Comparisons of Universal Health Care of Advanced and Developing Countries for the Sake of Tajikistan Health Care Prospective and its Population Longevity

By

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DECLARATION OF ORIGINALITY

I, KHAYRIDDINOV, Umedzhon, hereby declare that this research paper is a result of my own original academic work under the supervision of Professor OTSUKA Kozo. I certify that this master thesis titled, "COMPARISONS OF UNIVERSAL HEALTH CARE OF ADVANCED AND DEVELOPING COUNTRIES FOR THE SAKE OF HEALTH CARE PROSPECTIVE AND POPULATION LONGEVITY OF THE REPUBLIC OF TAJIKISTAN" has not previously been submitted anywhere for the award of an academic degree. I also hereby certify that all reference sources have been acknowledged in the appropriate referencing manner.

KHAYRIDDINOV Umedzhon,

June 15, 2017

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LIST OF ABBREVIATIONS

ADS : Acquired Immune Deficiency Syndrome

GDP : Gross Domestic Product

HIV : The Human Immunodeficiency Virus

ID : Identification

IT : Information Technology

MEDT : Ministry of Economic Development and Trade

MoF : Ministry of Finance

MRI : Magnetic Resonance Imaging

NDS : National Development Strategy

OECD : Organization for Economic Co-operation and Development

OLS : Ordinary Least Squares

PHD : A Doctor of Philosophy

SCO : Shanghai Cooperation Organization

STATA : General Purpose Statistical Data Package

UHC : Universal Health Care

UK : United Kingdoms

UN : United Nations

USA : The United States of America

USD : United States Dollars

US : United States

WHO : World Health Organization

ABSTRACT

A master`s thesis claims that Universal Health Care (hereinafter UHC) might not be introduced in the Republic of Tajikistan for the next 13 years. This is because, according to Tajikistan`s National Development Strategy for year 2030 (Henceforward NDS-2030), health care spending is projected to be 3.87 percent as a GDP share by the year of 2030, which is not consistent with the findings of the current master`s thesis.

With this in mind, in this master`s thesis, qualitative and quantitative methods were used to disclose, how much health care spending (%) as a GDP share should be in Tajikistan in order to introduce UHC and reach the average life expectancy for Organization of Economic Cooperation and Development (onward OECD) countries, (78,41 years). Moreover, the findings of this master`s thesis are supported by an extensive health care insurance related literature review, as well as analysis of countries panel dataset of 12 OECD and 3 Shanghai Cooperation Organization (from now on SCO) countries, including Tajikistan. In fact, the dataset covers a significant long period of time, i.e., 20 years from 1994 to 2013, and it examines variables such as, total life expectancies of males and females, number of beds per 1000 people, number of physicians per 1000 people, health spending as a GDP share, pharmaceutical spending as a GDP share, length of hospital stay (acute care in days) total GDP per capita and medical graduates per 100 thousand people.

For this reason, random and fixed-affect techniques as well as ordinary least squares (OLS) regression method and linear function were used to estimate total life expectancies of males and females of OECD and SCO countries.

In other words, the STATA (General Purpose Statistical Data Package) regression disclosed main variable that largely contributed to longevity in OECD and SCO countries, such as: health spending as a GDP share. In other words, Tajikistan might be able to introduce UHC, in which case, the population may live up to 78.3 years, if the total health spending as a GDP share would be 5 to 6 percent, which is also consistent to the recommendation made by World Health Organization for developing countries: to spent minimum 5 percent of GDP for healthcare needs. (William D. 2007). Tajikistan healthcare spending would be less than that in OECD for 2.76-3.76 percent but on the contrary, Tajikistan people would have average total life expectancy, as it is in OECD.

Nevertheless, UHC can be possible upon the following conditions: significant economic growth, total industrialization, exports oriented economy, high employment, strong will of the centralized government, consensus, and efficient coordination. Also close cooperation among UHC`s stakeholders, particularly among state ministries and agencies, sound pooling funds, and a prudent reimbursement system, efficient and fair distribution of healthcare resources are required.

Unfortunately, in accordance with Tajikistan's National Development Strategy for the year 2030, the government of Tajikistan projected smaller expenditure for the health-care sector as a GDP share (3.87%), which is inconsistent with the above-mentioned findings. As a consequence, the introduction of UHC and reaching a life expectancy of 78.3 years in Tajikistan might be unfeasible for the next 13 years.

Key words: Universal Health Care, variables, Tajikistan

CHAPTER 1

INTRODUCTION

1.1. Study background.

More than 2 billion of mankind currently face inefficient, inappropriate health care funding and meager medical quality services. Moreover, according to the World Health Organization, more than 150 million people are in desperate circumstances because they face a financial crash caused by high out-of-pocket payment for sudden emergency medical care (Maria-Luisa, 2010). Thus, for the last 30 years, policy makers around the world have paid considerable attention to health care issues due to their constant rising costs As a matter of fact, modern medical technologies, combined with an aging population is considered to be one of the leading health care cost rising variables (Sabrina Luk, 2014). Nonetheless, Johannes, (2005) argues that economic development closely interrelates with decent health care coverage provided by the public sector. The more a population is vulnerable to disease, the less labor time is contributed for the economic development. As a result, there is s positive correlation between acquiring health insurance and enjoying more medical services.

Dozens of studies have witnessed that after introduction of health insurance in low and middle income countries, upturns in access and quality of medical treatment, made the poor strata of the population somewhat financially protected through reduction of out-of-pocket payments and catastrophic spending cases. For instance, in accordance with a survey that had been made in Namibia, the uninsured usually did not report or seek care as soon as possible during acute illness compare with insured individuals. Rather,

postpone treatment, due to financial difficulties and low quality care provision by government facilities (Maria-Luisa, 2010). Moreover, if the uninsured acquire acute infectious diseases, such as tuberculosis, HIV, AIDS or other life threatening communicable sicknesses, aside from other ongoing problems, they prefer to keep quiet and not to undertake medical care, which could endanger family members, neighbors, and ultimately the country. If residents, particularly the poor strata of the population, were covered by health insurance, they would be motivated to go through curative procedures. Nevertheless, evidence suggests that generally politicians during parliamentary election promise many benefit packages for indigent, premium exemption for some strata of the population, such as children, elders, and government employees. They even introduce UHC to win electors` votes. However, in the long run, this type of UHC is fated to fail owing to serious challenges, which makes the situation worse (Maria-Luisa, 2010). In contrast, most of low and middle-income households, as well as conservative politicians, do not welcome health care financing reforms, especially, during economic stagnation and recession in the country. Although this may be true, if we refer to the Chinese word of “crises”, which that consists of two characters, “danger” and “opportunity”. We might presume that the crisis periods are the exact right time to implement valid reforms in the country, including a health-care financing one (Sabrina Luk, 2014).

