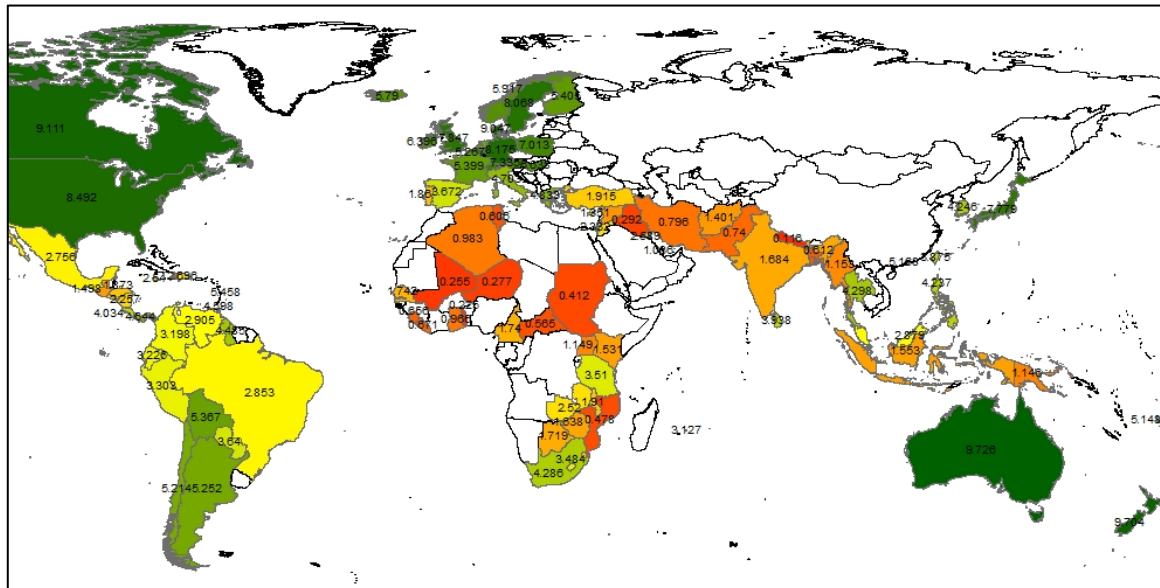
Source: IAEA, 2012

12.3 Regional Distributions of Average Mean Years of Schooling

Setting aside for the moment the aforementioned problems associated with putting too much stress into the mean years of schooling indicator, looking at changes in MYS at the global level between Myrdal’s research period in the 1960s to the present, some general statements can be made on the importance of the “initial education” conditions. From 1960 the mean years of schooling (MYS) map in Figure 12.1, one can see that Southern Asian already had a wide variation between countries. Thailand (4.3 years), the Philippines (4.2), and Sri Lanka (3.9) were above the above the global average but the MYS, but Nepal (0.1), Pakistan (0.74) and Bangladesh (0.6) were among the lowest in the world with Indonesia, Burma, and even Malaysia not fairing much better. Looking at the map,t one can see that the uneven MYS rates in Southern Asia are were unique in the developing regions of the world. South America had both higher and less spatial variation in MYS averages, though there is more variation in Central America compared to Southern Asia. Scores in West Africa at the time were also very low, but showed less variation than in Southern Asian, as was the case in the Middle East as well. Only in the southeastern Africa is there a comparably wide range of MYS between neighboring countries as is Southern Asia at the dawn of independence.

Moving forward to the MYS map of 1999 in Figure 12.2 (the last year of data available in the global data set), global MYS have gone up in absolute terms. In Southern Asia, the same countries which had higher MYS scores continue to lead the pack with the Philippines, Thailand, and Sri Lanka continuing to be regional leaders, and Nepal, Bangladesh and Pakistan the regional laggards, but only in Malaysia is there a movement from below to above global average MYS.

Figure 12.1 Average Years of Schooling 1960 (green higher, red lower)

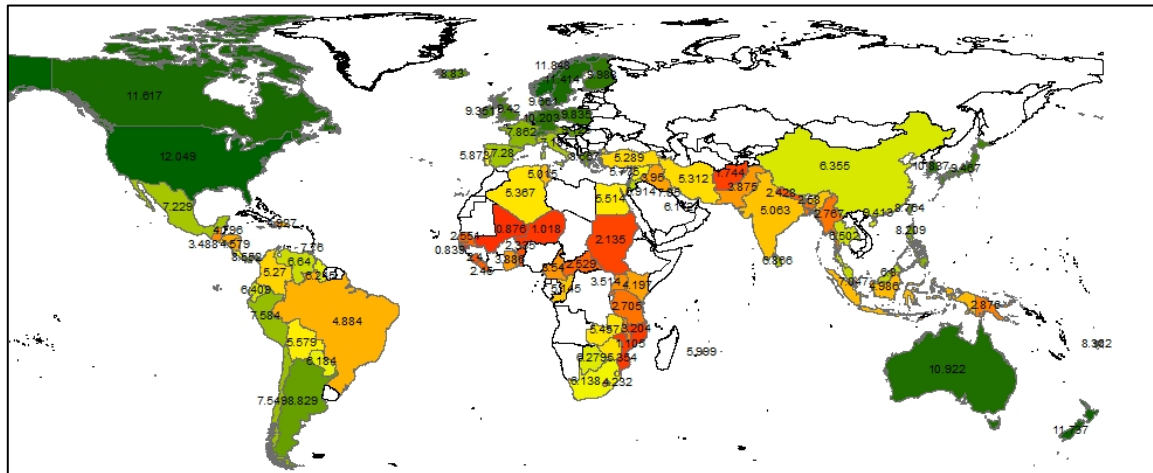


Source:

map generated by author with data from World Bank, 2011

In general, however the region remains highly uneven in terms of access to education at the national level. Outside of Southern Asia, MYS have retained the same patterns as were present in 1960: West Africa and the Middle east remain laggards in MYS across the board and Southeastern Africa maintains a similar degree of spatial variation as in Southern Asia. Only in South and Central America, have there been significant changes of increased regional variation in MYS levels. Finally, it is worth noting in comparison that China, a null district in 1960 due to the chaos of the Great Leap Forward has an above global average MYS of 6.35 years, placing it lower than the highest MYS countries of Southeast Asia, but considerably higher than every country in South Asia. Furthermore, the MYS in the rapidly developing Northeastern Asian economies of South Korea, Taiwan, and Hong Kong, and Singapore are among the highest in the world by 1999 and show a larger absolute rise in MYS between 1960 and 1999 than the more gradual improvements in the Southern Asian countries, despite having higher rates to begin with in 1960.

Figure 12.2 Mean Years of Schooling 1999



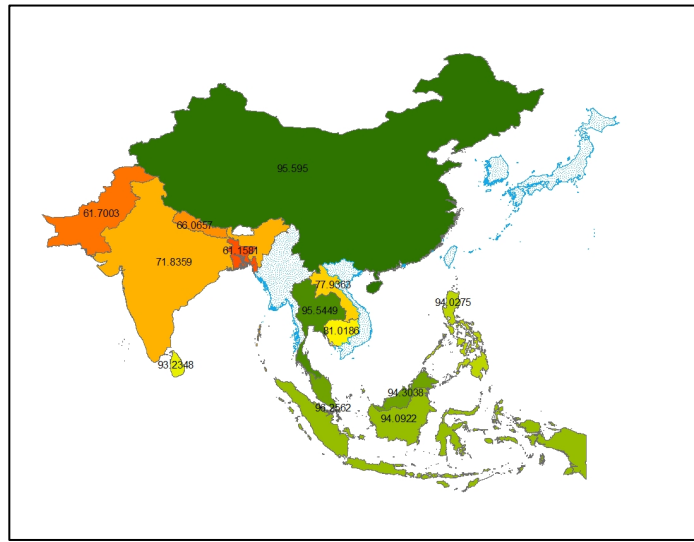
Source:

map generated by author with data from World Bank 2011

12.4 Regional Distributions of Literacy

The regional literacy map in Figure 12.3 mirrors the mean years of schooling map above at the regional level. Two important similarities can be seen between the two maps. First, the higher than average levels in the foundational six ASEAN countries especially in Thailand, Malaysia, and Indonesia (and an emergent China) show a strong contrast with the South Asian countries of Pakistan, India, Nepal, Bangladesh, and even in the usually stronger educational performing Sri Lanka. As such, the regional differences between Southeast and South Asia becomes more pronounced. However, the null values for Myanmar and Vietnam, and the lower than average literacy rates in the former Indochinese states of Laos and Cambodia as well as that of Myanmar, show a clean division between an educationally more equitable Southeast Asia and an more unequal South Asia. It is also worth noting that Indonesia is able to maintain higher than average literacy rates despite having only middling mean years of schooling. This may point to a more effective in-class teaching system, a more robust non-traditional adult education regime, or another qualitative difference. Either way, it supports Myrdal's suggestion that MYS was not an all-encompassing indicator to measure educational success.

Figure 12.3 Literacy rate age 15+ 2015 estimate

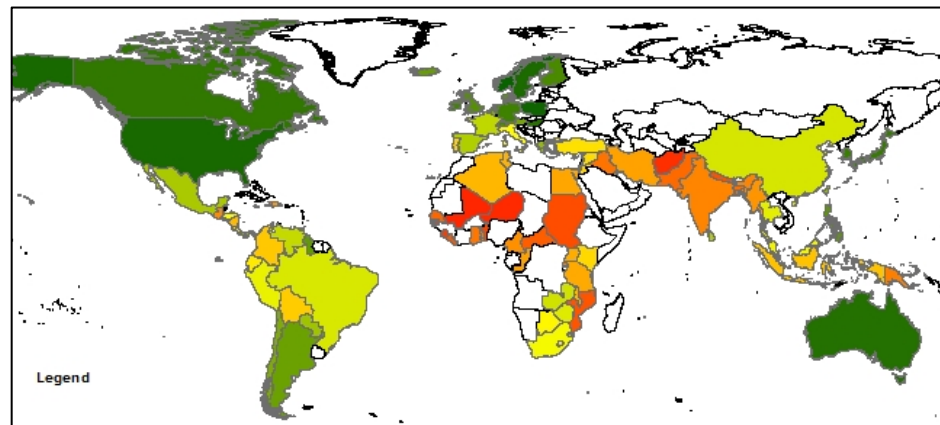


Source: generated by author with data from World Bank, 2011

12.4.1 Educational GINI coefficient

The educational GINI coefficient (eGINI) as conceived and calculated by Barro and Lee (2000) calculates the degree of inequality in the educational achievement of a society in terms of the last educational level completed or attempted. The graduations include, no education, primary, lower secondary, higher secondary, tertiary, and partial completions at every level. As such, an eGINI score of zero would indicate perfect equality in which everyone in the society had an equal amount of education, and a perfect score of one would be a single person having all of the education. Just the existence of such an indicator, and its increasing application in education studies, shows an increased attention to measuring and inequality in the education. This is a welcome departure away from binary literacy rates, and is more inline with Myrdal's indicator suggestions (Chapter 4). However, the indicator, like MYS, measures quantitative educational levels achieved rather than the qualitative skills imparted. As such in the indicator, a year of schooling in Finland is indistinguishable from a year in the Sudan.

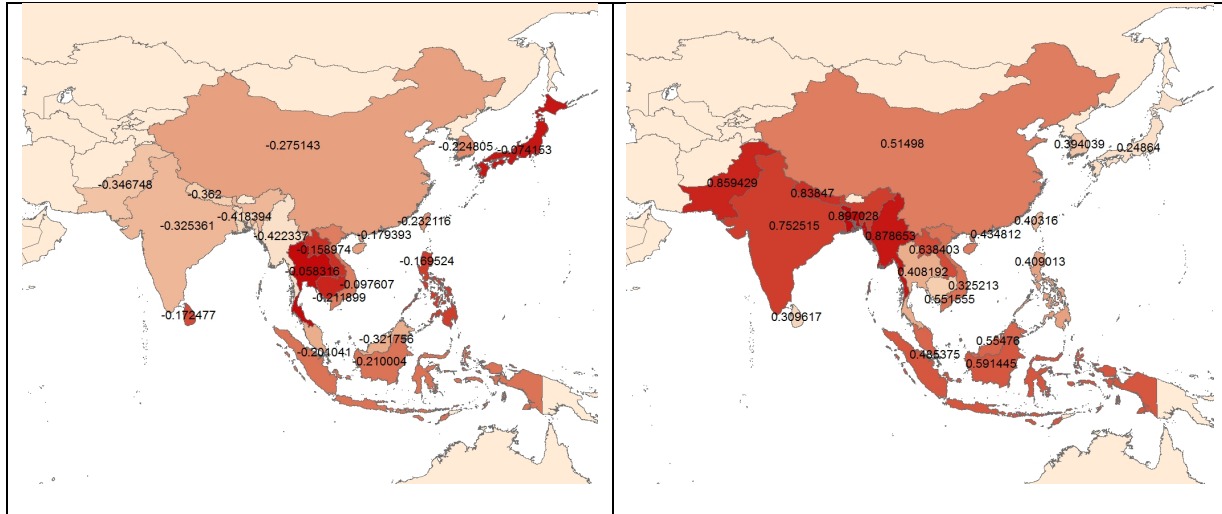
Figure 12.4 Educational GINI Coefficient (eGINI) 1999 where green is more equal and red is less equal



Source: generated by author with data from World Bank, 2010

The map in figure 12.4 vindicates Myrdal's finding that educational inequality in Southern Asia was exceptionally high across the board and was likely to remain so. In 1999 (the most recent year data is available) educational inequality remains a problem in the region even compared to other developing regions globally. In the map above, there is a common pattern of lower educational GINI scores in the more developed countries in North America, Western Europe, Northeast Asia, and Australia. However, unlike the international literacy, or average years of schooling maps which have the strongest outcomes throughout Europe, in this map, other developing countries (especially in South America and Southeast Asia) have more educational equality than some Mediterranean countries including Italy, Portugal, Greece, and even France. For its part, South Asia shows stronger degrees of educational inequality than Southwestern Africa, and even the Middle East. In Southeast Asia, Myanmar, Indonesia, Thailand and Malaysia fare little better and have high degrees of inequality in terms of educational GINI coefficient. The singular exception to this regional pattern is the Philippines where there is a very low degree of educational inequality. The only region with sufficient data that has a similarly wide degree of educational inequality as Southern Asia as measured by the eGINI is Sub-Saharan Africa, which is only nominally wider.

Figure 12.5 (Left) Educational GINI, (Right) Educational GINI coefficient difference between 2010 and 1970 (darker red shows less change);



Source: generated by author with data from World Bank, 2012

Comparing the educational GINI coefficient from 2010 to that of 1970 in East Asia in Figure 12.5 above the degree of change in inequality can be seen. In every case, the eGINI coefficient became more equal, though in Thailand, Laos, Cambodia, Sri Lanka and the Philippines, the regional leaders in the 1960s, the change is almost negligible. This stands in contrast to the substantial improvements made over the forty years span in the poorest educationally performing regional countries of Myanmar, Bangladesh, Nepal, India, Pakistan, but especially in Malaysia and Indonesia. The move towards increasing equality in southern Asian, however, should be qualified by the map also shows that that in Northeastern Asia China, Taiwan, Hong Kong, and even in Korea the educational eGINI shrunk by 0.2 or more despite having more educational equality than in Southern Asia in 1970.

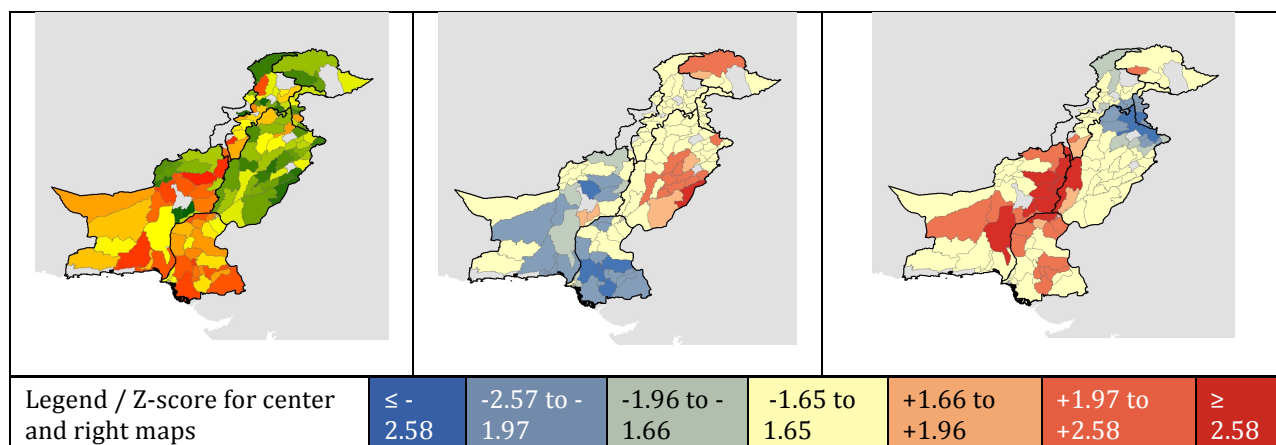
12.5 Sub-National findings for Countries in the Region

In the proceeding section, a brief overview was given of the state of educational inequality comparing Myrdal's Southern Asian study area to larger global and regional trends. In the final section of this chapter the domestic educational geography of the study area (minus India) are discussed in turn.