1.2. Research problem

At the moment, there is not universal health care in Tajikistan, and the insurance industry is underdeveloped. However, law on mandatory health insurance was enacted in Tajikistan in 2008 but its application was postponed so far, because Ministry of finance and Tax committee in Tajikistan opposed it, due to the financial shortages (Asia-plus, 2017).

1.3. Study purpose

The purpose of this research is to study universal health care of advanced and developing countries. In particular, to study their similarities, varieties, current and future problems associated with UHC, and many other related variables, that caused certain countries to go far ahead, providing decent health care for their residents and contributing to the long life of their populations. Moreover, the given analysis discusses the rationality and capability of introduction of UHC in Tajikistan for the next 13 years.

1.4. Research objectives

- To determine the main variables that contributed to population longevity in advanced and developing countries;
- To specify leading pros and cons of the UHC of advanced and developing countries for the sake of Tajikistan`s health care prospective and its population longevity.
- To scrutinize social-economic targets of the Republic of Tajikistan for the year 2030; and
- To study and analyze the Tajikistan health sector, including its existing health insurance premises.

1.5. Research questions

How much should health spending be as a GDP share (%) in Tajikistan in order to introduce UHC and ensure its durable operation for the sake of population longevity?

1.5.1. Sub questions

How many doctors and beds per 1000 people, and how long should hospital stays be in Tajikistan in order to reach the average life expectancy of OECD countries (78.41 years was the average for 20 years), as well as meet the longevity targets (75.7 – 80 years) of Tajikistan`s 2030 National Development Strategy?

1.6. Hypothesis

Tajikistan will likely be unable to introduce UHC and ensure its durable operation for the next 13 years due to the insufficient economic growth and meager health spending as a GDP share.

1.7. Study scope

The analysis data consist of 12 OECD and three developing countries of Shanghai Cooperation Organization such as People`s Republic of China, Russian Federation and Republic of Tajikistan. With regards to the time frame, 20 years from 1994 to 2013 are covered.

1.8. Thesis structure

The structure of this thesis consists of an introduction, literature review, Tajikistan`s health sector profile, methodology, discussion and analysis as well as a conclusion.

1.9. Study significance

The government of Tajikistan has elaborated and adopted the new National Development Strategy of the Republic of Tajikistan for the year 2030 (MEDT, 2016). Hence, the National Development Strategy of the Republic of Tajikistan for the year 2030 (hereinafter referred to as NDS-2030) was developed on the basis of the provisions of the Constitution of the Republic of Tajikistan, the Law of the Republic of Tajikistan "On State Projections, Concepts, Strategies and Programs of Social and Economic Development of the Republic of Tajikistan (NDS-2030). Moreover, the NDS-2030 also took into account the United Nations` Sustainable Development Goals, as a result education and health care sectors are prioritized in NDS-2030 in order to reduce level of poverty. In the long run, the outputs of the given thesis may serve as an analytical information resource for policy makers and relevant health insurance stakeholders, while considering the introduction of UHC in Tajikistan.

1.10. Methodology

The research was conducted based on qualitative and quantitative methods by using secondary data collections such as academic papers, textbooks, a variety of insurance related literatures, as well as official reports, research works and statistics. Furthermore, this research also focused on exploratory study of UHC in developed and developing countries.

1.11. Limitations

The main limitation was the lack of primary data that could be collected through relevant interviews and questionnaires distributed to major health care stakeholders in Tajikistan, such as the Ministry of Health and Social Protection, the Ministry of Finance,

hospitals and clinics, physicians and patients as well as state and privately owned insurance companies. Interviews and meetings could probably give closer insights into the health-care sector, life expectancy, and willingness of its stakeholders for the introduction of UHC in Tajikistan. Nevertheless, these should definitely, be pursued in future PHD research.

CHAPTER 2

LITERATURE REVIEW

The literature review in this chapter would discusses the UHC of developing countries as well as the health care of advanced nations.

2.1. Health insurance for the poor in developing countries

Farmers in low-income agricultural countries encounter many challenges in accessing to assets such as land, water credit, and information and technology. Furthermore, the lack of adequate social security, hinders sustainable rural development. According to Johannes (2005).

Johannes (2005) further adds:

Moreover, most of the households in low-income countries face intra-seasonal risks, which implies entailing welfare losses. Besides, majority of households rely on selling their livestock in order to cover health related costs in low-income countries. “As a result more than 80% of the population in developing countries remains uncovered against basic risks, despite considerable efforts on part of policy makers”. Nonetheless, being poor and unhealthy does not always refer to the absence of relative resources in order to obtain it, but in the most cases is attributable to the level of education, culture and the philosophy of certain groups of population groups in developing countries. For instance, the afore mentioned poor people tend to rely much on traditional healers or shamans rather than modern scientific medical institutions, believing that poverty and morbidity can be eliminated through methods such as anti-witchcraft ceremonies and so and so forth.

As an illustration, empirical studies conducted in a few low-income countries revealed that level of education, income and religion as well as age were crucial determinants for participation in a community financial scheme. Also, more importantly findings testified that membership to a community financial scheme enhanced the availability of health care service and reduced out-of-pocket payments. Thus, risk pooling and prepayment regardless of its magnitude, significantly improved the financial protection of different population strata. Henceforth, it is crucial to raise awareness among societies regarding to the importance of modern health opportunities, including health insurance, and to make them understand that it is their responsibility to undertake needed actions for their health risk reduction. In this case, the most important alternatives to state or market based social security systems based in reciprocity and solidarity at the household or community level. In other words, there are a few institutional settlements, placed in rural areas to mitigate the risk of illness, known as a community based insurance. Often, community based health insurance cooperatives are small in size, i.e., they cover limited beneficiaries of up to 100 people, however, they can also be large encompassing millions of recipients.