12.5.1 Pakistan

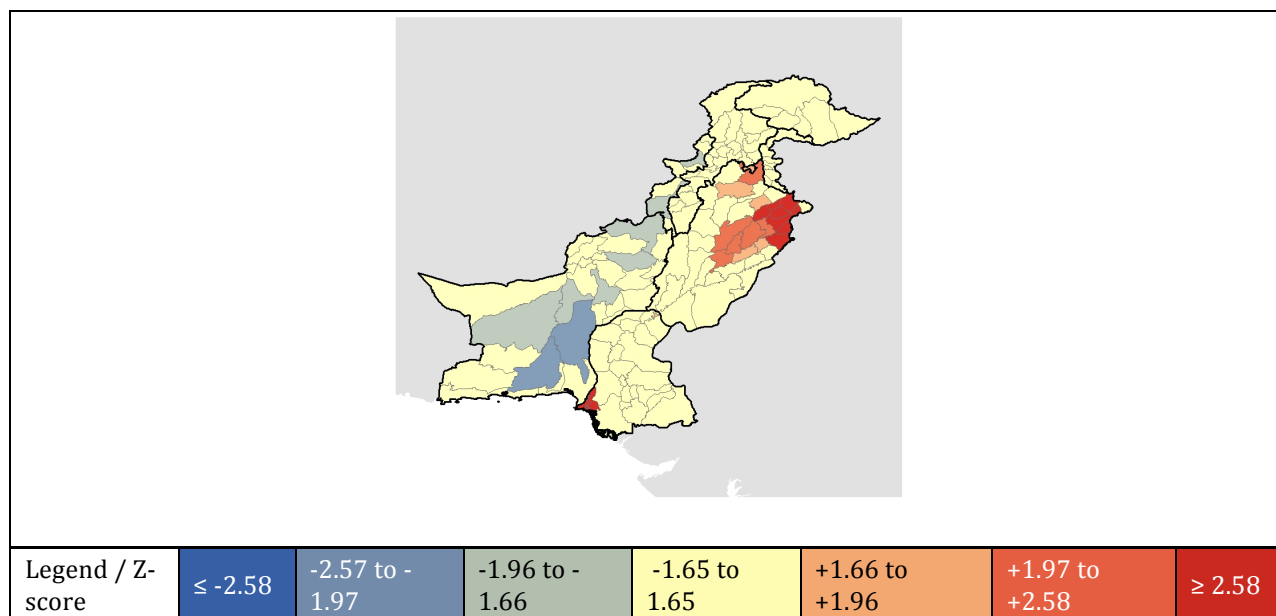
Unsurprisingly given the low state of development in Pakistan, there is a general dearth of educational outcome data collected and accessible, especially at the sub-national level. This lack of data differs from its neighbor India, whose freely accessible data at the district level was available across a host of educational factors. However, while the Pakistani state does little to publish education statistics, the ASER Centre conducts a similar survey in Pakistan as it does in India. Because of this, a similar analysis can also be done on student capabilities and out of absentee rates. However, the results are less detailed due to the markedly fewer number of districts, smaller population, and high number of null districts in the data. Similar to India, some Pakistani regions have so many null values that they must be excluded from the discussion altogether as is the case in the very remote tribal territories. Unlike India, and likely due to the fact that there are simply less districts and states, no state has full state saturation of either higher or lower growth comparable to the high performing state of Kerala, or the northeastern states. One can also see that in Pakistan there is a tighter clustering of higher ASER capability rates. Clusters of high achievement are only evident in Punjab, and lower achievements are evident across Baluchistan and Sind. Comparing the geography of ASER capabilities rates in Pakistan with the absentee rates in Figure 12.6, there is a very different spatial pattern. Specifically, there is an absentee hotspot in the central part of the country along either side of the Baluchistan-Punjab state border, and throughout much of Baluchistan and Sind. It is also worth noting that the absentee cold spot in the greater Karachi does is not matched with a corresponding higher or lower ASER capability rates. This provides further evidence of the divide between the two issues as uncovered in the Indian comparison of the two issues in Chapter 8. This general pattern of a higher achieving core and poor achieving periphery is a common feature in several other countries in this chapter, but as the previous chapters showed, does not hold for India.

Figure 12.6 Pakistan average ASER Achievements Raw (left) All Achievements Overlaid 2011 (middle); Out of school ASER center hotspots (right)



Source: generated by author with data from ASER Centre, 2012

Figure 12.7 Hotspot map of percent of private schools of all schools



Source: generated by author with data from ASER Centre, 2012

Whereas there is only a weak relationship between absenteeism and higher ASER achievement rates in Pakistan, there does appear to be a strong spatial relationship between higher attendance in private schools and higher than average ASER capabilities rates. The opposite situation, of lower average capabilities rates and a higher percentage of government schools also appears to hold, but the classification of Madrassas, or NGO run schools is ambiguous in the description of the methodology used. This finding is consistent with similar findings in Section 9.5 from neighboring India, and both suggest a weakness in

the state in government school administration. Finally, a statistical breakdown of ASER collected statistics across districts by skill tested is given in Table 12.5 below.

Table 12.5 Pakistani ASER statistics by skill tested and district distribution

	Mean	Range	STD	Count
ASER can read Sentences	43.1	94.2	22.1	125
ASER can read words	48.1	93.6	24.4	125
ASER can do subtraction	39.6	94.6	22.5	125
ASER can read stories	49.8	92.5	23.2	125
ASER can read letters	45.4	92.5	23.1	125
ASER can do division	42.0	92.5	21.9	125

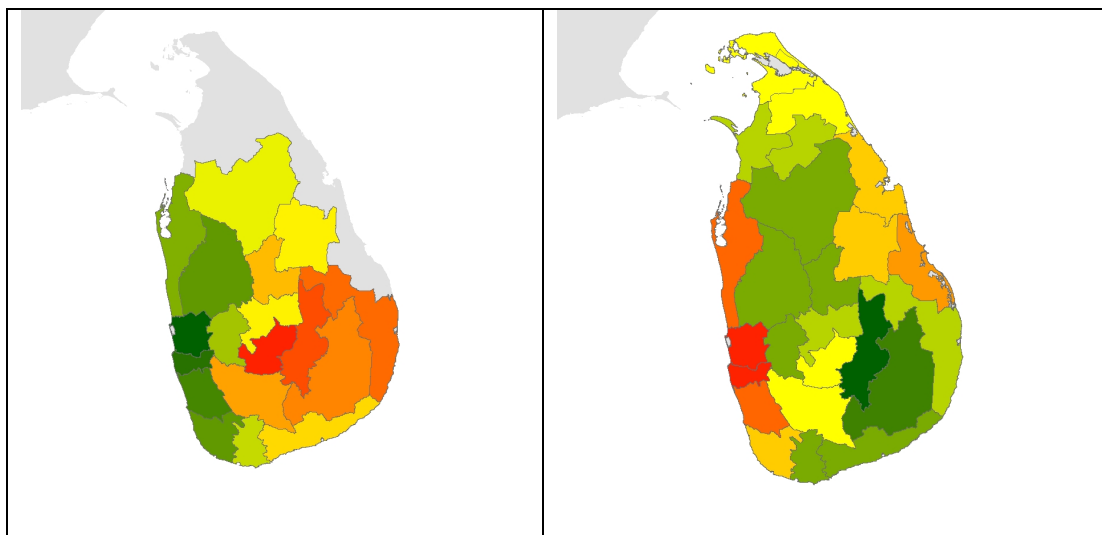
Source: ASER Center, 2012 statistics generated by author

12.5.2 Sri Lanka

Oddly, considering the higher education and literacy rates in the country, there is sparingly little data collected on the educational outcomes in Sri Lanka available at that subnational level with the exception to literacy data, which itself is only available at the state level. The subnational data that is available does not include data from the predominantly Tamil speaking areas in the north and eastern parts of the country. The lack of district-wise data in the county can be attributed to several factors. The first of which is the obvious chaos and abnormal complications that a country emerging from decades of civil war, rightly, does not prioritize the collection of education statistics as a first priority. Secondly, the relatively small size and population of the country, regional sensitivity, and lack of government control in some parts of the country limit subnational statistics. This would suggest that the country's recent policy turn towards a focus in improving educational quality (Government of Sri Lanka, 2011) has either not been matched with an updated statistical gathering regime, or that such statistics are being gathered but are not yet available to the general public. In spite of these issues, the absence of student outcome data in Sri Lanka is somewhat baffling given ease of which enrollment data, and it's meticulous breakdown into urban/rural, gender, and linguistic divides is freely available (Government of Sri Lanka, 2011). Unfortunately, the data set of provinces in Sri Lanka that

report literacy data is below is be low the 30 entry threshold needed to perform the Getis-Ord G_i^* spatial analysis used in previous chapters. With these caveats in mind, however the literacy map below mirrors similar distribution patterns as other countries in the region. As is the case in Pakistan, literacy rates are consistently higher in the capital and along the western coast than they are in the interior or along the eastern coast.

Figure 12.8 Sri Lanka Literacy by province (left); Pupil Teacher Ratios by province (right; green areas show lower PTRs)



Source: generated by author with data from Government of Sri Lanka, 2011

The map on the right in Figure 12.8 above shows that primary school TPRs in Sri Lanka do not seem to match the spatial patterns of literacy rates on the left. Spatially, the literacy rates are higher in the Sinhalese coastal western provinces, the TPR ratios are lower in the South interior regions. This regional difference should not be overstated given that the range between the highest and lowest primary school TPR districts is actually quite low-- ranging from a low of 13 students per teacher at the low end, to 23 students per teacher at the high end in primary schools.

12.5.3 Bangladesh

Similar to the case of Sri Lanka, though scores are much lower, there is also not very much district level data available for Bangladesh on educational outcomes collected by the government and openly available. Unfortunately, there also isn't any ASER Centre data on student capabilities for comparison. It should also be noted before continuing, that data accessibility for Bangladesh was exceptionally low, even by regional standards: websites

that promised gateways to data were outdated and consisted of innumerable layers of folders and subfolders, to ultimately reveal that there was almost no data to speak of. That said literacy data was available. Table 12.6 shows that while the mean scores in the country for districts are low at 43.8% literacy, the Standard Deviation (8.5) among districts and the range (37.9) between them are in fact much lower than the STD and range in either India or Pakistan. Additionally, unlike India and Pakistan, which had a great deal of null districts, there was only one Bangladeshi district missing data. The fact that a near complete coverage of the educational data can be gathered is no small achievement in such an underdeveloped country.

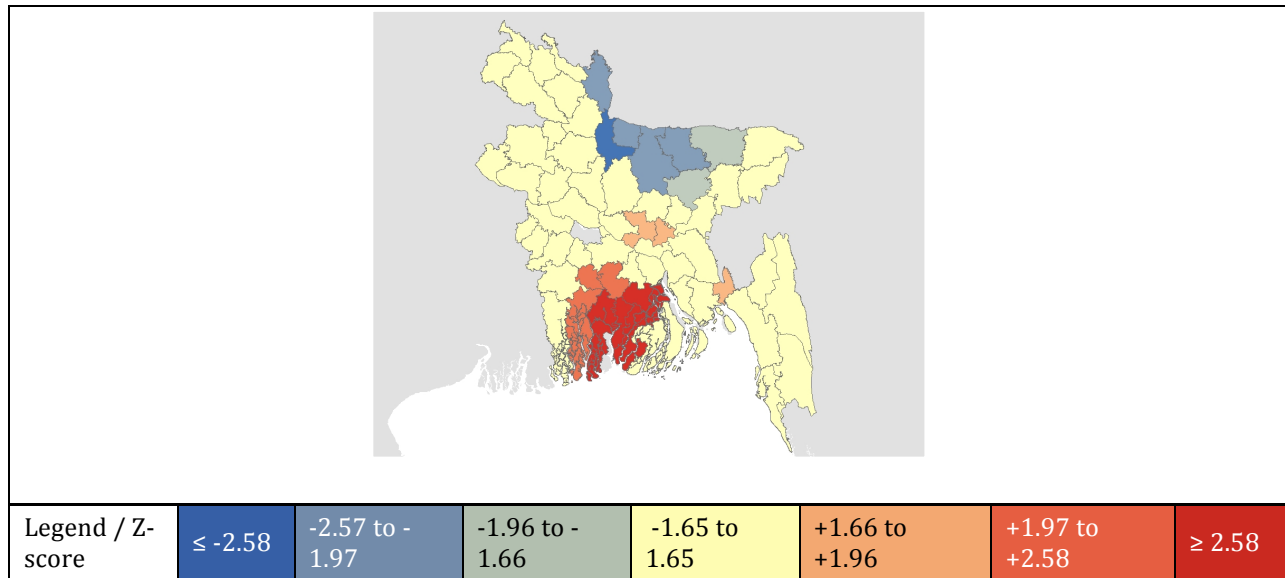
The hotspot map of literacy in Bangladesh in Figure 12.9 generated by the author adds further evidence for the tendency for higher literacy clustering along both coastal and capital areas, and markedly lowers literacy rates deeper in the countries interior. The hotspot map also shows that districts, which border the higher educationally performing Indian states of Tripura and Mizoram, do not have significantly higher outcomes in Bangladesh. Finally, the map shows a higher number, and higher intensity of literacy hotspots compared to cold spots suggesting that there are more higher achieving than laggard districts, though again with a national average of 43.8% literate, even the most literate districts remain desperately far from achieving universal education.

Table 12.6 Bangladesh Literacy Statistics

	Mean	Range	STD	Count
Literacy rate 2010 Districts	43.8	37.9	8.5	64

Source: generated by author with data Government of Bangladesh, 2003

Figure 12.9 Bangladesh Literacy Hotspot



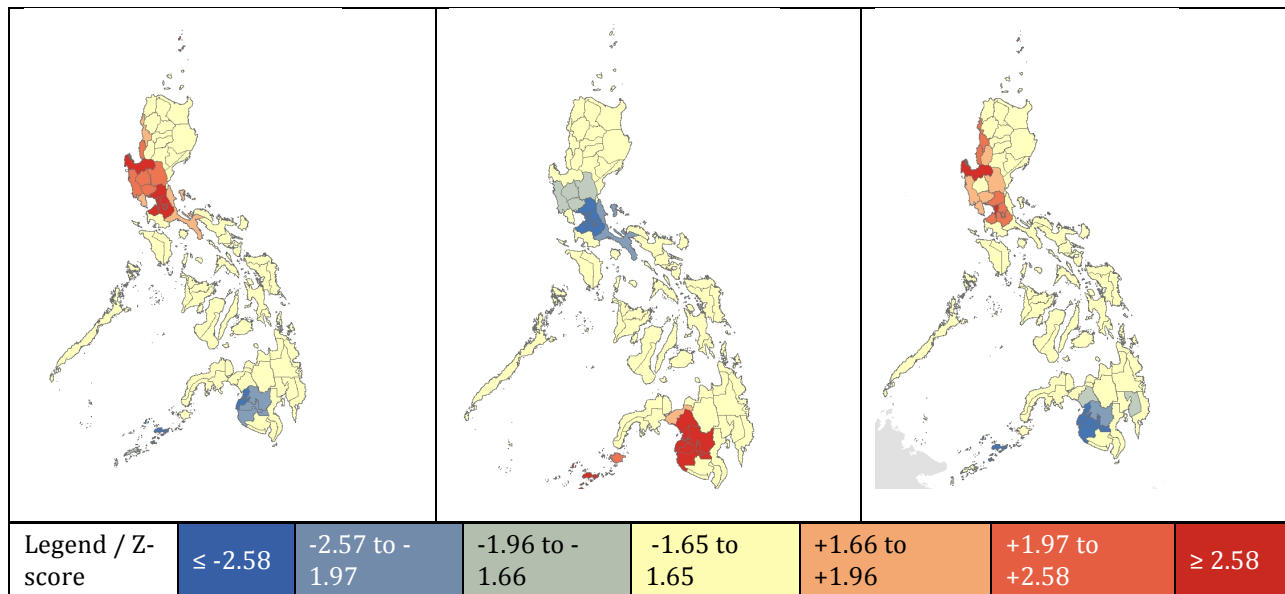
Source: generated by author with data Government of Bangladesh

12.5.4 The Philippines

Moving eastward from South Asia, the Philippines had more types of educational data available and was more accessible at different special scales than any other country in the region covered in this chapter. Not only were literacy, absenteeism, and average years of schooling data available at the provincial level, the results of the nationally administered tests across several subjects were also freely available. Sub regional results from the internationally administered TIMSS tests conducted in the Philippines are also available, though often at the regional level. The Philippines also had a great deal of multi-year panel data available as well across a variety of topics other than the educational sector. It should be remembered however, that the Philippines educational data was scattered across several sources, and departments and had a higher number of broken Internet links than in other countries. Furthermore, one unspecified and unlabeled government source claiming to be a complete survey of literacy and student out of school rates at the very locale Barangay level included far less than half of the Barangay in the country. In searching the Internet for data on Philippines educational outcomes, the researcher also found that in cases where unsecured data on individually named students' test scores were published online, bringing up privacy concerns.

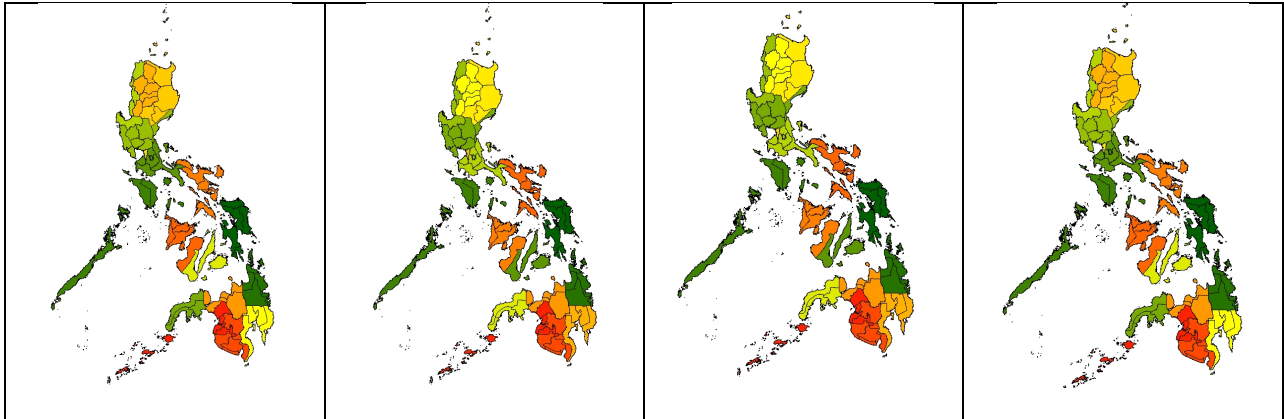
Spatially speaking the Philippines data shows a very different distribution of educational outcomes than India. Where as in India higher ASER outcomes rates are not associated with proximity to the national or even state capitals, in the Philippines divisions between more equitable and higher educational achieving provinces are in the north (especially in Manila) and less equitable educational distributions are found in Mindanao with the Visayas provinces in between. In all of the hotspot maps below, a nearly identical spatial overlap between more desired and less desired results exists along these lines in the average years of schooling (MYS), educational GINI, and educational index hotspots maps below.