As a matter of fact, there are two main health insurance schemes being operated in agrarian areas, i.e., high cost, and low frequency, likewise, low cost and high frequency. These can be distinguished by a certain degree of confidence and harmony. Explicitly, type one`s focus tends to be owned by hospitals, covers a larger population, and uses actuarial formulas for calculating costs, whereas type two is owned by the community, based at the village level and sets premiums paid, according to capacity of households.

Hence, the demand for health care and active participation in community financial scheme by population very much depends on health care provider, which provides qualitative treatment at the hospital or at the local clinics. Moreover, referral system is an important tool to efficiently manage community financial scheme. In other words, if insured has a minor disease, there is no need to undergo treatment in major hospitals but in the local clinics, in order to avoid unnecessary costs. Generally speaking, through health insurance schemes managed by local organizations could empower local communities to impact on health care provision including types of service, quality and price. To put it differently, community based health insurance schemes are able to ease adverse effect of disease to households, however, most of the time, pool of funds are limited, biased selection problems, strongly lean on subsidies and managerial difficulties, which does not guaranty to its growth and sustainable viability. Thus, government policies, which are aimed at raising the rural residents` access to public goods, i.e., education, health and infrastructure can significantly reduce a range of risks. Through improvement of social security governments should not see it as a cost side but as an investment in human capital, because the economic development closely interrelates to a decent health care coverage provided by public sector. The more population is vulnerable to disease the less labor time contributed for the economic development.

Besides, it would be better if governments would treat rural households as independent players and could take into account their social protection demands and need to elaborate policies in favor of rural households and different community financial schemes, which could facilitate the coordination and cooperation at the different levels (community, district, regional and national) as well as public private partnership. For

instance, government can endorse community financial schemes by linking to social funds. Under those circumstances, pooling of resources and risks are essential, which is aimed at sharing financial risks of illness among the rich and poor, as well as that of low and high-risk members of the same pool. Consequently, the advancement of community financing schemes and inter-community ties would be a right thing to do for low-income countries at the early stages. Nevertheless, the aforementioned, scheme very much depends on financial the sustainability of its members. As can be seen, viable community health or financial schemes should carry the following features: a flexible payment policy so the include poorest strata of the community, may be included; community participation and democratic management to somewhat improve, mutual trust and solidarity among the members and dealing with adverse selection covariant risks during natural disasters or epidemics, in such a way that the community health insurance scheme should closely cooperate with public, private and international donors to obtain relevant subsidies and financial aid. Management and members ought to acquire proper financial skills and social protection expertise for the sake of efficient maintenance of the community financial schemes. For this reason, over the last several decades, researchers have developed three main social security approaches to assist individuals during risks periods: “Traditional social security approach”, “ The entitlement approach”, and “The social risk management approach”.

The first approach provided by the state and supported by taxes and contributions, also it is solely targeted to protection against downturn in the living standards of the population. Moreover, it is considered to have single-dimensional security against a well-

defined set of risks, such as sickness, maternity, employment injury, invalidity, old age and death.

The second approach is regulated by both public and civil society organizations and is backed by taxes. This approach deals with the wider aspects, and is known as a promotion. It is mainly focused upon to upgrade the living standards, and better manage existing and future hardships. An important statement of the entitlement approach is that social security is a crucial elements of economic growth attainment, but not vice-versa.

The last but not the least, approach was mainly developed and advocated by the World Bank. This approach basically centered on supporting desperately poor groups of the population through enhancing their capability to cope with various covariant hazards, such as production, health, social and institutional risks. The fundamental players of this system include multitude stakeholders, including, states, businesses, nonprofit organizations, and households, and the population is financed through various funding source. Given these points, most of the health systems around the glob generate revenues by drawing funds such as taxes, and social security contributions, insurance inputs, as well as out-of-pocket payments from households, companies and organizations. Correspondingly, the bulk of the out-of-pocket payments for more than 40% falls in low-income countries, whereas, the majority of middle and developed nations do not spent much given their high income. Usually out-of-pocket payment is nourished by small size of the formal economy, huge magnitude of poor and rural population, as well as sluggish institutional and organizational soundness.

"Nevertheless, institutional development of formal insurance scheme is generally hindered by existence of covariant risks and adverse selection problems resulting in high

unit transaction costs per contract and in market failure". Besides, for some folks, when insured individuals have results in unreasonable use of health care services, which might cause the health insurance market to go bankrupt. However, with the introduction of co-insurance and deductibles the discussed problem can be significantly reduced. Obviously, an insurance company can conduct adverse selection by charging all high and low-risk consumers the average premiums without taking into account their life style behavior, chronicle diseases, occupation and the level of income. Thus, this may, can produce serious financial obstacles for the insurance sector. Adverse selection might be addressed through permitting only household membership rather than individual members.

Another key dilemma, is the principal-agent problem, where the interests of the insurer, patient and health care provider coincides and contradict, in other words, when the insured stays healthy, the insurance company makes more profit, but the health care provider makes a loss. However, when the insured gets sick as a consequence, they desire the best treatment without regard for cost, which makes the health care provider more delighted than the insurance company. Nonetheless, if the health care provider is paid a fixed amount, the incentive to provide more services would diminish. Ultimately, the profit from health insurance and the status of having improved health is greater than the projected or incurred costs. This is due to how, it would upturn the quantity of working days, thus leading to earning of higher incomes. In case of employee transfer from agriculture into the industry sector the demand for social security would increases due to a permanent reliable source of income.

2.2. The impact of health insurance in low- and middle-income countries

More than 2 billion of mankind currently face inefficient, inappropriate funding, and meager quality services. Moreover, according to the World Health Organization, more than 150 million people are in desperate circumstances and face a financial crash due to high out-of-pocket payment for sudden emergency medical care (Maria-Luisa, 2010).

Maria-Luisa (2010) argues that there is a positive correlation between acquiring health insurance and enjoying more medical services. Moreover, dozens of studies have witnessed that after the introduction of health insurance in low- and middle-income countries, there have been upturns in access and quality of medical treatment. In other words, a community-based health insurance scheme carried out in Guizhou Province of China showed positive outcomes on health status among participants. , also the poor strata of the population were observed to be somewhat financially protected through reduction of out-of-pocket payments and catastrophic spending cases.

Maria-Luisa (2010) claims below:

In accordance with a survey conducted in Namibia, the uninsured usually do not report or seek care as soon as possible during acute illness compared with insured individuals. Rather, they postpone it due to financial difficulties and low-quality care provision by government facilities. For instance, if the uninsured obtain acute infectious disease such as tuberculosis, HIV/AIDS, or other life-threatening communicable sicknesses, in addition to the other ongoing problems, they prefer to keep quiet and not undertake medical care. This potentially endangers family members, neighbors, and ultimately the country. If residents, particularly from the poor strata of the population,

were covered by health insurance, they would be motivated to go through curative procedures. Besides, currently, in Namibia, a low-income health-insurance scheme is in operation for regular income earners, and both employees and employers endorse it. Hence, the above paragraph allows us to make possible different income level health-insurance schemes in order to umbrella as many citizens as possible with health insurance by pooling all ranges of resources and risk together. Nonetheless, UHC substantially is diversified in terms of arrangement, target society, benefit coverage, financial systems, and practice. As a result, does not rely on enrollees' premiums and copayments, but mostly depends on payroll, value added, luxury taxes, excise duties, and social contributions of the formal sector workers. This makes the UHC financially unsustainable if the formal sector is small in size, similarly with health-care demand.

The following strata of the population can be registered into mandatory health insurance: A formal or self-employed worker as well as labor migrants, pensioners, voluntary members, and indirect members who are considered to be family members and dependents of the insured person. When introducing UHC, governments must ensure they do not allow transformation of doctors, health centers, clinics, and hospitals into profit-seeking entities that would do anything in order to gain more and more revenue. Hence, the government can avoid the given issue through efficient supervision and hand over decent subsidies to health-care providers. Commonly, people are willing to pay premiums constantly if the awaited health benefits outpace current costs. In this way, it is essential to reach out to beneficiaries when the current costs in forms of premiums are minor compared with possible expenses with uninsured status.

A single institution can be both an insurer and care provider, similar to how it is now in Costa Rica, where the autonomous government institution has technical, administrative, and functional sovereignty, and operates a mandatory health insurance fund.

2.3. Health insurance reforms in Asia

For the last 30 years, policy makers around the world have paid considerable attention to health-care issues due to their rising costs (Sabrina Luk, 2014). Modern medical technologies combined with an aging population is considered one of the leading health-care cost-rising variables (Sabrina Luk, 2014).

In conformity of Sabrina Luk (2014), health care is financed via four main resources: taxation, social insurance, private insurance, and out-of-pocket payment. The first two resources are generated by governments through a range of taxations, such income, land, sales corporation profits, payroll, and others, which makes the government the main payer for health-care costs, and has universal features. As a result, there is strong public domination. The remaining two resources depend mostly on individual income and willingness to enroll into certain private insurance companies for the particular insurance coverage.

Sabrina Luk (2014) adds furthermore:

Under those circumstances, health-care reforms directed toward health insurance, especially toward a universal one, are in need of prior piloting stages and experiments that start from basic to comprehensive health-care coverage, as well as from local to nationwide dissemination. If government gives hospitals and clinics autonomy, as well as disconnecting them from government subsidy and budgetary funds allocation will cause

health-care providers to turn into profit-seeking entities. As a consequence, this will result in an ongoing health-care spending upsurge. Moreover, if the government softens oversight on the price of drugs and services, it could lead to incentives to bill sick individuals with a greater cost than the real cost. This is an alarming situation, which can damage financial durability and solvency of private- and state-owned business, and may ultimately drive employees into underinsurance and non-insurance conditions. For this reason, the introduction of free health-care policies, while promoting market economy in the country, is a total failure. Moreover, the cost of drugs plays a very crucial role in the viability of UHC. If a health-care provider is supplied medicine through many second-hand dealers, which markup their own prices above that of manufacturer's (30–40 times as high), absurdly costly payments for patients could result. In this way, hospitals are recommended to import drugs from producers or single representatives.

In the long run, the Singaporean government realized that economic development could be achieved if it possessed a healthy workforce. It is important to mention that Singapore adopted their health-care system from Great Britain in 1959, which was established predominantly on taxes. According to the Health minister of Singapore, one of the driving forces of high medical costs is the aging population above 65 years old, who tend to visit hospitals three times more than 45-year-old individuals. Consequently, the Singaporean government undertook health-care financing reforms such as the "Medisave-mandatory medical savings scheme that denotes equal inputs made by both an employer and employee, ranging from 6% to 8% of the employee's salary. The generated amount would be transformed to a private medisave account, but the government controls it. Thus, the medical costs of the individual would be deducted from the above-mentioned

personal medisave account. Later, the state introduced "Medishield" to reimburse long-lasting serious diseases and to support medisave.

In addition to these schemes, the government introduced the idea of institutionalizing Medifund so that it could back-up the above-mentioned insurance schemes during extraordinary situations. The given fund breeds from budget surpluses and expands through interest income. Nevertheless, with the aging population, new financial challenges have been raised for the government, and consequently, extra funding ranges were introduced to endorse the elderly population, such as the eldershield and eldercare fund. This is a very good system that excludes unnecessary intermediaries, and facilitates the government to secure fiscal spending of the country. It also encourages saving and individual responsibility, as well as a self-reliance mentality among its population. Moreover, the Singaporean government has been strongly outreaching so that economic advancement and decent welfare transformation in the country depends solely on each and every citizen's hard work and saving mentality. Moreover, individuals must be responsible for themselves and family members, and not rely too much on the government. Obviously, if private insurance companies subscribe healthy individuals only, especially the young, and deny older people or people with chronic diseases, a misbalance would be caused in the health-care sector, such as a large government budget deficit. On the contrary, this condition would bring in a large revenue for private insurance companies.

Besides, if there are two or more competing and confronting robust political elites or parties in the country who struggle for power, and one of them initiates health-care financing reforms, they will hardly or in some cases never come to a consensus. This is

because all political parties have divergent interests and are proponent to certain business elites and corporations. We can see that if one side suggests health risk and cost sharing between the government and residents, in contrast with another party, this idea will definitely be opposed. It may be argued that health care must be free because it is basic entitlement of every individual in the country. However, currently, health care in many countries is transforming into an obligation rather than a right for the population. As a matter of fact, this kind of debate takes place throughout presidency or parliamentary election campaigns in favor of merely winning votes. As illustrations, the Hong-Kong government has been failing to introduce trustworthy health-care reforms for more than 20 years, and the content of recent (2016) USA presidential election campaign slogans (Sabrina Luk, 2014).