Figure 12.10 Philippines MYS 2008 (left); 2008 Philippines eGINI (center) Educational Index 2011 (right)



Source: generated by author with data from Government of Philippines various sources

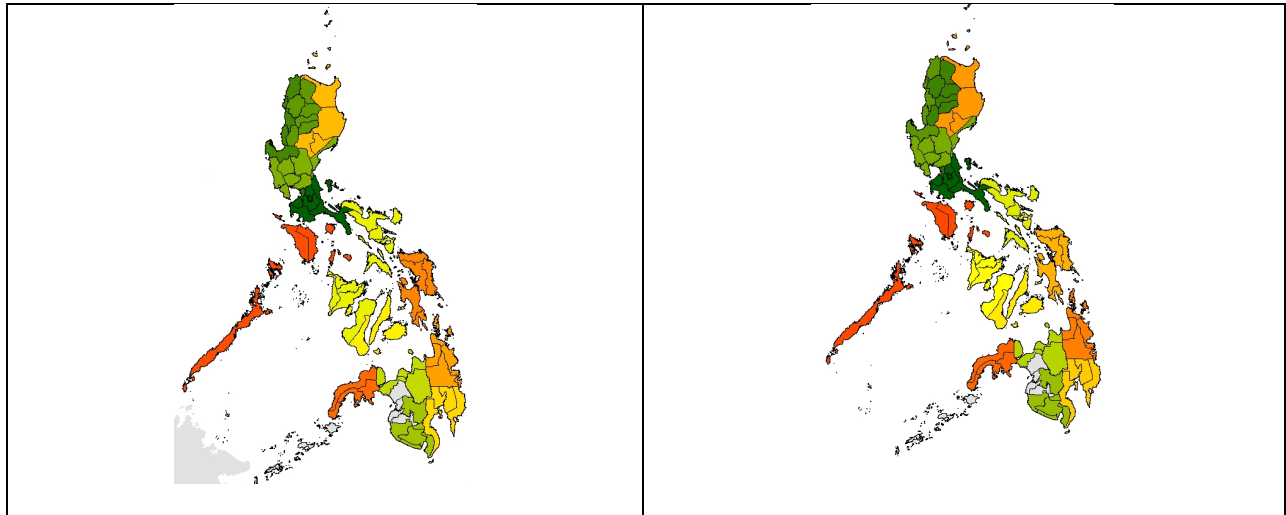
Figure 12.11 Mean National Achievement Scores (from left to right) in Filipino, English, Science, and Mathematics 2008



Source: generated by author with data from Government of Philippines 2008 various sources

Looking at the regional mean of the National Achievement Tests (Figure 12.11) across Filipino, English, science and mathematics scores, one can see that there is little difference across subjects in the positional ranking of different regions. Moreover, the same low-achieving provinces of insurgent Western Mindanao in the Autonomous Region of Muslim Mindanao (ARMM) do consistently worse across all subjects than other regions. It is also worth noting that the urban provinces in and around Manila are not the highest achieving regions in the country as there are stronger results in southern Luzon in Region 4. In the mean national achievement test, maps generated above there are outliers that do not conform to the general north-south patterns. Across all four tests, Regions 13 and 8 in the south and east are the highest achieving regions in the country and Region 6 in the northeast is a consistently lagging region compared to its neighbors.

Figure 12.12 TIMSS math and science Scores by region

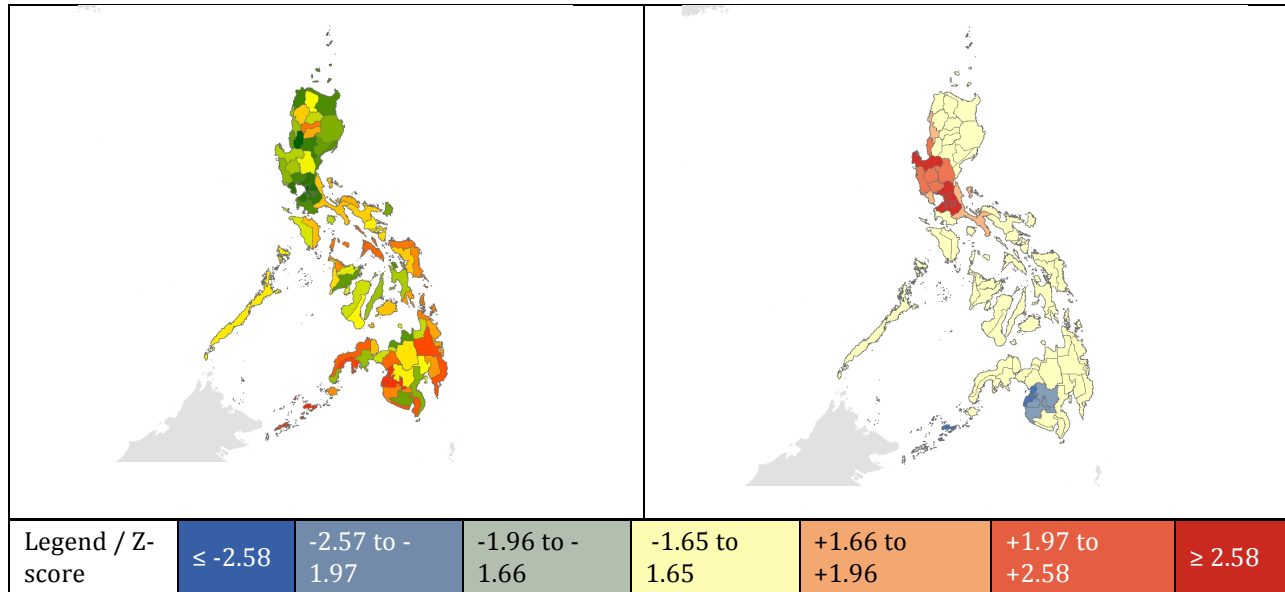


Source: Government of Philippines Various Sources

The Philippines is the only country in the region to release sub-national results from internationally administered TIMSS test on math and sciences data at the regional level from the 2007 wave. Surprisingly, despite the fact that the TIMSS test and the national achievement tests both covered the same math and science subjects at roughly the same grade level, the spatial difference between mean scores between the two tests are notable. For instance, the relative positions of performance in the ARMM and the neighboring Region 9 are reversed. Mindanao actually performs much better than the national average in the internationally administered TIMSS and PIRLS tests. In the internationally administered test there is a concentration of skills in the urbanized and more developed regions of Southern and Western Luzon, especially in the Luzon districts of Region 4. A finding that would be more consistent with the capital city high performance found in Thailand and Bangladesh. This shows a closer match to Myrdal's prediction that higher performance would cluster primarily in urban- capital areas than was shown in the Indian map in previous chapters. Although there is a lack the data to test the idea further, it may also be that the national test is more culturally biased toward the dominant Luzon culture and politics and away from that of Muslim Mindanao compared to the internationally administered TIMSS test which may be more culturally neutral. Here again it would be useful to see have data available at a more localized level than the regional scale to compare results more fully between the nationally and internationally administered tests,

and to have a dataset large enough to perform hotspot analysis to uncover deeper patterns of concentration of higher and lower educational performance in the data.

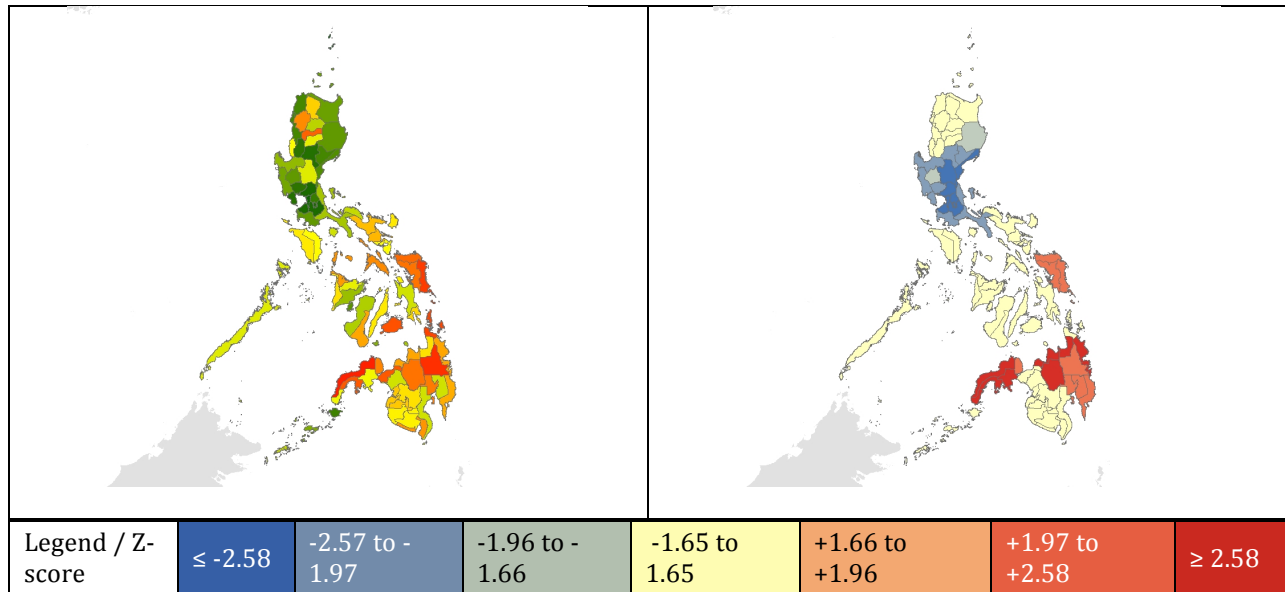
Figure 12.13 Philippines 2010 Human Development Index (left)



Source: Government of Philippines various sources

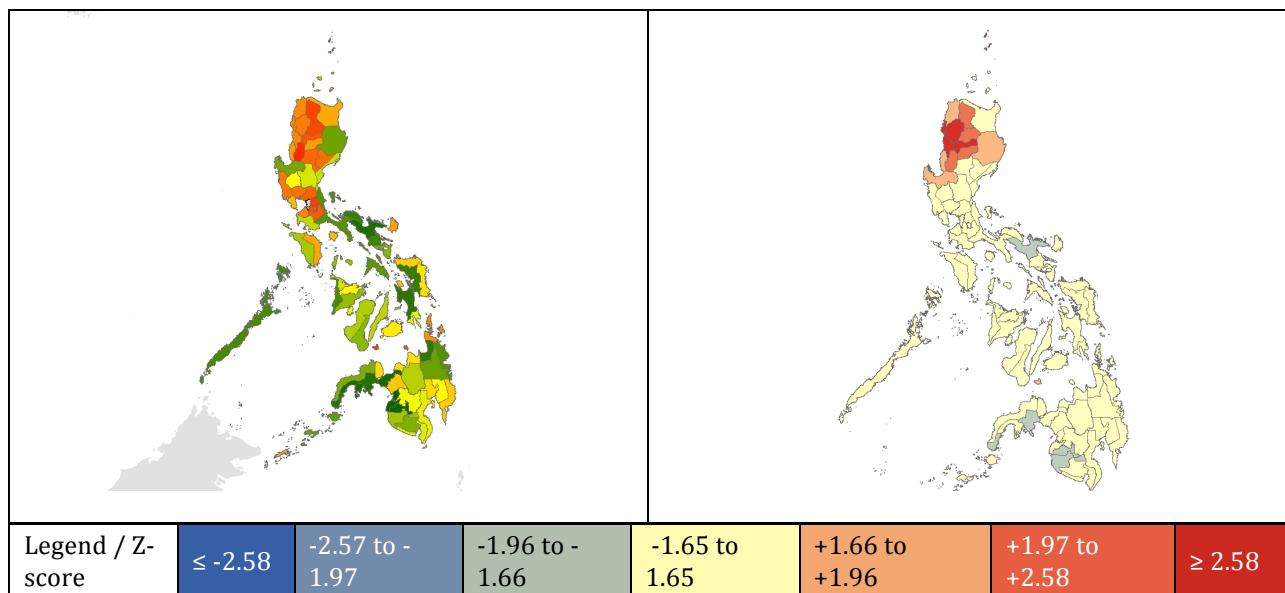
At the provincial level and outside of the education sector in the Philippines, other measurements of development and deprivation including HDI scores (Figure 12.13), poverty severity Figure 12.14, and to a slightly lesser extent, good governance Figure 12.15, also fit the established north-south polarity based. However, the raw value maps in each figure also show that there are outlying districts of better performance in the mostly poorly performing Mindanao and lower performing districts in Luzon, specifically in Abra and Ifugao Provinces.

Figure 12.14 Poverty Severity Raw values and hotspots



Source: Government of Philippines various sources

Figure 12.15 Good governance raw values and hotspots



Source: Government of Philippines various sources

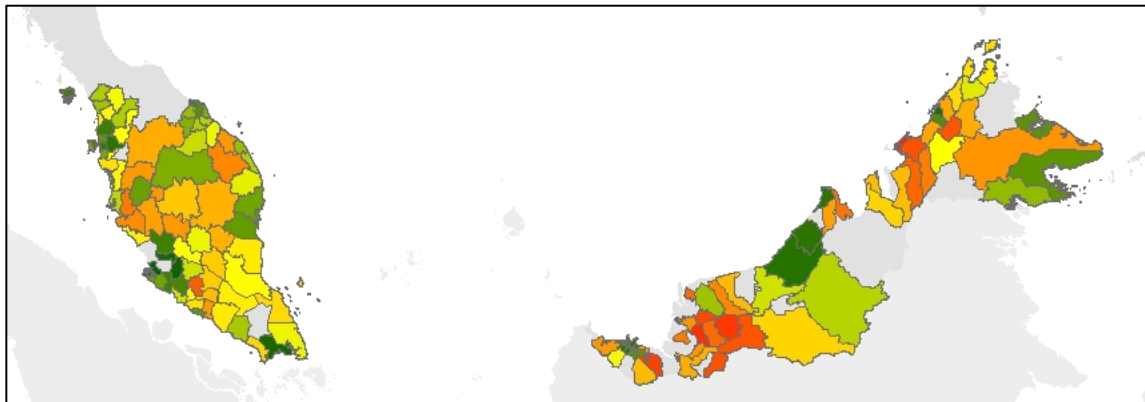
Based on the discussion on the spatial distribution of education and general development data above, the Philippines results validate several of Myrdal's hypotheses. Most clearly the spatial component to his circular and cumulative causation model

(outlined in Section 5.2.1) that in societies with lagging development higher skills and better outcomes will tend to cluster in administrative centers, and that backwash effects will keep lagging regions lagging.

12.5.5 Malaysia

In addition to joining the international assessment tests as discussed above, Malaysia also conducts a series of its own national examinations including the UPSR conducted at the completion of primary school, the PMR at the end of lower secondary school, and the SPM at the end of secondary school modeled on the O-level test inherited from the British educational system. The exams are increasingly difficult and take into account a wider number of subjects that differ from the international tests, but all include aspects of basic literacy in Malaysian and English as well as science and math (Malaysia MoE, 2012). However, as is characteristic of the statistics gathered in the region, there is a lack of spatial information on the geographical distribution of the scores in the country as most statistics are aggregated nationally.

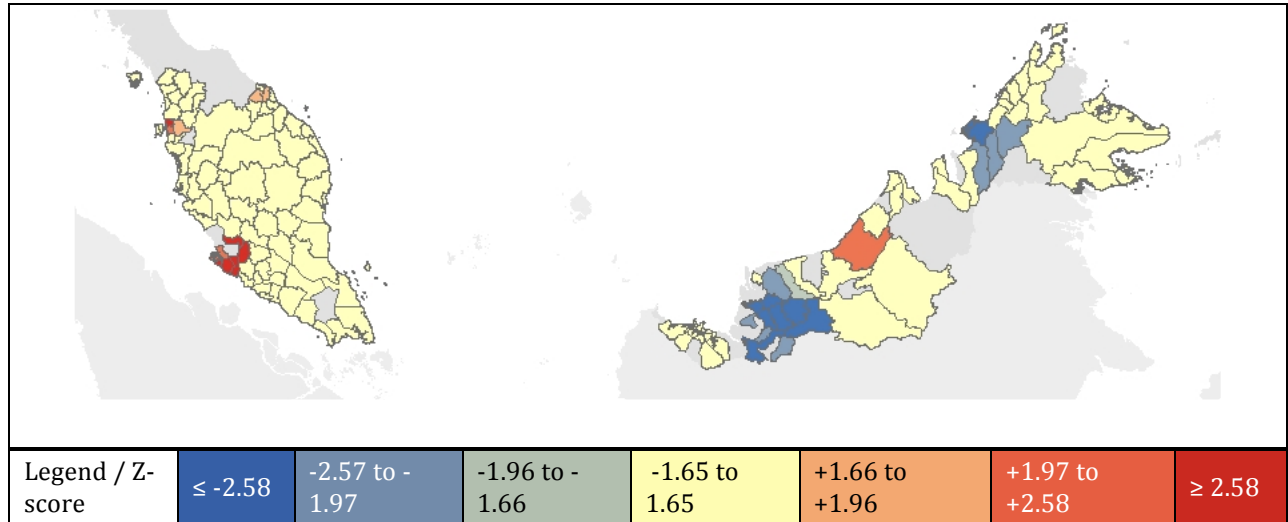
Figure 12.16 Malaysia UPSR test scores 2011 Raw Values



Source: Malaysia MoE, 2012 map generated by author

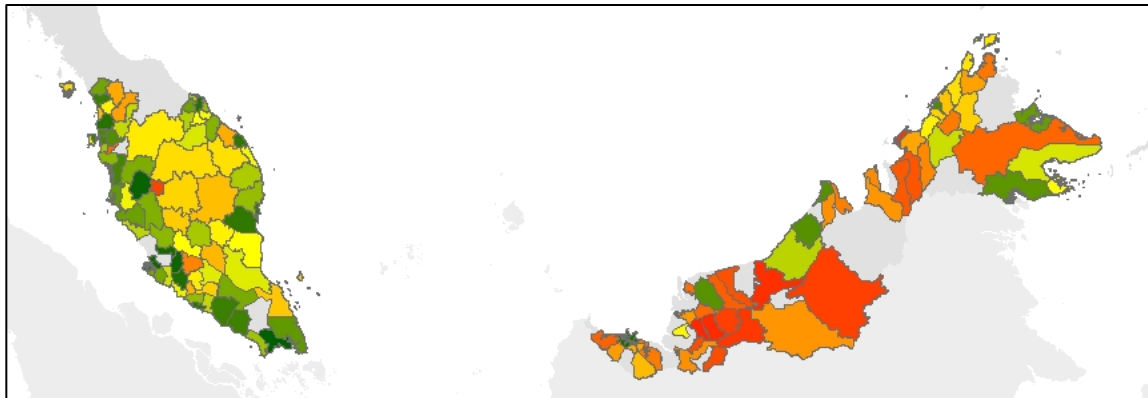
Mapping the UPSR Scores from 2011, it is possible to see that there are a high number of null values at the district level, and that scores in the country are higher around the primary cities of Kuala Lumpur, Kota Baru and Georgetown/ Butterworth, and are lower on Borneo in Sarawak and Sabah. This is reminiscent of the Philippines example above between the Luzon achievement rates and those of the far south.