Generally, the experimental data of Shanghai, Singapore, and Hong-Kong, has shown that performance of political institutions is an utmost persuasive component in building successful or deficient health-care reforms. In other words, if health-care financing reforms' stakeholders strongly resist each other, especially lawmakers, no significant reforms can take place (Sabrina Luk, 2014). Meanwhile, in most cases, low- and middle-income households, as well as conservative politicians, do not welcome health-care financing reforms; especially during economic stagnation and recession in the country. Although this may be true, if we refer to the Chinese word "crises", which consists of two characters, i.e., danger and opportunity, we might presume that a crisis period is the exact right time to implement valid reforms in the country, including one that addresses health-care financing.

As can be seen, there is no single health-care system or model that can be adopted everywhere, but the given system commonly starts and blossoms or fails under certain politico-economic situations, as well as under social-cultural realities of a particular sovereignty state (Sabrina Luk, 2014).

2.4. Health financing and delivery in Vietnam

Demand and supply-side moral hazards are inevitable within UHCs in low-income countries. Likewise, copayment is a weak tool for dealing with demand-side moral hazards; nevertheless, it can be helpful in reducing the above-mentioned risks. Furthermore, benefit health packages or insurance policies must be précised on types of covered diseases (Samuel S., Adam W., 2009).

Generally speaking, constant increments in health-care costs can also be explained by service overprovision by health-care providers. For example, after introduction of related health-insurance reforms in Vietnam, the number of outpatients and inpatients dramatically rose to 7%, and hospitals provided an extended volume of services from different kinds of diagnosis toward surgery, and there was an upturn in the quantity of beds in the hospitals. Moreover, the wages of health-care providers skyrocketed by up to 40%; nonetheless, drug costs contributed a heavy portion to total costs, accounting for 30% in Vietnam (Samuel S., Adam W., 2009). Henceforth, single payers who have a quality control mechanism can substantially reduce and curb unnecessary health care through the following example: if the health-care provider constantly meets cost requirements of the stated single payer, and efficiently treats the patient, they can be rewarded materially. However, if hospitals run out of money quickly

but their health outcomes are sluggish, a single payer must consequently conduct a special investigation against the given hospital and shed light on the problem. In this case, if the health-care provider intentionally created the above-named financial deficit, it must be sanctioned Besides, it is important to increase the awareness of people, especially that of sick individuals on whom generic and brand-name foreign drugs have an equal effect, despite generic brands being much cheaper. Additionally, single payers have to encourage health-care providers to prescribe generic drugs (Samuel S., Adam W., 2009).

In fact, the local authorities have a critical role in maintaining transparent, unbiased, and efficient operation of the health-care system . Identically, resource and risk pooling are nationally supposed to be equitable, i.e., the greater one's income, the larger contributions one is obliged to make (Samuel S., Adam W., 2009).

2.5. Toward Universal Health Coverage and equity in Latin America and the Caribbean

Many studies have argued that pooled financing and equity are important components toward UHC. That is to say, all health mandatory contributions are combined to a single pool in order to provide equity and subsidy to all population. Besides, timeliness, quality, equity, and efficiency constitute feasible and sustainable UHC for many generations to come. In addition, deliberate steps towards UHC calls for major structural changes to purchasing and provider reimbursement, as well as administration systems (Tania D., Gisele A., 2009).

As a result, many international organizations including the United Nations and the World Bank incorporated UHC targets as a prior means to eradicate full poverty by 2030. To put it differently, countries where UHC is absent have similar health-sector features in the form of wide disintegration and lack of pooling funds and risks. One obvious example can be attributed by the following statement: a health-care system is financed partially through various mandatory taxes, along with social insurance contributions made by employers and employees. Traditional line-item budgetary policies undertaken by the Ministry of Finance is considered inflexible and limits the timeliness and capability of health-care cost management. As a result, the foreknown policy can cause drawbacks toward UHC. Nonetheless, an ongoing increment of health-care public spending does not always mean positive outputs for people under medication, but rather indicates the inefficiency of the health-care system. Another key point, the more democratic a country is, the stronger the voice of the population in claiming favorable UHC (Tania D., Gisele A., 2009).

2.6. Health and wellbeing in Islamic societies

The authors of a book review on the Islam religion from the health-care perspective aimed to foster the Muslims around the world (Harold G., Shohaib 2014).

During ancient times, people believed either sin or evil spirits caused most diseases; thus, religious practitioners were mainly physicians and healers. Islamic law (Shari'ah) guides humans from initial steps of birth to their final destination of death, along with health traditions. Nonetheless, there are not many instructions on health care in the Qur'an — Muslims' holy book — but it upholds strict prohibition of alcohol and

intoxicating items, which makes one lose control. Luckily, in the later stages, Islamic scholars came to understand that psychological factors such as faith, positive words, love, kindness, and patience play crucial roles in sick treatment and recovery. As a result, prophetic medicine or spiritual medicines emerged. Mainly, believers read out loud the relevant Sura from the Qur'an and proclaimed healing over their life and body (Harold G., Shohaib 2014). In fact, through intercommunications during the pre-Islamic period and during practice of local traditions, Greco-Roman and other beliefs that impact Islamic Medicine turned into scientific ones that ultimately very much influenced western medicine according to the Latin version of the Canon of Medicine of Ibn Sina. Another distinguishing feature of Islamic medicine was the welfare program, which was supported by mandatory Muslim financial contributions known as a zakat. As can be seen, Islamic scientists, scholars, and physicians believed that while treating a patient, psychological and spiritual aspects should be taken into consideration, such as emotions, household atmosphere, life principles, behavior, and diet (Harold G., Shohaib 2014).

The prophet Muhammad advised people to look for cures while they were sick because he used to pursue medication himself. Similarly, every Muslim is responsible for his body before God; thus, one must lead a healthy lifestyle through sanitary habits, and obesity is not encouraged, while ritual washing is a must before prayer (Harold G., Shohaib 2014).

2.7. **Reforming America`s health care system**.