Figure 12.17 Malaysia USPR Test Results Hotspots 2011



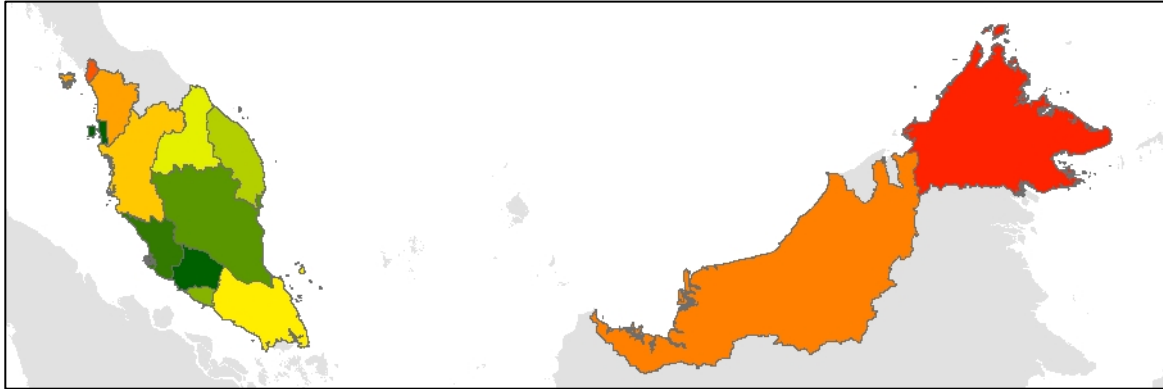
Source: Malaysia MoE, 2012

Figure 12.18 Percent of population with tertiary education



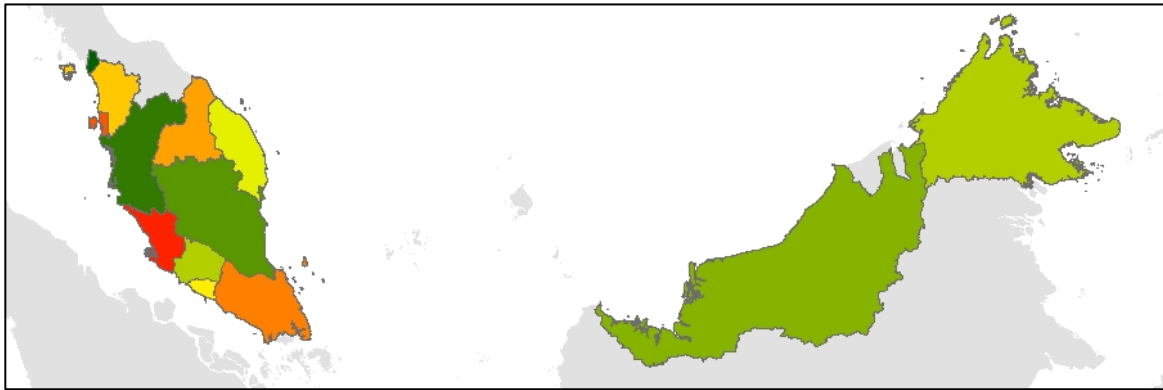
Source: Malaysia MoE, 2012

Figure 12.19 Average percent UPSR (primary test average)



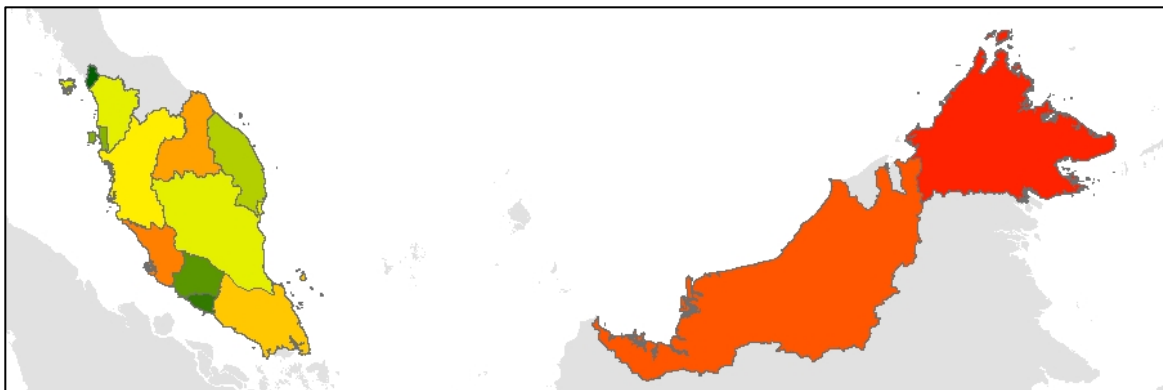
Source: Malaysia MoE, 2012

Figure 12.20 TPR rate primary school



Source: Malaysia MoE, 2012

Figure 12.21 No Formal education percent of national

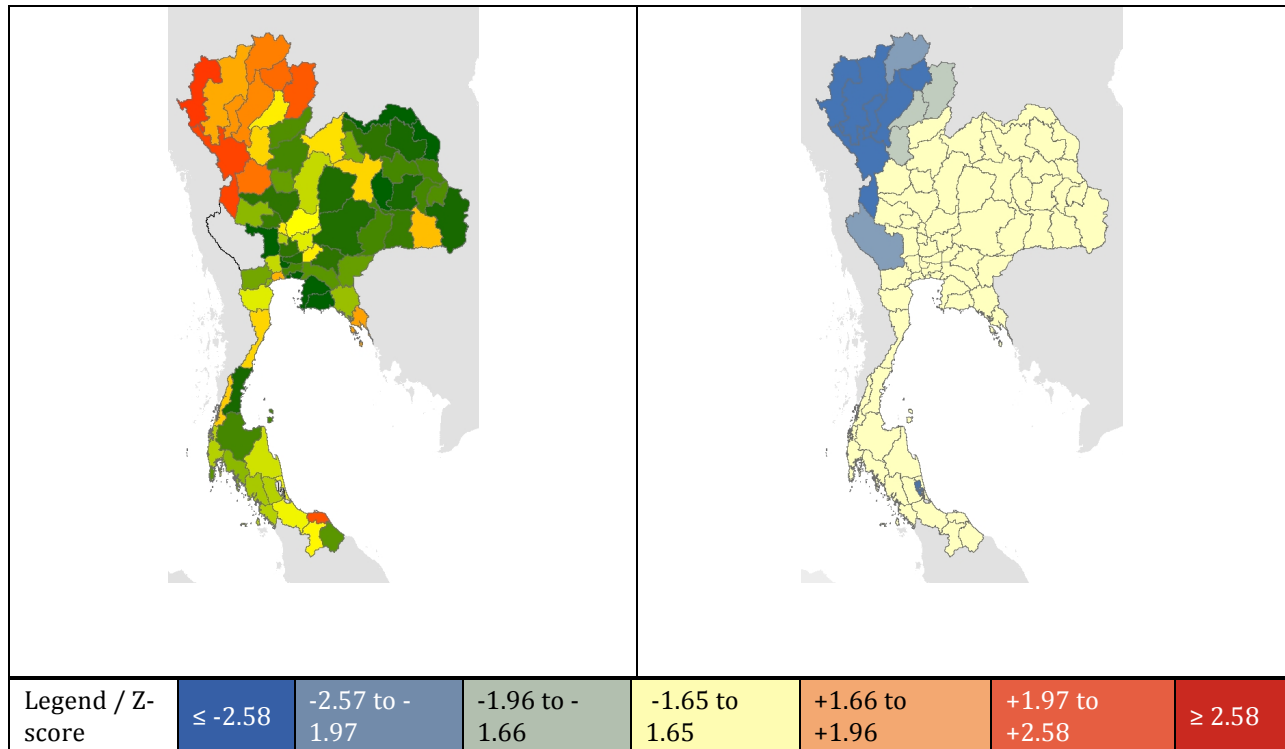


Source: Malaysia MoE, 2012

12.5.6 Thailand

Similar to the previously mentioned cases of Bangladesh and Sri Lanka, there is a lack of available data in Thailand for nationally administered test scores or other educational student outcomes at the provincial or district level. Furthermore, in Thailand, like the Philippines, data is often aggregated into somewhat arbitrary regional groupings putting several provinces together. This obfuscates the usefulness of the data and prohibits the ability for hotspot analysis to be conducted given the low number of regions and limits discussion on spatial patterns. It should also be noted that at the time this research was conducted the data for Kanchanaburi province was unavailable and is the only null value across all of the maps presented.

Figure 12.22 Thai Provincial literacy data 2010 Census



Source: Thai Provincial Data from 2010 Census

Strangely, the Thai provincial literacy data from the 2010 census shows a somewhat different distribution from the other maps in this subsection. In nearly all of the succeeding maps, there are hotspots of stronger performance or outcomes in Bangkok and in its surrounding provinces with cold spots of lower performance in outlying areas. Instead, in the literacy map in Figure 12.23 above there is no such Bangkok hotspot of higher literacy,

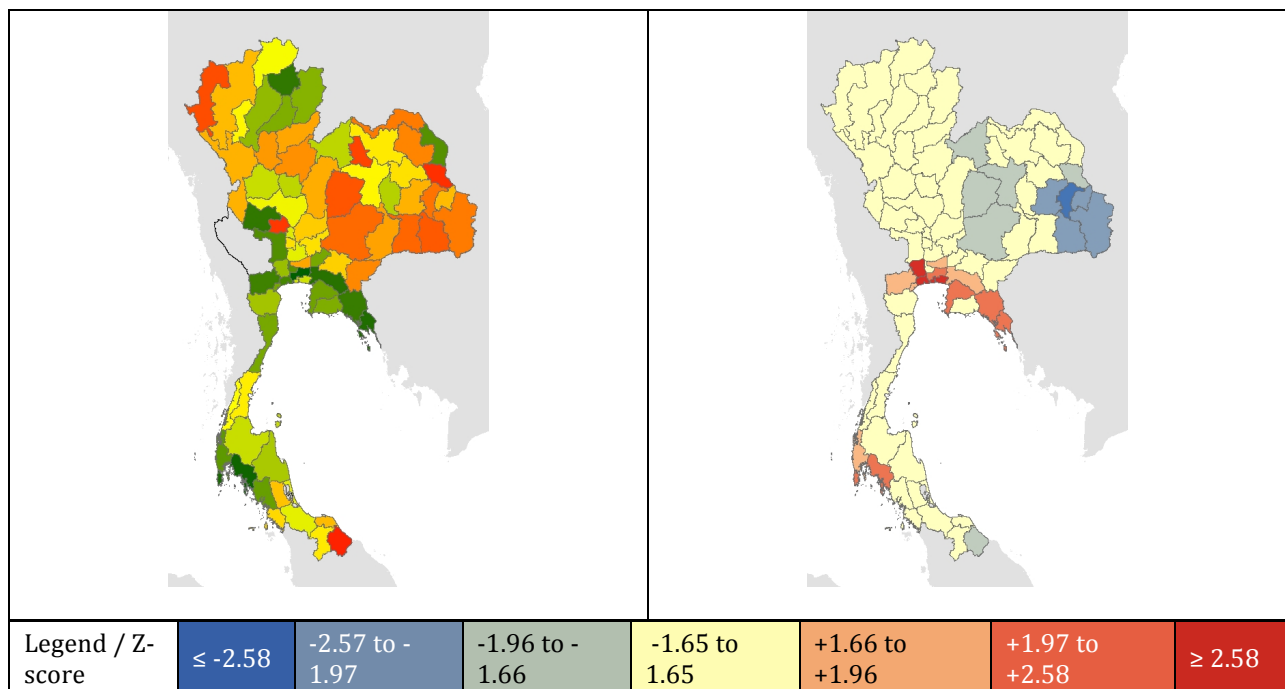
and instead there is only a fairly deep and extensive cold spot of lower literacy rates in the far northwest especially in Chiang Mai, Chiang Rai, Mae Hong Son, Lamphun, and Tak provinces. Because documentation on the collection methods used in the study only collected data on literacy in Thai and English were recorded, this could be due to the presence of lower literacy in hill tribe groups or perhaps among other non-Thai speaking ethnic groups. It should also be noted that despite the cold spot in the northwest, literacy rates across Thailand are actually very high throughout the country, especially when compared to South Asian countries, which may also explain the lack of a Bangkok hotspot in 12.7 below.

Table 12.7 Thailand Literacy Statistics

	STD	Range	STD	Count
Literacy rate2010 Province (minus Kanchanaburi)	97.6	22.6	3.6	75

Source: Thai Provincial Data from 2010 Census

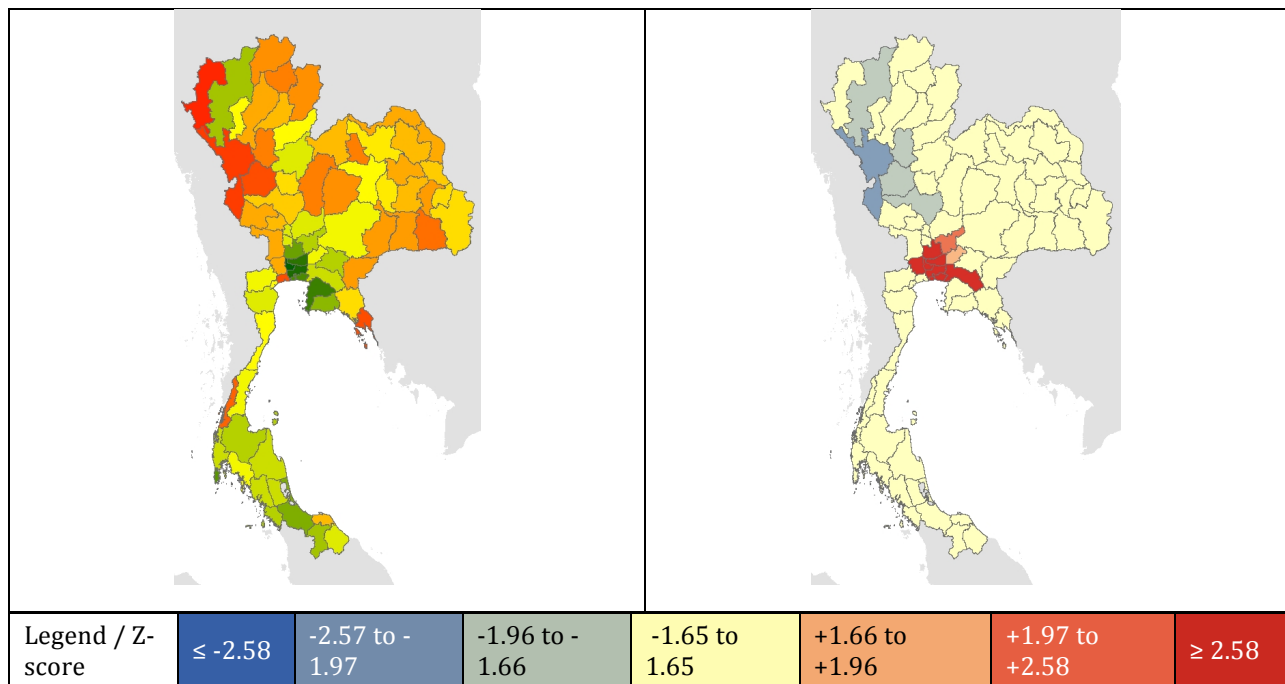
Figure 12.23 Thailand Quality of Education 2011 Hotspots map (excluding Kanchanaburi)



Source: Thai Provincial Data from 2010 Census

The Thai quality of education hotspot⁵ map is more exemplary of the general spatial distribution of educational issues in Thailand. Like other countries in the region, Bangladesh in particular, there is notably higher performance in the capital and coastal regions along shipping routes in this case a clustering of higher capabilities around Bangkok, Nonthanburi, Nakhon Pathom, Chonburi, Chanthaburi, and Trat and a second cluster of higher performance in the developed tourist areas around Phuket and Karabi in the Southwest. Thailand also follows the pattern of a clustering of low achievement areas in the inland areas that are culturally more different than the center with clustering of lower educational index achievement in Narathiwat Province and in the far south. However, the breadth of the difference between Bangkok and the periphery provinces is not as extensive or intense as the ARMM cold spot in the Philippines maps in Figure 12.9.