The author believes that through successful health-care reforms, the USA can rebuild its economy. Although this may be true, the USA is the only advanced country that does not provide UHC for its citizens. In fact, more than 46 million or 15.3% of the

American population are uninsured, and 25 million people are underinsured. Insured citizens bear the costs of uninsured individuals by paying high premiums; thus, everybody has to have insurance in order to minimize high health-care costs (Damien B. 2010). In other words, the USA allocates 2.3 trillion USD to health care annually; nevertheless, health-care costs keep rising and endanger the economy of the country. Moreover, of this amount, almost 700 billion USD does not improve Americans' health at all. In case of inactivity and inefficient reforms, 2.3 trillion USD will soon reach 4 trillion USD. Due to high medical costs, uninsured people receive very poor quality health care; as a result, more than 100,000 Americans perish annually. In addition, the bulk of insured people (79 million) are unable to pay medical bills despite having serious diseases. As a consequence, 2 million people fall into desperate poverty due to medical debt every year in the USA (Damien B. 2010).

Similarly, the USA government spent more than 16% of its GDP on health-care provision, despite providing no UHC; while the rest of the advanced nations consumed two times less GDP but could afford to provide UHC. This can be explained by how the health service in the USA compared with the rest of the world is extremely expensive; for example, the cost of magnetic resonance imaging (MRI) is less than 100 USD in Japan compared with 1200 USD in the USA (Damien B. 2010). Moreover, the USA occupies the last position among developed countries in unnecessary deaths and ranks 29th out of 37 countries for infant mortality. Regarding high health costs, most patients are being undertreated or are provided poor quality health care. Health-care providers in the USA tend to provide more inefficient care in the form of overlapping tests, imaging services,

and other unnecessary procedures. This does not improve the health conditions of the sick, but rather makes exhausts them of money.

Furthermore, the author argues that the 46 million Americans who do not have health insurance make people with health insurance poorer because they have to pay higher insurance premiums to cover the uninsured as well. Thus through tax system, the American population must be obliged to obtain health-care insurance with regard to enhancing health care in the USA, and make it accessible for all (Damien B. 2010). Apart from, high medical costs in the USA can be explained by fraud too. In fact, the national health-care anti-fraud association roughly estimated that 60 billion USD is lost to fraudulent activities annually in the USA. On that count, transparency is very crucial in daily affairs of a health-care system. That is, insurance companies as well as health-care providers must demonstrate to patients their services, all treatment procedures, and costs. They must also provide sick treatment alternatives, such as less expensive examinations as well as generic drugs. Patients must know and understand what kind of services are provided and why they would receive them, especially considering how large pharmaceutical corporations, usually through sale representatives, give expensive gifts and invite physicians to dine at luxury restaurants and go on trips. All of these are done for the purpose of advancing brand drugs, which are costly. These kinds of suspicious relations between health-care providers and pharmaceutical companies must be prevented and prohibited (Damien B. 2010).

Currently, private insurance companies disfavor aged people and those who have chronic or serious diseases, such as cancer and asthma. As a result, in most cases, provision of health-care coverage is rejected, or unbearable premiums are claimed.

Insurance premiums are on a spiraling upsurge in the USA, faster and higher than that of wages and inflation. For instance, between 1999 and 2008, premiums for individuals and families were raised up to 117% and that for employers increased up to 119%. The main reason for these increases was the large application of medical technology, which added from 38% up to 65% in health-care costs rise. Nonetheless, there are additional other reasons, such as obesity, and 56 billion USD health-care donations by hospitals and clinics are given to some uninsured people (Damien B. 2010).

Under those circumstances, health care reforms in the USA consist of a "Baucus plan" that designs a nationwide insurance pool in the form of health insurance exchange. As a result, USA's residents can freely contrast and buy needed insurance plans in this marketplace. Another important benefit of the given exchange is providing a transparent platform, where private insurers compete for clients, and hence provide more favorable conditions despite pre-existing health conditions and ethnic disparities for future policyholders. The Baucus plan envisions the introduction of a health IT system that would be able to aggregate, save, analyze, and disseminate relevant patients' data to all stakeholders, particularly health-care providers, to provide productive treatment, track patient care, and for better coordination (Damien B. 2010). Consequently, the Baucus plan consists of six main principles for achieving decent health care for Americans:

Individual responsibility means that all citizens will obtain health insurance and will do their best to live a healthy life;

Strengthening the employer-based system – motivate and assist businesses to employ workers and arrange prudent health-care inputs from their side;

Guaranteed access to affordable coverage for individuals and small businesses – Individuals, households, and small businesses should be provided extra aid while under financial constraints. Hence, health insurance exchange can provide relevant insurance plans for all different strata populations based on their urgencies and possibilities ;

Strengthening public programs – Medicare, Medicaid, State children's health insurance program and the Indian health service onward need to provide required health care promptly, and waiting lists must be eliminated;

Focusing on prevention and wellness means care prevention is better than treatment;

The last but not least principle is addressing health disparities in the USA. Some minority nationalities and legal immigrants living in America are not allowed to enjoy equal and equitable medical treatment on time (Damien B. 2010).

Medicaid was established in 1965, and state children's health insurance programs opened health-care doors for 67 million low-income Americans. Nevertheless, these programs are considered unsatisfactory and consume billions of dollars from federal resources in other words, Medicare and Medicaid utilize most public expenditure Medicare is health coverage for older populations aged 55–64 years old and for people with disabilities. Studies have shown that chronic diseases are worrisome in America because they absorb 96 cents of every medicare dollar and 83 cents of every medicaid dollar. Correspondingly, the government must use dollars for preventing and providing quality medical treatment to the extent of avoiding deep-rooted sickness. Currently, the USA is encountering shortages in the physician and nursing labor force. Usually, when people get richer, they tend to spend more on health-care services Increasing health-care

costs will continue to devastate small- and medium-sized businesses in the USA as long as employers spend more and more on employees' premiums (Damien B. 2010).

2.8. Government and public health in America.

The medical sector of the USA is well known for being owned by the private sector, and managed through market mechanisms. Nonetheless, there are huge contributions made by the federal government to the health care sector, including 500 billion USD for the medical needs of more than 83 million Americans, along with war veterans, military personal, American Indians, and Alaskan natives (Ronald H. 2007).

2.9. ObamaCare

On 23rd of March, 2010 the President of the USA Barack Obama signed "Patient protection and affordable care act", which is known as ObamaCare. According to the given act every American must have health insurance otherwise must pay penalty 2085 USD per year. As a result more than 52 percent of American wish ObamaCare to be repealed as of July 2012 (Nick J. 2013). On 23rd of March, 2010, the President of the USA, Barack Obama, signed the "Patient protection and affordable care act", which is known as ObamaCare. According to the given act, every American must have health insurance, otherwise they must pay a penalty of 2085 USD per year. As a result, more than 52% of Americans wished for ObamaCare to be repealed as of July 2012 (Nick J. 2013). The initial target of ObamaCare was to control and even reduce the rapidly rising health-care costs in the USA, but instead, health-care costs began to be boosted faster than before, which subsequently led to a heavier burden falling on businesses' and

employees' shoulders. Up to 50% of ObamaCare financing is derived from taxes and fees that are being levied from Americans (Nick J. 2013).

In general, ObamaCare has four initial objectives: 1. Facilitate larger admittance to health care because more than 37 million Americans do not have health insurance due to financial constraints. 2. Control and reduce health-care costs because critics believe that fees for services are the driving force that makes health care more expensive. Likewise, health-care providers have incentives to provide quantitative health services rather than qualitative care. 3. Add more consumer benefits and protections. This goal intends to restrain insurance companies from the entitlement to reject or bill much higher premiums for elderly and seriously sick consumers, who have pre-existing health problems or chronic diseases. 4. The goal of number 4 is to address other different health-care troublesome concerns (Nick J. 2013). Nevertheless, there are two main healthcare stakeholders that uphold and are happy about ObamaCare: The first are insurance companies, because millions of uninsured are obliged to purchase insurance policies from insurance companies. The second largest recipients are drug manufacturers because the demand for drugs upsurge. To be explicit, health-care systems include both socialized-based (through government-sponsored programs such as Medicaid as well as Medicare) and employer-based healthcare (employers and employees contribute together for the cost of health insurance).

Health insurance in the USA by the year 2010:

Medicare provides health care for 47 million people, and its share is 15%, with most recipients being retirees and people with disabilities. Employer insurance contributes to health care for 150 million people, and its share is 48%, with most

recipients being within the low- to high-income bracket. Private insurance companies and others provide health care for 27 million people, and their share is 9%, with most recipients being within the medium- to high-income bracket. The uninsured total 50 million people, and its share is 16%, with most recipient being young adults and low-income earners. It is important to mention that 13 million out of 50 million are illegal foreign people who work in the USA. Medicaid and the children's health insurance program provide health care for 40 million people, and its share is 13%, with most recipients being the poor and children. One of the critical goals of ObamaCare is to reduce the number of uninsured people from 50 million to 10 million for the next 10 years. The total cost is estimated to be 1,08 trillion USD (Nick J. 2013). Young adults comprise a significant share among uninsured individuals. They believe that they are young with strong health, and thus do not need to buy expensive insurance. But now, through ObamaCare, they must have health insurance or otherwise be obliged to pay fines. ObamaCare tries to reach out to young people to help them understand that, although they have good health, their contributions are needed to share financial risks in the common pool.

Medicaid recipients under ObamaCare are those American households whose income equates to 133% of the federal poverty line, i.e., it totals 22,050 USD per year for a family of four persons (Nick J. 2013). Through ObamaCare, the United States government supports health-care recipients in the form of schemes such as Medicaid expansion, which fully subsidized, health insurance exchanges are partially financed on the basis of a sliding scale, and small businesses-tax credits are also based on a sliding scale. A sliding scale means that a family of four persons has to pay premiums in

accordance with their annual income. Thus, if their annual income level is sizeable, they are obliged to pay higher premiums than low-income families. Health insurance exchanges are marketplaces that are controlled by the US government. People can buy health insurance from the above-mentioned exchanges with limited financial support of the state; nevertheless, some states in America do not want to burden their financial constraints by creating health insurance exchanges within their own jurisdiction (Nick J. 2013). The main goal of health insurance exchanges creation is to form a platform, where consumers can have multiple choices, protection by minimum benefits, and insurance company competition can be fostered in order to downturn the price as well as upturn quality. Customers can purchase health insurance plans through visiting an online website of the exchanges, with the need to go to each and every insurance company being eliminated. Insurance companies annually spend 25 billion USD for marketing purposes.

At the initial steps of health insurance exchanges, large companies are not allowed to purchase insurance policies because they can cause higher price increments. As a consequence, small businesses and individuals again would be unable to afford to bargain and buy appropriate insurance policies (Nick J. 2013). Another reason for American's medicine being so expensive is doctors' obligatory malpractice insurance. Annually, more than 52 billion USD is spent on covering medical malpractice insurance, which comprises 2.3% of all health-care costs in the USA. As an illustration, if a doctor happens to perform an unintentional medical mistake that might cause a patient's health to deteriorate or death, the victim can easily sue them. As a consequence, the doctor must pay large fines and also give up for a certain period of time their daily bread: their medical license. As a result, doctors ask for many unneeded tests from patients in order to

protect themselves from potential medical errors (Nick J. 2013). At present, the federal government in the USA compensates roughly 57% of all of Medicaid's beneficiaries. Moreover, employers around the USA are hesitating to provide more jobs due to the ObamaCare mandate to ensure health care for their laborers.

2.10. Healthcare in Japan

In 1986, almost 2000 Japanese citizens had exceeded the 100-year-old benchmark. Most of these individuals were women; nevertheless, the oldest person was a man who lived to 120 years of age. The author argues that people in Japan began to live long and healthy lives after World War II (Margaret P., Masahira A. 2011).

One of the significant reasons why Japanese health care is comparably cheap is the very well-managed and funded system that has matured over a long course of time. Moreover, intertwined social and cultural factors have been facilitated to keep health-care costs low. Traditional ethics encouraged people to less rely on the government, and rather fed a robust group sensibility and liability. As a matter of fact, Japanese medicine was very much influenced by China in the early ages, but later European and Christian missionary medicines played their role. As time passed by, Chinese medicine "Kampo" was replaced by the German system of health care up to the year 1945, including social and health insurance. As a result, in 1922, health insurance law was enacted in Japan, which provided relatively favorable health protection for laborers. It is important to note that the launch of the above-mentioned law had coincided with the swift industrialization of Japan (Margaret P., Masahira A. 2011).