Figure 12.24 Thailand Average Years of Schooling



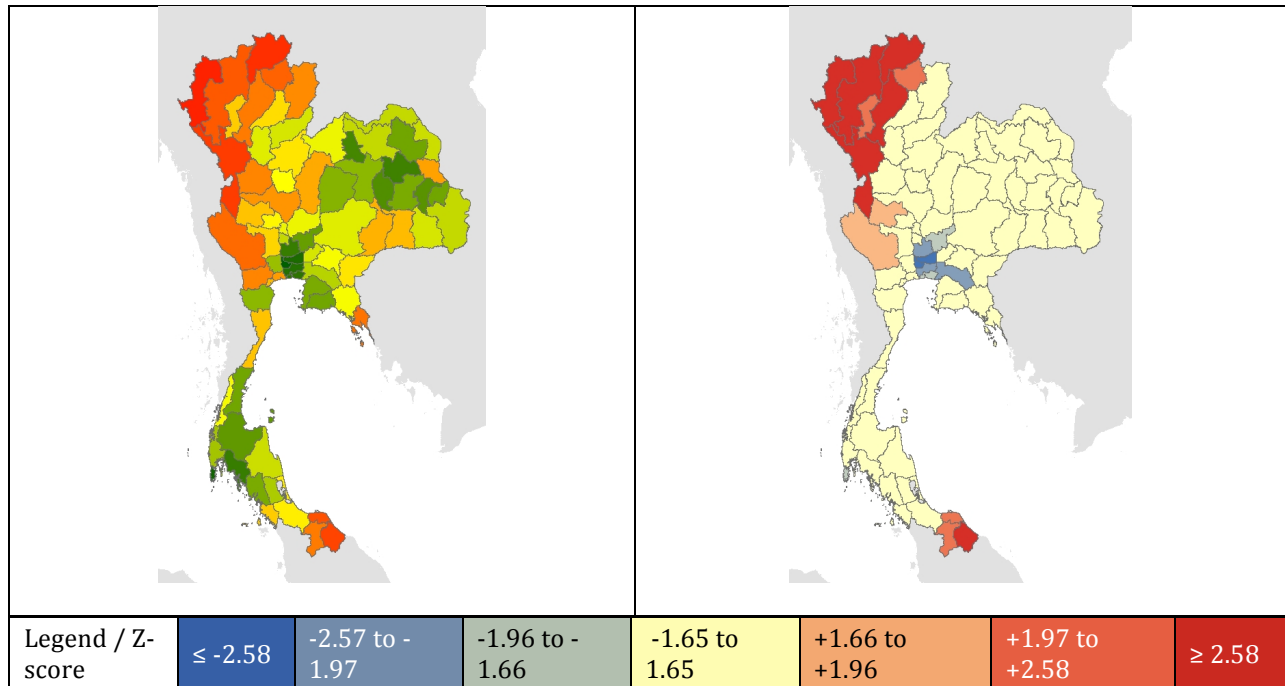
⁵ Emblematic of the Thai data as a whole, documentation on the components of the Educational Index and the methodology of its collection were unavailable.

Source: Thai Provincial Data from 2010 Census

In the average years of schooling map in Figure 12.25 above, there is an even stronger hotspot centered in Bangkok than in the other maps. In this case, the statistically significant hotspots of higher years of schooling are not present in and around Phuket province. Moreover, significantly fewer years of school are found along the Myanmar border in the west.

Finally, using the Thai educational data collected by the Census and conducting the hotspot analyses on the eGINI coefficient in Thailand, the common spatial pattern of a far more equitable distribution of education in Bangkok and more unequal distribution of educational achievements in both the far west and in the rebellious far south. This very much adheres to Myrdal’s conception of the likelihood for the geographic processes of cumulative and circular causation to concentrate educational services into the elite core.

Figure 12.25 Educational GINI coefficient raw values and Hotspots



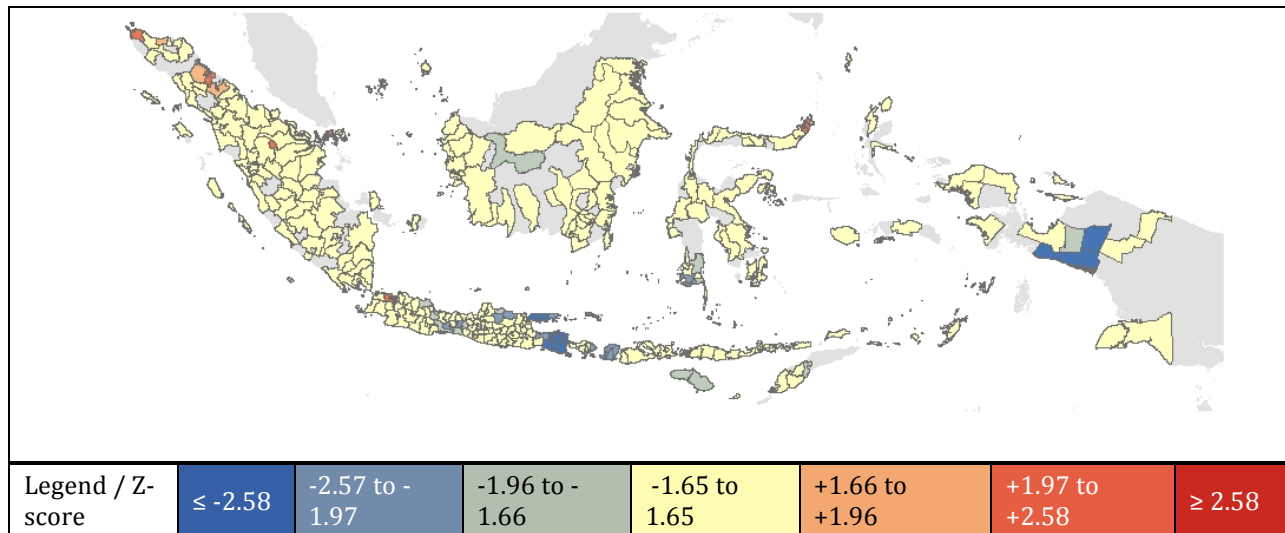
12.5.7 Indonesia

Indonesia educational data divided at the provincial level was more easily accessible than in other countries through the Badan Pusat Statistik Republik Indonesia web porthole (Republic of Indonesia, 2013). However, as in other countries previously mentioned, the data available had a great deal of unneeded acronyms listed without an accompanying description of the meanings or methodologies on how the data was collected. Other issues also existed in the data accessibility. First, like the Indian situation the data was available at the state / provincial level rather than at the district / regency level. Unfortunately, literacy data from the most recent 2010 census was not yet available yet at the local regency level. Furthermore, what data was available has a far higher percentage of null values compared to the Indian census and ASER data, although this also varies by region. Java has few null regencies, while the “outer” islands have more, and Irian Jaya Barat has more null districts than districts with data reported.

The spatial distribution of basic education in Indonesia shows a different pattern of spatial education inequality than in capital- periphery model described in the previous countries described above. In the Indonesian case, there is much less clustering at the regency level than at the district or province level in other countries, especially compared to the strong regional clustering in India. In Figure 12.27 below, there is little clustering of MYS in the country with the important exception of Irian Jaya Barat. Throughout the section, IJB has few regencies reporting data and those that do have low level of education levels completed. It is also worth noting that the more industrialized island of Java does not have a higher clustering of higher MYS than the other islands. In fact, regencies in East Java actually have a cold spot of lower MYS rates than the national average. Also, in Indonesia the higher MYS in Aceh differ from the previously established link between separatism and more unequal, or lower, education levels as seen in Pattani, Narathiwat, and Yala in Thailand, and in ARMM in Mindanao in the Philippines. However, in Indonesia another regional trend of higher educational outcomes in the more Christianized areas seen in Kerala, Goa, and in the northeaster states of India can also be seen in Gorontalo, Sulawesi and in the Batak areas of North Sumatra. Also similar to India, Indonesia has a tendency for

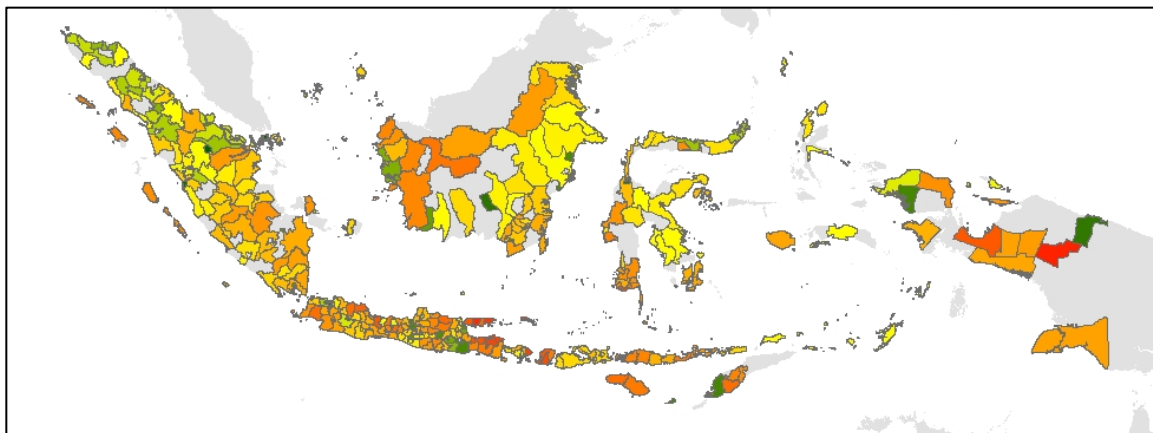
higher educational values to cluster along the Western coasts and in port cities such as Padang, Medan, Manado, and Jakarta (though strangely not in the second largest city of Surabaya). The same spatial hot and cold spot patterns can be seen clearly in the literacy map in Figure 12.27.

Figure 12.26 2002 MYS from UNDP Report.



Source: (Statistics Indonesia, 2013)

Figure 12.27 Mean MYS 2002 Raw Values (green are higher red lower)



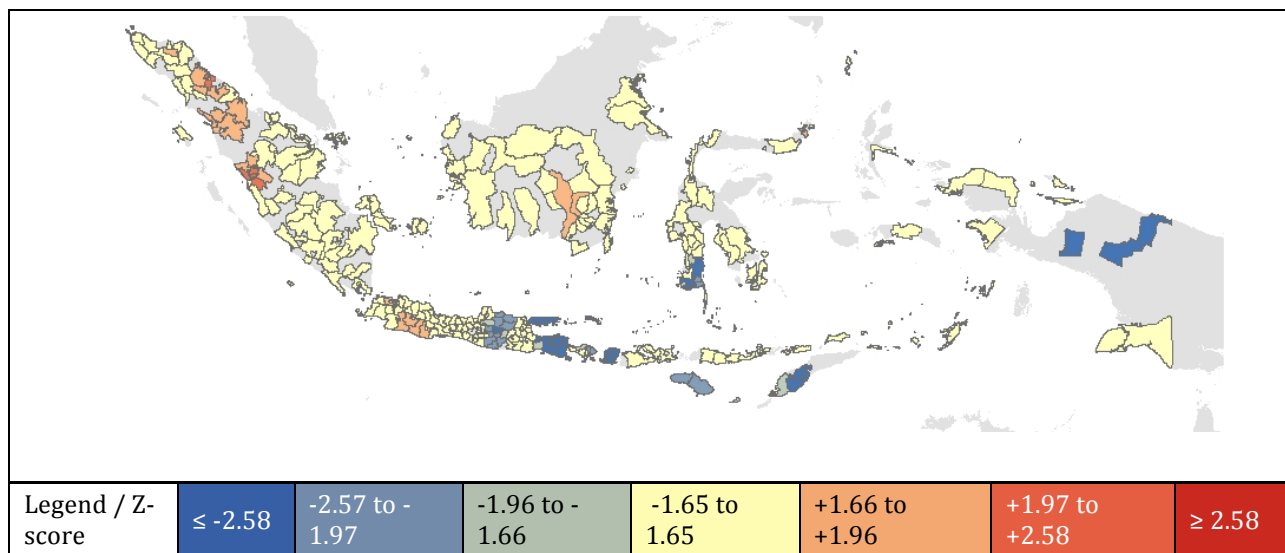
Source: (Statistics Indonesia, 2013)

There are many more and wider hot and cold spots in literacy rate map than there are in MYS maps. However, this must be attributed to the differences in the type of data itself. Again, literacy rates are higher in northern Sumatra and are lowest in southwest

Sulawesi, East Java and, of course, in PNG. For its part, Kalimantan in both the MYS and literacy map shows very little spatial difference, however this could be in part due to the few number of regencies compared to Java's denser populated and sheer number of districts.

Despite handicaps and limitations in the Indonesia data set, the data that is available shows that there are both fewer and less intense hotspots in Indonesia than in India. Considering that both India and Indonesia entered national independence with very low literacy and education rates (Section 1.1) it can be said say with some certainty that, with the exception of Irian Jaya Barat, Indonesia has gone farther than India in achieving universal literacy as well lessening spatial inequality between districts.

Figure 12.28 Indonesia 1999 Literacy rate hotspot map



Source: Statistics Indonesia, 2013

12.6 Chapter Summary with Reference to Research Questions

In this chapter, the spatial distribution of educational outcomes of countries other than India included in the study region were analyzed. First, the variability in the methodology and accessibility of subnational data on educational outcomes between countries was compared in order to answer Research Question 2.2. Here it was shown that the indicators used had been greatly improved in terms of accessibility, reliability, and certainty compared to the 1960s when Myrdal's conducted similar research. However,

despite these improvements, there remains a plethora of weaknesses in the data that is suggestive of a softness in the educational sector, especially in the accessibility of the data in government websites. Furthermore in no country was subnational data offered in map form. Also with regards to the data, there appears to be far more data collected on the quantitative issues of education especially Gross and Net Enrollment Rates (GER/ NER) compared to data on actual student outcomes. Thus, with regards to Research Question 2.1, governments in the region do appear to continue prioritizing quantitative enrollment data over qualitative as Myrdal suggested that they stop doing.

Chapter 13 Summary, Conclusion, and Recommendations

13.1 Chapter Summary of Theoretical Chapters 1-9

The first four chapters in this dissertation offered a theoretical analysis of Myrdal's major larger contributions to the developmental literature outside the field of education. These chapters served several simultaneous functions and were similarly organized. Each began with an introductory contextualization of the respective into the period in which Myrdal penned *Asian Drama*. This was followed by a summary of Myrdal's theoretical contributions to the different topics, and their relationship to his contemporaries. Next, those ideas were tested against the larger developmental theoretical movements that have occurred subsequent to *Asian Drama*, and a discussion of how they applied to development Southern Asia was given when possible. In these theoretical chapters, the author was primarily concerned with answering Research Question 1 regarding Myrdal's larger theories, and as such, only briefly mentioned educational issues specifically.

The second chapter focused on Myrdal's critique of the theoretical underpinnings, indicators, and the need to integrate social indicators into the field of developmental economics. More specifically, the chapter argued that the 1974 Nobel Prize serves as a useful ideological fork in the road in development economics between the human development approach that Myrdal encouraged, and the neoliberal approach championed by Von Hayek. This chapter also traced the development of indicators subsequent to the publication of *Asian Drama*, and whether, and where the specific indicators Myrdal felt were useful were taken up by the international community and subsequently collected. The chapter concluded that the theoretical underpinnings of Myrdal's critique on developmental economics remain nearly as relevant now as it did in the late 1960s. However, despite Myrdal's influence on the development discourse, the neoliberal approach has dominated much of the actual policy planning in practice.

Where the second chapter presented Myrdal's disagreement with neoclassical and the nascent neoliberal economics, the third chapter discussed his complex relationship

with the social sciences and the larger modernization school in the immediate Cold War period and beyond. In particular, this chapter parsed Myrdal's understanding of modernization and development and the need for--and difficulty in-- integrating "indigenous" values with rationality as a reformed modernization project. Further, this chapter also closely examined Myrdal's reformist vision of modernization against that of his mostly Western contemporaries. Particular attention was paid to the to the need to change social attitudes and values as part of a transition from "traditional" to "modern" societies. The conclusion of the chapter posited that Myrdal's reformist vision of modernization, for the most part, avoided the excesses of the most polarizing mid-century advocates of modernization and the extreme relativism of more recent post- modernist, post-developmental, and post-colonial critiques; but was mostly abandoned in the fall of the Modernization school as a whole.

The fourth chapter addressed Myrdal's suggestion that the state use its power to actively promote social and economic equality; and how this view separated him from his American contemporaries, especially the structural functionalists, and later the neoliberals. Looking at the changes in the development discourse subsequent to the *Asian Drama* with regards to inequality, it was shown that Myrdal's stress on the issue was adopted by the BNA theorists in the 1970s, but fell into decline with the rise of the neoliberals. However, more recently, the issue has resurfaced in popularity, in part, due to the publication of *Capital in the 21st Century*, and the general spirit of civil unrest throughout the world in the 2010s relating to structural inequalities. This chapter also laid the theoretical groundwork for the discussion of spatial inequality in the empirical chapters in the second half of the dissertation beginning with Chapter 8. From this point, the relationship between inequalities, as Myrdal viewed them, was assessed in light of the rise of globalization. Finally, the chapter compared Myrdal's perception of inequality to that of Amartya Sen's, especially with regards to his addressing of the issue in his most recent book, *An Uncertain Glory*, and their shared view on the importance of the issue with regards to Indian development prospects.

The fifth chapter of the study looked at Myrdal's prescient understanding of spatial inequalities and the cumulative and circular causation approach with attention to the

geographic components of the approach. In that chapter, the differences between Myrdal and his contemporaries are compared and contrasted, but the bulk of the chapter discusses the ways in which globalization has impacted the usefulness of Myrdal's analysis. This is done primarily through a survey of the literature on whether or not, and in which areas, globalization has led to more convergence or divergence in inequality in general, and in Southern Asia in particular.

In a rather lengthy discussion, Chapter 6 looked at the gap between Myrdal's normative view of the role that the state in Southern Asia should take in developmental planning, as well as his positivist view that the state as it existed was inadequate given the enormity of the task it set for itself. In particular, the chapter addresses the role that nationalism played in Myrdal's modernization views; what Myrdal saw as the weakness of relying on markets in the region; and the contours of his 'soft state' thesis. This is followed with a comparison between Myrdal's 'soft state' and the subsequent conception of the developmental state, especially as it manifested in Northeast Asia. From here, the chapter compared Myrdal's 'soft state' concept against subsequent incarnations and normative views of the state, including from the neoliberal perspective. In these different conceptions of the normative role of the state in development pressures on the Myrdal's conception are considered. Ultimately however, the chapter concludes that the conception of the 'soft state' has had a lasting legacy, but that his normative view of the state as the monopoly actor in development has become somewhat antiquated with the rise of NGOs and other non-state actors.

Chapter seven transitions the discussion away from the more theoretical aspects of the *Asian Drama* and towards the educational sector. The chapter was intended primarily for background on Myrdal's larger views of the educational sector and the magnitude and nature of the reform he envisioned. This chapter also discussed the non-spatial aspects of his discussion (fiscal and curriculum issues for example) that are not tested in the subsequent Chapters 9 through 12, but are nonetheless important in understanding the nature of the Indian education system.

Beginning with Chapter 8, this research explored the spatial aspects of basic education attainment in the study region. The chapter began with a brief summary on defining the parameters of Myrdal's understanding of functional literacy, and then compared those to the major trends in the discussion. Doing this, it was shown that his view of the importance of functional literacy has largely withstood conceptual challenges that included an inflation of the term, and a postmodern critique of literacy itself. From here the dissertation employs spatial analysis of adult literacy, ASER attainment rates, and absenteeism at the district level. This is conducted first in India nationally, and then in larger states of the country individually, and in comparison with one another. From this process, Myrdal's prediction that student absenteeism had only a minor relationship to student skills, is mostly verified. The chapter also provided evidence on the relationship between the subnational state and educational outcomes. Based on Myrdal's stress on useful basic skills being imparted as the most important goal of the education sector, the spatial distribution maps of student outcomes generated in the chapter were used as the base layer against which other exogenous and endogenous factors in the education sector were measured against in subsequent chapters 10 and 11.

Chapter 9 Looked at the spatial relationships between exogenous factors in the educational sector and student capabilities rates including, the district's decadal growth economic rate, areas with higher than average percentages of scheduled caste and tribe populations, sex ratios, and areas with higher and lower recent birth rates. This chapter also analyzed on the relationship between private-public school administrations, as they are a feature uniquely suited for testing the 'soft state' and was also frequently referenced in the subsequent Chapters 10 and 11. The findings from the empirical spatial analysis from Chapters 9-12 are discussed with relationship to the research questions presently.

13.2 Findings related to the Research Questions

Research Question 1: Are Myrdal's theoretical contributions in *Asian Drama* relevant to the development discourse?

Using the two-track method of comparing and contrasting Myrdal's theories from his contemporaries and from subsequent theorists, the author can conclude that some of

Myrdal's theories have been found to be more resilient than others. His critique on neoclassical and by extension neoliberal economics and econometrics have clearly been incorporated into the mainstream of the discipline, despite the fact that Myrdal is rarely given adequate credit for planting the theoretical seeds of the heterodox position in economics. Second, Myrdal's stress on the interrelated need for state attention to address social and economic inequality in development, and the symptoms and consequences of the 'soft state' also retain a great deal of relevance the problems facing countries in the region. Many of Myrdal's predictions and policy prescriptions have become a major feature of the current economic discourse as shown by the popularity and impact of Thomas Piketty (2014) in particular. Another lasting contribution from *Asian Drama* is the suggestion that development (or modernization) should be suited and situated to the particular social cultural contexts of different regions rather than trying to uncover universal maxims.

Compared to these useful contributions other theoretical aspects offered in *Asian Drama* have had more mixed results. His conception of circular and cumulative causation in both its spatial temporal aspects remain difficult to pass judgment upon given the nebulous way in which Myrdal conceived them and his adamant insistence that they remain "unmodeled". Other areas which Myrdal's analysis missed include the transformative importance of technology, the rise of NGOs, and most important of all, globalization. Furthermore, his conception of a highly activist state in social and economic affairs appears out to be of fashion in Southern Asian development policy appears to be moving towards a more bottom up approach, but based on the outcomes of the developmental state in Northeast Asia (and in Singapore) should not be ruled out. As a whole, this dissertation posits that Myrdal's theoretical contributions remain relevant to the development discourse, and represent something of a critical but reformist road between the extremes in the development discourse from the free market neoliberals, the command economy Communists, didactic ethnocentric Modernists, and relativistic postmodernist and postcolonial and post development theorists. However, just as in 1968 when the book was published, his nuanced position is drowned out by other more radical theories.

Research Question 2: Have Myrdal's theoretical and policy suggestions with regards to education sector in *Asian Drama* been addressed by countries and states in Southern Asia? and India in particular?

With regards to Research Question 2, it is shown quite clearly from Chapters 7 to 12 that though there have certainly been improvements in the educational sector, they have been so gradual that it is difficult to declare even a modicum of success when weighed against the goal of universal education. Where there have been successes in Malaysia, Thailand, and Indonesia, they have largely been based on concerted government efforts as Myrdal predicted. In the case of India, the state did not adopt enthusiastically any of the major recommendations Myrdal suggested, and continues to invest its relatively meager investment in the primary education sector resources on quantitative expansion of schools and the provision of facilities rather than on teachers, teacher training, curriculum reform, or mass adult education programs. Instead, the Indian education discourse is fixated on irrelevant issues such as the proper role of para-teachers. Access to meaningful data in the education sector at the sub-state level remains either uncollected, unavailable, outdated, or buried in poorly maintained websites in nearly every country in the region. Based on the data collected, reams of school participation rates are gathered as it remains the dominant measure of education, while the quality of teachers, teachers, methodologies, and student outcomes are almost entirely ignored. In conclusion, I offer with some certainty that Myrdal's normative suggestions on the contours of a reformed educational sector in Southern Asia (and India in particular) have not been adopted, and that his fears of the consequences of not addressing the weaknesses Myrdal targeted have largely come to fruition, despite the exceptions in some Indian states, and perhaps Singapore.

Where there are regional exceptions to the poor degree of universal basic education, we've showed that this is likely due to differences in state implementation, a finding itself consistent with Myrdal's analysis of the 'soft state'. If one allows that the education sector is a useful proxy for judging state competency as a whole (as postulated in the Introduction Chapter 1), then one has to accept that the state in Southern Asia remains soft and spatially inequitable. Thus, while Southern Asia hasn't imploded in the same way the Middle East has in the last forty years, much of the region remains in the limbo of

stagnation for much of its population. Finally, before moving to Research Question 3 and 4, the researcher was shocked at the disparity between the Indian media and academic attention given to minute details of the elite higher education issues, (especially the Indian Institutes of Technology) compared to the dearth of coverage or research on the primary basic skills sector. What little domestic research is conducted on education is often concentrated on proposed changes in history textbooks. The only serious look at the problem of ignorance in India appears to be conducted from non-Indians in the NGO and developmental community. Put together, this points to a shocking degree of elite disinterest in the plight of the poor in modern India.

Research Question 3: What is the spatial dimension of educational inequality in Southern Asia, and in India in particular? Research Question 4: How do spatial distributions of exogenous economic and social factors relate spatially to educational outcomes inequality in India?

Because of the similarities between Research Questions three and four, they can be addressed simultaneously. The promises to provide universal education and expand basic literacy were foundational cornerstones of the newly decolonized states of Southern Asia (Section 1.1). Chapters 9 through 12 provided a detailed analysis on the distributions of educational outcomes. Using the hotspot techniques, it was shown that there are indeed spatial patterns of educational inequality as Myrdal had suggested at several spatial scales. At the regional level, there is very wide gap between higher and lower achieving countries as measured by international testing, eGINIs, and MYS rates compared to other developing regions. There is also a gulf between South Asian and Southeast Asian countries as well. As Myrdal had predicted in his cumulative causation conception, the capital cities in most of the countries have much higher education rates than provincial areas, however this does not appear to be the case in India even when considering state capitals.

In India, student educational outcomes are exceptionally unequally distributed nationally and in lower performing states at the state level. States closer reaching universal literacy are more likely to also have less inequality between districts, and most educational issues were state delineated this suggests that state policy was a strong determinate of

outcome, also as Myrdal suggested. Also, as Myrdal had predicted with the cumulative causation theory, higher basic educational achievement was higher in areas with better “initial conditions”, in particular where education-minded Christian missionaries had an early impact especially in Kerala and in the Northeastern States. Another pattern that became apparent in educational geography in India, was the ability to identify lagging districts in a given state most notably Vishakhapatnam (western) and Vizianagaram in Andhra Pradesh; Bijapur and Bidar in Karnataka; and the tribal areas of eastern Gujarat. It was also possible to show that, in the educational sector, there is little evidence of a so-called “Southern model” because the educational characteristics between Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh were most often as dissimilar as those in other parts of India. In addition, there was scant evidence of a discernable difference between education outcomes in districts in the partition of Andhra Pradesh, especially when compared to other more educationally internally divided states like Odisha and Bihar.

The relationship between different exogenous and endogenous factors on one another, and on student outcomes was far more complex than Myrdal’s simplistic circular causation model suggested would occur. The same factor (for instance high percentage of tribal populations) often had very different effects in different regions. This adds to the wisdom of Myrdal’s recommendation that social and historical factors cannot be ignored, but on the other hand highlights the predictive limitations of his cumulative causation model. That said however, it was possible to show that, generally, the number, gender, and ratio of teachers to students and teachers per 100,000 population showed more spatial inequality India and had a more similar spatial geography to student outcomes than school and facility issues, also consistent with Myrdal’s analysis.

13.3 Suggestions for Future Research

Despite the breath of research this dissertation grappled with, there are several avenues left unexplored and are ripe for future research, most of which are in the educational sector. First, by focusing on the spatial aspects of education and the relative newness of indicator availability it was unfortunately methodologically impossible to address the temporal aspects of the circular and cumulative causation theories. Future

research will benefit from a longer set or panel data. Second, this research looked at the district level with attention to the distribution of educational issues within states in order to show a broader national picture of the spatial dimensions to educational issues. It is likely that the bulk of educational inequality occurs at the village level, thus future complementary research could examine sub-district scales and would benefit from more localized qualitative data. As hinted at in the previous section, future research on educational inequality should be conducted on fiscal issues and the gulf between the primary sector and the secondary and tertiary education sectors, issues that were outside the scope of the theoretical contours of this thesis. A particularly interesting avenue to address may be the spatial dimension of fiscal disparity between basic and higher education (especially in elite institutions). Additionally, an inquiry into the media's coverage of the education sector in Southern Asian with an eye on elite concerns would also be fertile grounds for future research. Though this research used as comparative a model as the data would allow, more in-depth comparisons between Southern Asian spatial patterns of educational inequality and those of other regions Northeast Asia, South America, Africa, the OECD countries would also like add to empirical findings in this paper.

With regards to the areas of future research associated with the theoretical aspects the author believes that expanding on the features and consequences of the 'soft state' in different contexts and iterations likely has the most potential for fruitful future studies. Another possible avenue of research would be to model Myrdal's circular and cumulative causation approach using econometric tools. Alternatively, one could also recreate the *Asian Drama* whole cloth and survey a new collection of modernization goals and values, and then compare new normative aspirations in the region to the current conditions as Myrdal had done.

13.4 Final Conclusion

Finally, I would like to make a conclusion on the nature of the research in *Asian Drama* itself. For a new student of development and Asian Studies, the type of research that Myrdal's *Asian Drama* represents felt wholly different in size, scope and methodology than the type of development currently being conducted in academia today. The *Asian Drama*

spanned three dense volumes over 10 years spanning a wide range of topics—all of which were interrelated and interlocked creating something of a grand theory of development, while at the same time was simultaneously rooted (or attempting to be rooted) into a regional context. The size and scope of the work stands in contrast to the current research paradigm in development economics of short single-issue journal articles anchored most often in quantitative analysis. Furthermore, the development ecology presented in the *Asian Drama* differs from the type of single-critical-factor and “if we just fix this one thing” thinking that dominates long-form research in development economics from microfinance to mosquito nets. Yet despite the pessimism that spills from Myrdal’s work, there retains an earnestness and genuine concern for the societies that he is studying as well as a willingness to present uncomfortable findings for both elites, and the research community itself, that is often lost in much of the current discourse. As to the question posed in the title of this dissertation, Whither Myrdal? Yes, indeed.

Bibliography

- Abadzi, H. (2003). *Improving Adult Literacy Outcomes*. Washington: World Bank.
- Abadzi, H. (2004). *Strategies and Policies for Literacy: Background Paper for GMR*.
- Acemoglu, D., & Robinson, J. (2012). *Why Nations Fail*. New York: Crown Publishers.
- ADB. (2001). *Education and National Development in Asia: Trends, Issues, Policies, and Strategies*. Manila: Asian Development Bank.
- ADB. (1997). *Emerging Asia: Changes and Challenges*. Manila: Asian Development Bank.
- ADB. (1994). *Financing Human Development*. Manila: Asian Development Bank.
- Agrawal, A. (1995). Dismantling the Divide Between Indigenous and Scientific Knowledge. *Development and Change* 26 , 413-39.
- Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.
- Archer, D., & Cottingham, S. (1996). *Action Research Report on REFLECT, DFID Educational Paper No. 17*. London: Department for International Development.
- Arndt. (1987). *Economic Development: The history of an Idea*. Chicago: Chicago University Press.
- ASER Centre. (2012). *Annual Status of Education Report 201*. New Delhi: ASER Centre.
- Ashburn, K. E. (1969). Review: *Asian Drama An Inquiry into the Poverty of Nations*. *Southern Economic Journal* Vol. 35, No. 3 , 285-287.
- Banerjee, A., & Duflo, E. (2011). *Poor Economics* . Cambridge: MIT Press.
- Barro, R. J., & Lee, J. (1993). International Comparisons of Educational Attainment. *Journal of Monetary Economics*; 32, no. 3 , 363-394.
- Barro, R., & Lee, J. (1997). International Measures of Schooling Years and Schooling Quality. *American Economic Review Papers and Proceedings* 86(2) , 218-223.

- Barro, R., & Lee, J. (1997). *Schooling Quality in a Cross Section of Countries*. NBER Working Paper No. 6198.
- Barro, R., & Lee, J. (2000). *International Data on Educational Attainment Updates and Implications*. Cambridge: CID Working Paper no. 42 Center for International Development at Harvard University.
- Barton, D. (1994). *Literacy: An Introduction To The Ecology of the Written Language*. Oxford: Blackwell.
- Barton, D., & Hamilton, M. (1999). Situated Literacies: Reading and Writing in Context. In D. Barton, M. Hamilton, & R. Ivanic, *Literacy Practices* (pp. 7-15). London: Routledge.
- Bebbington, A. (2008). Social Capital and Development. In V. Desai, & R. Potter, *The Companion to Development Studies (2nd ed)* (pp. 132-136). London: Hodden Education.
- Berger, M. (2004). *The Battle for Asia*. Oxon: Routledge Curzon.
- Berger, P. L. (1993). An East Asian Development Model? In P. L. Berger, Hsin-Huang, & M. Hsiao, *In Search of an East Asia Development Model* (pp. 3-11). New Brunswick, New Jersey: Transaction Publishers.
- Black, C. (1966). *The Dynamics of Modernizations: A Study in Comparative History*. New York: Harper Torchbooks.
- Boothe, D. (1985). Marxism and Development Sociology: Interpreting the Impasse. *World Development* 13 (7) , 761-87.
- Borts, G., & Stein, J. (1964). *Economic Growth in a Free Market*. New York : Columbia University Press.
- Bowles, S. (2012). *The New Economics of Inequality and Redistribution*. Cambridge: Cambridge University Press.

- Bowles, S., & Gintis, H. (2011). *A Cooperative Species: Human Reciprocity and its Evolution*. Princeton: Princeton University Press.
- Bracking, S. (1999). Structural Adjustment: Why it Wasn't Necessary and Why it Didn't Work. *Review of African Political Economy* 26 (80) , 207-26.
- Braudel, F. (1980). *On History (Ecrits sur l'Histoire)*. Paris.
- Briggs, J. (2008). Indigenous Knowledge and Development. In V. Desai, & R. B. Potter, *The Companion to Development Studies (2nd ed)* (pp. 107-111). London: Hodder Education.
- Briggs, J. (2005). The use of Indigenous Knowledge in Development: Problems and challenges . *Progress in Development Studies* 5 , 99-114.
- Brown, C. (1992). *International Relations Theory: New Normative Approaches*. Hemel Hempstead: Harvester Wheatsheaf.
- Bull, H. (1977). *The Anarchical Society: A Study of Order in the World Politics*. London: Macmillan.
- Burton, J. (1972). *World Society*. Cambridge: Cambridge University Press.
- Cammack, P. (2000). The Mother of All Governments: The World Bank's Matrix for Good Governance. In R. Wilkinson, & S. (. Hughes, *Global Governance: Critical Perspectives*. London: Routledge.
- Castells, M. (2000). *The Rise of Network Society*. Oxford: Blackwell.
- Chabbot, C. (2003). *Constructing Education for Development: International Organizations and Education for All*. New York: Routledge.
- Chakravorty, S. (2006). *Fragments of Inequality: Social, Spatial, and Evolutionary Analyses of Income Distribution* . New York: Routledge.
- Chandramohan, B. (2002). Underinvestment and Changing Prioritization Resulting in a New Paradigm of Education. In R. Vashum, & L. Prakash, *State, Development and*

- Identity in South Asia: A Search for Alternative Paradigms* (pp. 180-189). New Delhi: Indian Social Institute.
- Chossudovsky, M. (1997). *The Globalization of Poverty: Impacts of IMF and World Bank Reforms*. Penang: Third World Network.
- CMEPSP. (2009). *Report of the Commission on the Measurement of Economic Performance and Social Progress*. Paris: Commission on the measurement of economic performance and social progress <http://www.stiglitz-sen-fitoussi.fr/en/index.htm>.
- Collins, J. (1995). Literacies and Literacies. *Annual Review of Anthropology* 24 , 75-93.
- Conway, D., & Heynens, N. (2008). Dependency Theories: from ECLA to Andre Gunder Frank and Beyond. In V. Desai, & R. Potter, *The Companion to Development Studies (2nd. ed.)*. London : Hodder Education Cowen, M., & Shenton, R. (1996). *Doctrines of Development*. London: Routledge.
- Cope, B., & Kalantzis, M. (2000). *Multiliteracies: Literacy Learning and the Design of Social Futures*. London: Routledge.
- Cornia, G. A., Jolly, R., & Steward, F. (1987). *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth*. Oxford: Oxford University Press - UNICEF.
- Cran, W. (Director). (2002). *Commanding Heights: the Battle for the World Economy* [Motion Picture].
- Curry, G. N. (2003). Moving Beyond Post-Development: Facilitating Indigenous Alternatives for "Development" . *Economic Geography* 79 (4) , 405-23.
- Desai, V. (2008). The role of Non-Governmental Organizations (NGOs). In V. Desai, & R. Potter, *The Companion to Development Studies* (pp. 525-530). London: Hodder Education.
- DIVA-GIS. (2010). *DIVA-GIS Home*. Retrieved July 7, 2014, from <http://www.diva-gis.org/>

- Dixon, C. (1999). The Pacific Asian Challenge to Neoliberalism. In D. Simon, & A. (. Narman, *Development as Theory and Practice: Current Perspectives on Development and Development Cooperation*. Harlow: Longman .
- Doherty, T. (1993). Postmodernism: An Introduction. In T. (. Doherty, *Modernism and Post-Modernism* (pp. 1-31). Hemel Hempstead: Harvester Wheatsheaf.
- Dollar, D., & Kraay, A. (2002). Growth is good for the Poor. *Journal of Economic Growth Vol 7* , 195-225.
- Druze, J., & Sen, A. (2013). *An Uncertain Glory: India and its Contradictions*. New York: Penguin Books.
- Druze, J., & Sen, A. (2002). *India: Development and Participation* . Delhi: Oxford University Press.
- Duford, M., & Smith, A. (2000). Catching up or Falling Behind? Economic Performance and Regional Trajectories in the 'New Europe'. *Economic Geography* 76 , 169-95.
- Dykema, E. (1986). No View without a Viewpoint: Gunnar Myrdal. *World Development, Vol. 14, No. 2* , 147-163.
- Evans, J. (2000). *Adults' Mathematical Thinking Emotions: A Study of Numerate Practices*. London: Routledge/Falmer, Taylor & Francis Group.
- EdCIL (2008). *Teachers' Absense in Primary and Upper Primary Schools in Andhra Pradesh, Madhya Pradesh, and Uttar Pradesh: Abridged Report*. New Delhi: Educational Conslutants India Limited.
- Eisenstadt, S. N. (1973). *Traditional Patrimonialism and Modern Neopatrimonialism*. Beverly Hills: Sage Publications.
- Eisenstadt, S. (1966). *Modernization: Protest and Change*. Englewood Cliffs, NJ: Prentice-Hall.
- Escobar, A. (1995a). *Encountering Development*. Princeton: Princeton University Press.

- ESRI. (2012). *Spatial Statistics* . Retrieved 2014, from Hot Spot Analysis:
<http://resources.arcgis.com/en/help/main/10.1/index.html#/005p00000010000000>
- Fukuyama, F. (1989). The End of History and the Last Man. *The National Interest* .
- Falk, R. (1995). *On Humane Governance: Toward a New Global Politics*. Cambridge: Polity Press.
- Fleurbaey, M. (2009). Beyond GDP: The Quest for a Measure fo Social Welfare. *Journal of Economic Literature* , 1029-1075.
- Frank, A. G. (1967). *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*. New York and London: Monthly Review Press.
- Frank, G. A. (1979). *Dependent Accumulation and Underdevelopment*. New York: Monthly Review Press.
- Fransman, J. (2006). *Understanding Literacy: A Concept Paper*. UNESCO.
- Freire, P. (1995). *Pedagogy of Hope. Reliving Pedagogy of the Oppressed*. New York: Continuum .
- Friedman, T. (2006). *The World is Flat: the Globalized World in the 21st Century*. London: Penguin.
- Friedman, T. (1999). *The Lexus and the Olive Tree*. New York: Harper Collins.
- Gee, J. (1999). *An Introduction to Discourse Analysis: Theory and Method*. London: Routledge.
- Gellner, E. (1983). *Nations and Nationalism* . Oxford: Blackwell.
- Giddens, A. (1979). *Central Problems in Social Theory: Action, Structure, and Contradiction in Soical Analysis*. London: MacMillan.

- Giddens, A. (1990). *The Consequences of Modernity: Self and Society in the Late Modern Age*. Cambridge: Polity Press .
- Ghosh, A. (2002). Alternative Schools and Education Guarantee Scheme. In R. Wazir, *The Gender Gap in Basic Education: NGOs as Change Agents* (pp. 78-93). New Delhi: Sage Publications.
- Gilpin, R. (2001). *Global Political Economy* . Princeton, NJ: Princeton University Press.
- Gouldner, A. (1970). *The Coming Crisis of Western Sociology*. New York: Basic Books.
- Goulet, D. (1971). An Ethical Model for the Study of Values. *Harvard Education Review* , 205-227.
- Government of Sri Lanka. (2011). *Sri Lanka Education Information 2011*. Colombo: Data Management Branch, Ministry of Education.
- Govinda, R. (2007). *India: Country Case Study*. UNESCO.
- Govinda, R., & Biswal, K. (2005). *EFA in South and West Asia: an Overview of Progress since Dakar*. UNESCO.
- Government of India. (1949). *Constitution of India*. New Delhi: Ministry of Law and Justice.
- Gundlach, E., Navarro de Pablo, J., & Weisert, N. (2004). Education is Good for the Poor: A Note on Dollar and Kraay. In A. Shorrocks, & R. Van Der Hoeven, *Growth, Inequality, and Poverty* (pp. 92-106). Oxford University Press: UNU-WIDER - Oxford University Press.
- Hollis, C (1974). *Redistribution with Growth*. London: Oxford University Press.
- India Planning Commission. (1964). *The Fourth Five Year Plan: A Draft Outline*. New Delhi: Education Commission (India).
- Inkeles, A., & Smith, D. H. (1974). *Becoming Modern: Individual Change in Six Developing Countries*. Cambridge, MA: Harvard University Press.

- Hagen, E. (1962). *On the Theory of Social Change*. Homewood, IL: Dorsey Press.
- Hägerstrand, T. (1952). *The Propagation of Innovation waves*. Royal University of Lund
Dept. of Geography. Lund: Lund studies in geography.
- Hall, J. W. (1965). Changing Conceptions of the Modernization of Japan. In M. B. (ed.),
Changing Japanese Attitudes Toward Modernization (pp. 7-41). Princeton: Princeton
University Press.
- Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford : Oxford University Press.
- Harvey, D. (1982). *The Limits to Capital*. Oxford: Blackwell.
- Hasan, A., Patel, S., & Satterthwaite, D. (. (2005). Meeting the Millennium Development Goals
in urban areas. *Environment and Urbanization* 17(1) .
- Held, D., & Koenig-Archibugi, M. (2003). *Taming Globalization: Frontiers of Governance*.
Cambridge: Polity.
- Heltburg, R. (2004). The Growth Elasticity of Poverty. In A. Shorrocks, & R. Van Der Hoeven,
Growth, Inequality, and Poverty (pp. 81-91). Oxford: UNU-WIDER & Oxford
University Press.
- Hette, B. (2008). Current Trends and Future Options in Development Studies . In V. Desai, &
R. Potter, *The Companion to Development Studies*. London: Holder Educational.
- Hette, B. (1995). *Development Theory and the Three Worlds (2nd. Ed)*. Essex : Longman
Scientific and Technical.
- Higgott, R. (1980). From Modernization Theory to Public Policy: Continuity and Change in
Political Science and Political Development. *Studies in Comparative International
Development* 15 (4) .
- Higgott, R., Robison, R., Hewison, K., & Rodan, G. (1985). Theories of Development and
Underdevelopment: Implications for the Study of Southeast Asia. In R. Higgott, & R. .

- Robison, *Southeast Asia: Essays in the Political Economy of Structural Change* (pp. 16-61). London: Routledge.
- Hill, R., Park, B., & Saito, A. (2012). Introduction: Locating Neoliberalism in East Asia. In R. Hill, B. Park, & A. Saito, *Locating Neoliberalism in East Asia* (pp. 1-26). Sussex: Blackwell.
- Hirshman, A. (1969). The Strategy of Economic Development. In A. A. Agarwal, *Accelerating Investment in Developing Economies*. London: Oxford University Press.
- Hirst, J., & Thompson, G. (1999). *Globalization in Question: The International Economy and the Possibilities of Governance (2nd ed.)*. Cambridge: Polity Press.
- Hoselitz, B. (1952). Non-Economic Barriers to Economic Development. *Economic Development and Cultural Change* 1:1 , 8-21.
- Hossain, M., Kathuria, R., & Islam, I. (2010). *South Asian Economic Development (2nd ed.)*. Oxford : Routledge.
- Howes, M. (1979). The use of Indigenous Technical Knowledge in Development. *IDS Bulletin* , 10, 12-23.
- Hunt, D. (1986). *Economic theories of Development*. London: Harvester Wheatsheaf.
- Huntington, S. (1968). *Political Order in Changing Societies*. New Haven: Yale University Press.
- Huntington, S. (1997). *The Clash of Civilizations*. New York: Touchstone; Simon & Schuster Inc. .
- Jackson, J. T. (2005). *The Globalizers: Development Workers in Action*. Baltimore, MD: John Hopkins University Press.
- Jenkins, R. (2008). The Emergence of the Governance Agenda: Sovereignty, Neoliberal Bias and the Politics of International Development. In V. Desai, & R. Potter, *The Companion to Development Studies* (pp. 516-519). London: Hodder Education.

- Johnson, C. (1982). *MITI and the Japanese Miracle*. 1982: Stanford University Press.
- Jones, P. (1997). The World Bank and the Literacy Question; Orthodoxy, Heresy, and Ideology. *International Review of Education* 43(4) , 367-375.
- Kaldor, N. (1967). *Strategic Factors in Economic Development*. Ithaca: Cornell University.
- Kaldor, N. (1972). The Irrelevance of Equilibrium Economics. *Economic Journal*, Vol 28 , 1237-1255.
- Kanbur, R. (2004). Economic Policy, Distribution, and Poverty: The Nature of Disagreements. In A. Shorrocks, & R. Van Der Hoeven, *Growth, Inequality, and Poverty* (pp. 29-61). Oxford: UNU/ WIDER, Oxford University Press.
- Kanbur, R. (1998). *Income Distribution and Growth*. Washington D.C.: World Bank Working Papers 98-13.
- Kennedy, J. F. (1963). Remarks in Heber Springs, Arkansas, at the Dedication of Geers Ferry Dam. The American Presidency Project.
- Keohane, R., & Nye, J. (1977). *Power and Interdependence: World Politics in Transition*. Boston: Little, Brown.
- Kiely, R. (1999). The Last Refuge of the Noble Savage? A Critical Account of Post-development. *European Journal of Development Research* 11(1) , 30-55.
- King, A. (1995). Forgetting Postmodernism? Recuperating a Social History of Local Knowledge. *Progress in Human Geography* 27(5) , 537-60.
- Kingdon, G., & Sipahimalani-Rao, V. (2010, March 20). Para-teachers in India: Status and Impact. *Economic and Political Weekly* , XLV (12), pp. 59-67.
- Kingdon, G., Banerji, R., & Chaudhary, P. (2008). *SchoolTELLS Survey of Rural Schools in Bihar and Uttar Pradesh, 2007-2008*. London: Institute of Education University of London.
- Kohli, A. (2013). *Poverty Among Plenty*. New York: Cambridge University Press.

- Krause, W. (1961). *Economic Development*. San Francisco: Wadsworth Publishing Company.
- Krasner, S. (1999). *Sovereignty: Organized Hypocrisy*. Princeton, NJ: Princeton University Press.
- Kremer, M. M., Chaudhury, N., Rogers, F., & Hammer, J. (2005). Teacher Absence in India: A Snapshot. *Journal of European Economic Association*, 3 , 658-67.
- Krishnamachari, V. (1961). *Planning in India*. Bombay: Orient Longmans.
- Krugman, P. (1991). *Geography and Trade*. Cambridge, MA: MIT Press.
- Krugman, P. (1992). *Towards a Counter-Counter-Revolution in Development Theory*. Cambridge: World Economy Laboratory at MIT.
- Kumar, K. (2004). *Quality of Education at the beginning of the 21st Century: Lessons from India*. UNESCO.
- Kumar, K., Manisha, P., & Saxena, S. (2001). The Trouble with Para-teachers. *Frontline* 18(22) , 93-94.
- Kuznets, S. (1955). Economic Growth and Income Inequality. *American Economic Review* 45, no. 1 , 1-28.
- Laffont, J. J. (2000). *Incentives and Political Economy*. Oxford: Oxford University Press.
- Lankshear, C. &. (2003). *New Literacies: Changin Knowledge and Classroom Learning*. Buckingham: Open University Press.
- Leclercq, F. (2003). Education Guarantee Scheme and the Evolutions of Primary School System in Madhya Pradesh: A Field Study. *Economic and Political Weekly* 38(19) , 1855-69.
- Lerner, D. (1958). *The Passing of Traditional Society: Modernizing the Middle East*. New York: Free Press.

- Linklater, A. (1998). *The Transformation of Political Community: Ethical Foundations of the Post-Westphalian Era*. Cambridge: Polity.
- Loftus, A. (2008). Public Private Partnerships. In V. Desai, & R. Potter, *The Companion to Development Studies (2nd ed.)* (pp. 543-547). London: Hodder Education.
- Love, J. L. (1980). Raul Prebisch and the Origins of the Doctrine of Unequal Exchange. *Latin American Research Review*, 45-72.
- Mahalonobis, P. (1969). Reviw: "The Asian Drama ": An Indian View. *Sankhya: The Indian Journal of Statistics, Series B. Vol. 31, No. 3/4*, 435-458.
- Maharatna, A. (2010). In Resurrection of Gunnar Myrdal's *Asian Drama*. *Mainstream vol. XLVIII No. 18*, <http://www.mainstreamweekly.net/article2035.html>.
- Malaysia MoE. (2012). *Malaysia Education Blueprint 2013-2025*. Kuala Lumpur: Ministry of Education Malaysia.
- Mansbach, R., Ferguson, Y., & Lampert, D. (1976). *The Web of World Politics*. Englewood Cliffs, NJ: Prentice-Hall.
- Mathew, A. (2005). *Literacy: Real Options for Policy and Practice in India*. UNESCO.
- McEwan, C. (2008). Post-colonialism. In V. Desai, & R. B. Potter, *The Companion to Development Studies (2nd ed)* (pp. 124-129). London: Hodder Education .
- McGee, T., & Kumssa, A. (2001). Introduction. In T. McGee, & Kumssa, *New Regional Development Perspectives Vol. 1*. London: Greenwood Press / UNESCO.
- McGrew, A. (2002). From Global Governance to Good Governance: Theories and Prospects of Democratizing the Global Polity. In M. Ougaard, & R. Higgott, *Towards a Global Polity?* London: Routledge.
- McGrew, A. (2006). Globalization and Global Politics. In J. Baylis, & S. Smith, *The Globalization of World Politics (3rd ed.)*. Oxford : Oxford University Press.

- McLennan, G. (1984). *Captialist State or Democractic Polity? Recent Developments in Marxist and Pluralist Theory*. In G. McLeannan, D. Held, & S. Hall, *The Idea of the Modern State*. Buckingham: Open University Press.
- Mendlovitz, S. (1975). *On the Creation of a Just World Order*. New York: Free Press.
- Milanovic, B. (2006). *Global Income Inequality: What it is and Why it Matters*. Washington D.C.: DESA Working Paper No. 26.
- Minh, H. C. (1930, Febuary 18). *Modern History Sourcebook: Ho Chi Minh Program for Communism of Indochina*. Retrieved May 12, 2014, from Fordham University: <http://www.fordham.edu/halsall/mod/1930hochiminh.html>
- Mohan, G., Brown, E., Millward, B., & Zack-Williams, A. (1999). *Structural Adjustment: Theory, Practice and Impacts*. London : Routledge.
- Mohanty, C. (1988). Under Western eyes: Feminist Scholarship and Colonial Discourses. *Feminist Reivew* (30) , 61-88.
- Moore, B. (1966). *The Social Origins of Democracy and Dictatorship*. Boston: Beacon Press.
- Morris, D. (1979). *Measuring the Condition of the World's Poor: The Physical Quality of Life Index*. New York: Pergamon Policy Studies no. 42.
- Muralidharan, K. (2012). *Education Policy in India's 12th Five Year Plan*. New Delhi: India International Center, NCAER & Brookings Institute.
- Muralidharan, K., & Zieleniak, Y. (2012). *Measuring :Learning Tragectories in Developing Countries with Longitudinal Data and Item Response Theory*. San Diego: UC San Diego.
- Muralidharan, K., Das, J., Holla, A., Kremer, M., & Mohpal, A. (2012). *The Fiscal Costs of Weak Governance: Evidence from Primary Education in India*. San Diego: UC San Diego.
- Myrdal, G. (1944). *An American Dilemma: The Negro Problem and Modern Democracy*. New York: Harper & Row .

- Myrdal, G. (1956). *An International Economy: Problems and Prospects*. New York: Harper & Brothers.
- Myrdal, G. (1957). *Rich Lands and Poor: The Road to World Prosperity*. New York: Harper & Row.
- Myrdal, G. (1968). *Asian Drama : An Inquiry into the Poverty of Nations*. New York: Twentieth Century Fund.
- Myrdal, G. (1971). *Asian Drama : An Inquiry into the Poverty of Nations*. New York: The Twentieth Century Fund: Abridged.
- Myrdal, G. (1974). *Nobel Prize Lecture*. Retrieved July 9, 2014, from The Equality Issue in World Development: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1974/myrdal-lecture.html
- Naik, J.P. (1964). *Educational Planning in India*. New Delhi: Education Commission
- NCAER . (2008). *Deployment of Professional Competence of Para-teachers: Executive Summary*. New Delhi: NCAER.
- Neher, C. D. (1984). The Social Sciences. In R. A. Morse, *Southeast Asian Studies : Options for the Future* (pp. 126-136). Lanham, MD: Univerity Press of America.
- Nehru, J. (1947, August 14). *Tryst With Destiny* . Retrieved April 29, 2014, from The Guardian : <http://www.theguardian.com/theguardian/2007/may/01/greatspeches>
- Nehru, V., Swanson, E., & Dubey, A. (1995). A New Database on Human Capital Stock: Sources Methodolgy and Results. *Journal of Development Economics Vol. 46, No. 2* , 379-401.
- North, D. (1990). *Institutions, Institutional Change and Economic Performance* . Cambridge: Cambridge University Press.

- North, D. (1995). The New Institutional Economics and Third World Development. In J. Harris, J. Hunter, & C. M. Lewis, *The New Institutional Economics and Third World Development* (pp. 17-26). London: Routledge.
- Nurkse, R. (1953). Problems of Capital Formation in Underdeveloped Countries. In R. Nurkse, *Some Aspects of Capital Accumulation in Underdeveloped Countries* (p. 4). Oxford: Oxford University Press.
- Ohmae, K. (1995). *The End of the Nation State: Rise of Regional Economies*. New York: Free Press.
- Ong, A. (1999). Clash of Civilizations or Asian Liberalism? An Anthropology of the State and Citizenship. In H. L. Moore, *Anthropological Theory Today* (pp. 48-73). Cambridge : Polity Press.
- Osborne, D., & Gaebler, T. (1992). *Reinventing Government*. New York: Addison-Wesley Publ. Co.
- Othick, J. (1983). Development Indicators and the Historical Study of Human Welfare: Towards a New Perspective. *Journal of Economic History Vol. 43 No. 1* , 63-70.
- Ozawa, T. (2009). *The Rise of Asia: 'The Flying Geese' Theory of Tandem Growth and Regional Agglomeration*. Chaltenham: Edward Elgar Publishing Limited.
- Pandey, S. (2006). Para-Teacher Scheme and Quality Education for All in India: Policy Prospectives and Challenges for School Effectiveness. *Journal of Education for Teaching: International Research and Pedagogy 32 (3)* , 319-34.
- Pandey, S., & Rani, R. (2007). *Professional Support System and Classroom Performance of Para-Teachers*. New Delhi: NCERT.
- Parnwell, J. G. (1996). Geography. In M. Halib, & T. Huxley, *An Introduction To Southeast Asian Studies* (pp. 101-147). London: Tauris Academic Studies .
- Parnwell, M. (2008). Agropolitan and Bottom up Development. In V. Desai, & R. Potter, *The Compaanion to Development Studies* (pp. 111-115). London: Hodder Education.

- Peet, R., & Hartwick, E. (2009). *Theories of Development: Contentions, Arguments and Alternatives 2nd ed.* New York: The Guilford Press.
- Perroux, F. (1988). The Pole of Development's New Place in a General Theory of Economic Activity. In B. Higgins, & D. Savoie, *Regional Economic Development: Essays in Honour of Francois Perroux* (pp. 48-90). Boston: Unwin Human.
- Persson, T., & Tabellini, G. (1996). Is Inequality Harmful for Growth? Theory and Evidence. *American Economic Review* 48 , 600-21.
- Pieterse, J. (2010). *Development Theory*. London: SAGE.
- Piketty, T. (2014). *Capital in the Twenty-First Century*. (A. Goldhammer, Trans.) Cambridge: Harvard University Press.
- Pogge, T. (2007). Why Inequality Matters. In D. Held, & A. (. Kaya, *Global Inequality* (pp. 132-148). Cambridge, UK: Polity Press.
- Prasartpornsirichoke, J., & Takahashi, Y. (2013). *Assessing Inequalities in Thai Education* . Hiroshima: Graduate School for International Development and Cooperation, Hiroshima University.
- Pritchett, L., & Murgai, R. (2008). *Teacher Compensation: Can Decentralization to Local Bodies take India from Perfect Storm through Troubled Waters to Clear Sailing?* Washington D.C.: World Bank.
- Pritchett, L., & Pande, V. (2006). *Making Primary Education Work for India's Rural Poor: A Proposal for Effective Decentralization*. 2006: Social Development Papers South Asian Series 95, World Bank.
- Psacharopoulos, G. (1973). *Returns to Education*. San Francisco: Jossey-Bass.
- Psacharopoulos, G. (1994). Returns to Investment in Education: A Global Update. *World Development Vol 22 No 9* , 1325-1343.

- Psacharopoulos, G., & Arriagada, A. (1986). *The Educational Attainment of the Labour Force: An International Comparison, Report No. EDT38*. Washington D.C.: World Bank .
- Rampal, A., & Bhagat, S. (2003). *A Study on School Effectiveness: West Bengal*. New Delhi: mimeo.
- Rapley, J. (1996). *Understanding Development Theory and Practice in the Thrid World*. London: UCL Press.
- Rawls, J. (1971). *A Theory of Justice*. New York: Belknap.
- Rena, K., Rafique, A., & Sengupta, A. (2002). *The Pratichi Education Report 1* . New Delhi: TLM Books and Patichi Trust.
- Republic of Indonesia . (2013). *Badan Pusat Statistik Republik Indonesia*. Retrieved July 8, 2014, from Educational Indicators:
http://www.bps.go.id/eng/tab_sub/view.php/excel.php?id_subyek=28%20¬ab=1
- Reynolds, L. (1974). Gunner Myrdal's Contribution to Economics 1940-1970. *TEh Swedish Journal of Economics Vol. 76, No.4 , 479-497*.
- Richards, P. (1985). *Indiginous Agricultural Revolution: Ecology and Food Production in West Africa*. London: Hutchinson.
- Richardson, H. (1973). *Regional Growth Theory*. London: MacMillian.
- Riggs, F. (1966). *Thailand: the Modernization of a Bureaucratic Polity*. Honolulu, HI: East-West Center Press
 Rigg, J. (2003). *Southeast Asia: The human landscape of modernization and development (2nd edition)*. London: Routledge.
- Rigg, J. (2008). The Millennium Development Goals. In V. Dessai, & R. Potter, *The Companion to Development Studies (2nd ed)* (pp. 30-36). London: Hodder Education.

- Rigg, J., Bebbington, A., Gough, K., Bryceson, D., Agergaard, J., et al. (2009). The World Development Report 2009 'Reshapes Economic Geography': Geographical Reflections.
- Rodan, G., & Hewison, K. (1996). A 'Clash of Cultures' or the Convergence of Political Ideology. In R. Robison, *Pathways to Asia: The Politics of Engagement* (pp. 29-55). St. Leonards: allen & Unwin Pty Ltd.
- Rostow, W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge: Cambridge University Press.
- Roy, M., Lourdes, M., & Khan, A. (2003). *Education for All in India: Going up the Down Staircase*. UNESCO.
- Royal Swedish Academy of Sciences. (1974). *Press Release: Economics Prize for Works in Economic Theory and Interdisciplinary Research*. Stockholm: The Royal Swedish Academy of Sciences.
- Rustow, D. A. (1967). *A World of Nations: Problems of Political Modernization*. Washington, D.C.: The Brookings Institution.
- Said, E. (1978). *Orientalism*. London: Routledge and Kegan Paul.
- Sankar, D. (2008). *Unravelling Teachers' Time on Task and Nature of Tasks: Evidences from Three Indian States*. New Delhi: World Bank.
- Sankar, D. (2008). *Does Instructional Time Matter in School Effectiveness in Improving Children's Learning Outcomes? A Study in Three Indian States Using Hierarchical Linear Modeling*. New Delhi: World Bank.
- Satterthwaite, D. (2003). The Millennium Development Goals and Urban Poverty Reduction: Great Expectations and Nonsense Statistics. *Environment and Urbanization*, 179-190.
- Schech, S., & Haggis, J. (2000). *Culture and Development: A Critical Introduction*. Oxford: Oxford Blackwell.

- Scholte, J. A. (2000). *Globalization: A Critical Reintroduction*. Basingstoke: Macmillan.
- Schuurman, F. (2008). The Impasse in Development Studies (2nd ed.). In V. Desai, & R. Potter, *The Companion to Developing Studies* (pp. 12-16). London: Hodder Education.
- Schwartz, B. I. (1972). The Limits of "Tradition Versus Modernity" as Categories of Explanation: The Case of Chinese Intellectuals. *Daedalus* 101 (2) , 71-88.
- Scribner, S., & Cole, M. (1978). Unpackaging Literacy. *Social Science Information Vol 17 No. 1* , 19-39.
- Sen, A. (1976). Poverty: an Ordinal Approach to Measurement. *Econometrica* 44(2) , 219-231.
- Sen, A. (1980). Equality of What? In S. M. MacMurrin, *The Tanner Lectures on Human Values (1st ed.)*. Salt Lake City, Utah: University of Utah Press.
- Sen, A. (1988). The Concept of Development. In H. Chenery, *Handbook of Development Economics* (pp. 2-23). New York: North Holland Sole.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Siddhanta, S., & Nandy, D. (2004). Disaggregated Pattern of Gender Gap in Education in Indian Population: A Fresh Exploration. *NNU/WIDER Conference* . Helsinki: UNICEF.
- Simon, D. (1995). Debt, Democracy, and Development in Africa in the 1990s. In D. Simon, W. Van Spengen, C. Dixon, & N. (eds), *Structurally Adjusted Africa: Poverty, Debt, and Basic Needs*. London and Boulder, CO: Pluto Press.
- Simon, D. (1999). Development Revisted. In D. Simon, & S. D. Narman, *Development as Theory and Practice* (pp. 17-54). Harlow: Longman.
- Simon, D. (2008). Neoliberalism, Structural Adjustment and Poverty Reduction Strategies. In V. a. Desai, *The Companion to Development Studies (2nd ed.)* (pp. 86-91). London: Hodder Education.

- Simon, D. (2008). Postmodernism and Development. In V. Desai, & R. B. Potter, *The Companion to Development Studies (2nd. ed)* (pp. 119-124). London: Hodder Education .
- Shorrocks, A., & Van Der Hoven, R. (2004). Introduction. In A. Shorrocks, & R. Van Der Hoven, *Growth, Inequality and Poverty*. Oxford: Oxford University Press.
- Slater, D. (1993). The Geopolitical Imagination and the Enframing of Development Theory. *Transactions of the Institute of British Geographers* , 419-37.
- Slaughter, A. (2004). *A New World Order*. Princeton, NJ: University Press.
- Smelser, N. (1967). Processes of Social Change. In N. (. Smelser, *Sociology* (pp. 674-728). New York: John Wiley & Sons.
- Smith, D. (1991). *The Rise of Historical Sociology*. Philadelphia: Temple University Press.
- Smith, D. (2000). Moral Progress in Human Geography: Transending the Place of Good Fortune. *Progress in Human Geography* 24(1) , 1-18.
- South Commission. (1990). *The Challenge to the South*. Oxford: Oxford University Press.
- Spence, M. (2002). Signaling in Retrospect and the Informational Structure of Markets. *American Economic Review* 92 (3) , 434-459.
- Spivak, G. (1990). *The Postcolonial Critic: Interviews, Strategies, Dialogue*. London: Routledge .
- Stiglitz, J. E. (1986). The New Development Economics . *World Development* , 257-65.
- Stiglitz, J. (1987). The Causes and Consequences of Dependence of Quality on Price. *Journal of Economic Literature* , 1-48.
- Stiglitz, J. (2002). *Globalization and its Discontents*. London: Penguin.
- Street, B. (2003). What's 'New" in New Literacy Studies? Critical Approaches to Literacy in Theory and Practice. *Current Issues in Comparative Education* 5(2), 1523-1615.

- Street, B. (2004). *Understanding and Defining Literacy*. Background Paper for EFA 2006.
- Stroper, M. (1991). *Industrialization, Economic Development and the Regional Question in the Third World from Import Substitution to Flexible Production*. New Delhi: Sage.
- Tandon, R. (1991). *NGO Government Relations: a Source of Life or a Kiss of death*. New Delhi: Society for Participatory Research in Asia.
- Tipps, D. C. (1973). Modernization Theory and the Comparative Study of Societies: A Critical Perspective. *Comparative Studies in Society and History, Vol 15, No. 2* , 199-226.
- The Economist. (2013, June 29). The March of Progress. *The Economist* .
- Thirlwall, A. (2008). Development and Economic Growth. In V. Desai, & R. B. Potter, *Companion to Development Studies (2nd ed.)* (pp. 37-40). London: Hodder Education .
- Thomas, C. (2000). *Global Governance, Development, and Human Security*. London: Pluto.
- Thomas, C. (2006). Poverty, Development, and Hunger. In J. Baylis, & S. Smith, *The Globalization of World Politics (3rd ed.)* (pp. 646-668). Oxford: Oxford University Press.
- Toye, J. (1987). *Dilemmas of Development: Reflections on the Counter-revolution in Development Theory and Policy*. Oxford: Basil Blackwell.
- U, N. (1951, December 22). *Modern History SourceBook: U Nu: Burma Looks Ahead*. Retrieved May 12, 2014, from Fordham University: <http://www.fordham.edu/halsall/mod/1951nu-burma1.html>
- UNESCO . (1961). *Manual of Educational Statistics*. Paris: UNESCO.
- UNESCO. (1956). *World Literacy at Mid-Century*. Paris: UNESCO.
- UNESCO and ECAFE. (1964). *Report of Meeting of Ministers of Education of Asian Membership States Participating in the Karachi Plan, Final Report*. Karachi: UNESCO.

- UNESCO. (2004). *Education for All Global Monitoring Report*. Paris: UNESCO.
- UNESCO-IBE. (2009). *A compilation of Background Information about Educational Legislation, Governance, Management and Financing Structures and Processes: South and West Asia*. UNESCO-IBE.
- UNDP. (1990). *Human Development Report*. New York: Oxford University Press.
- UNEP. (1993). *Agenda 21*. New York: United Nations Environment Programme.
- United Nations. (1989). *Handbook on Social Indicators*. New York: United Nations .
- United Nations. (2010). *Millennium Goals*. Retrieved March 10, 2013, from UN.org: www.un.org/millenniumgoals/
- United Nations Statistical Division. (1997). *Minimum National Social Data Set* . New York: United Nations Statistical Division.
- Uphoff. (1999). Understanding Social Capital: Learning from the Analysis and Experiences of Participation. In D. a. Seregeld in, *Social Capital: A Multifaceted Perspective*. Washington D.C.: World Bank.
- Verdoorn. (1949). Fattori che regolano della produttività del lavoro. *L'industria Vol. 1* , (English translation Thuirlwall, A.P. "Factors that Determine the Growth of Labor Productivity", in McCombie, J., Pugno, M. and Soro, B. (eds.) 2002).
- Wagner, D. (2005). *Monitoring and Measuring Adult Literacy: Different models for Different Purposes*. UNESCO.
- Waller, M., & Linklater, A. (. (2003). *Political Loyalty and the Nation-State*. London: Routledge.
- Wallerstein, I. (2004). World Systems Analysis. In G. Modelski, *World System History: Encyclopedia of Life Support Systems*. Oxford: UNESCO/EOLSS.
- Willis, K. (2005). *Theories and Practices of Development*. Oxford: Routledge.

- Winslow, C. (1951). The Cost of Sickness and the Price of Health. *Monograph Series, No. 7*, 9.
- Winterford, D. B. (1971). *Myrdal, The State and Political Development (Masters Thesis)*.
Edmonton: University of Alberta.
- Woo-Cumings, M. (1999). Introduction: Chalmers Johnson and the Politics of Nationalism and The Developmental . In M. Woo-Cumings, *The Developmental State* (pp. 1-31).
Ithaca : Cornell Universtiy Press.
- World Bank. (1997). *World Development Report 1997: The State in a Changing World*.
Oxford: Oxford University Press.
- World Bank. (1998). *Indigenous Knowledge for Development: A Framework for Development*.
Washington D.C.: Knowledge and Learning Center, Africa Region, World Bank.
- World Confederation of Organizations of the Teaching Profession. (1962). *Status of Teachers in Asia*. New Delhi : WCOTP.
- Wysocki, A. F., & Johnson-Eilola, J. (1999). Blinded by the Letter: Why Are We Using Literacy, as a Metaphor for Everything Else? In G. E. Hawisher, & C. Selfe, *Passions Pedagogies, and 21st Century Technologies* (pp. 349-368). Urbana, IL: National Council of Teachers of English.
- Young, A. (1928). Increasing Returns and Economic Progress. *The Economic Journal* , 527-542.
- Yousif, A. A. (2003). *Literacy: An Overview of definitons and assessments*. Paris: UNESCO.
- Zakaria, F. (2011). *The Post-American World: And The Rise of the Rest*. New York: Penguin Books Ltd. .