Generally, Japan initially had started its development from the textile and light industry, but gradually advanced into heavy industries such as shipbuilding. Protection of

the Japanese market from foreign exporters facilitated infant industries to become competitive. In accordance with the National Health Insurance Act of 1938, every municipality in Japan had to establish national health insurance societies in order to provide health care for farmers and fishermen. The aging population is one of the critical reasons why in medical costs up surged in Japan; correspondingly, by 2025, more than 21% of the Japanese population will consist of people aged 65 years and over. As an illustration, in 1983, the medical costs for elders accounted for more than 33.2 billion yen, which was 30% of National Health Insurance expenses. Nonetheless, Japanese spending on health care remains low among OECD countries (Margaret P., Masahira A. 2011).

Drugs tariffs, as well as medicines prescriptions, are constantly and rigorously regulated by the government in order to curb exceeding healthcare expenditures. To address many worrisome issues, including that of health care, people find that a quick solution considered to be efficient and regular is connections among politicians (diet members) and civil servants in Japan. Four main factors caused a relatively high rise in health-care prices in Japan: Demography - aging population, emergence of sustained illnesses, sophisticated medical technologies, and an increment in the social welfare of the population that resulted in greater health-care necessity. There are abundant beds for in-patients in Japanese hospitals and clinic, including bed patients who can also enjoy lengthy stays. In 1983, Japan was the second largest medicines manufacturer and consumer in the world (Margaret P., Masahira A. 2011).

2.11. Japanese health care reforms

The number of elderly people is dramatically increasing in Japan; in other words, by the year 2025, almost 26% of the total population of Japan might be composed of very senior citizens. Moreover, 50% of total health care outlays will be allocated to old people in Japan (Koichi K. 1998).

In fact, the Japanese government spent about 27 trillion yen on health care costs in 1995, (215,000 yen per person) and to date, average spending increases 1 trillion yen annually. Thus, the Japanese government intends to maintain health-care charges through four mechanisms: 1. Upsurge the quantity of specialized facilities and healthcare givers for aging patients outside of hospitals; 2. Provide limited funds to hospitals in order to prevent overstays by old patients; 3. Arrange more unbiased health insurance schemes sharing; 4. Encourage patients not to be bedridden through knowledge and different activities (Koichi K. 1998). Practically speaking, two kinds of health insurance schemes exist in Japan: First is health insurance for lines of business; i.e., government-administered health insurance for small-sized businesses, with almost 37.6 million benefactors; an association-managed health insurance scheme regulated by large-sized companies with approximately 32.5 million beneficiaries; and fraternal health insurance association schemes for civil servants, private-school teachers, and other workers with more than 11.7 million subscribers. The second type is known as national health insurance or community health insurance for the self-employed, farmers, and others with around 42.5 million users (Koichi K. 1998).

Another key point is that in 1995, total health-care costs were mainly covered by social health insurance schemes (insurance contributions of 6.4%), central, prefectural,

and municipal rendered assistance (government subsidies) for 31.7%, and out-of-pocket payment accounted for 11.8%. As has been noted, in 1995, health-care funds were mostly allocated to hospitals at a rate of 55.1%, to general clinics at 26%, to dental clinics at 8.8%, to prescription pharmacies at 4.7%, and to prolonged care facilities for older inpatients. It is important to acknowledge that the health care in Japan is a very labor-intensive sector; thus, costs only for medical workers' remuneration in hospitals account for 50% (Koichi K. 1998). In accordance with the medical service law in Japan, doctors and dentists are allowed to establish private hospitals and clinics, where they commit to providing both medical care and managing the clinic or hospital as a director (Koichi K. 1998).

I presume this law reduces and contains up surging health-care costs owing to the fact that doctors are not like capitalists who are only concerned with profit maximization. Moreover, doctors most likely are very busy treating the sick rather than spending much of their time figuring out how to make more revenue as businessmen do.

There are many health insurance associations in Japan totaling around 166 as of 1995 that are recognized as a powerful force in keeping the Japanese UHC credible. In Japan, the salaries of physicians, nurses, and dentists are comparably low due to the oversupply of medical workers, which makes health care relatively affordable in this country. One of the reasons is that health care in Japan is a free service, meaning that every visit to a doctor is accompanied by a drug prescription. However, in France and Germany, drugs prescriptions have a price ceiling that cannot be exceeded. Nonetheless, doctors must, prior to prescription of expensive medicines, provide detailed information to patients and obtain their consent. Nevertheless, there are hundreds of domestic

Japanese pharmaceutical corporations that make good use of the above-mentioned amount (7.5 trillion yen) (Koichi K. 1998).

2.12. Reforming Healthcare systems.

Social health insurance was founded by Germany in 1883 (Theodore M. and Claus W. 2011). There is three core elements in health-care system reforms: ideas, interest groups, and institutions. Health-care researchers claim that a competitive health-care economy is not a perfect road to go along, but market health economy brings generous revenues for profit-seeking financial companies and service-provider agencies.

Nevertheless, as far as patients are concerned, the above-mentioned mechanism does not always guarantee sound health-care treatment. Although unlikely, it could promote privatization of social risks and disparity (Theodore M. and Claus W. 2011). However, having said that, market tools might support a particular hospital at the micro-level, but on a national scope, it may cause health-care insecurity for the population.

Danish health-care practices testify that through all-inclusive and protective work, the health of the population can be enhanced, and as a result, medical costs can be controlled (Theodore M. and Claus W. 2011). For domestic health-care stakeholders, is important to be aware about relevant contrasting studies on health care across neighboring countries, regions, and the world as a whole in order to become familiar with successful and failed health-care policies, reforms, and institutional structural changes.

Until now, there has been no unified analytical comparison framework on health-care systems and reforms. The OECD distinguishes health-care systems according to three aspects: coverage, funding, and ownership of health facilities (Theodore M. and Claus W. 2011).

Moreover, health care can be explained by three public approaches: consumption, provision, and production. Consumption introduces sick people health-care entitlements and resource distribution. Provision is about the oversight of doctors and hospitals. Production deals with elements that manage medical modernization. There is a belief that fees for services can broaden doctors' independence, and as a result, provide better treatment to patients, while at the same time, per person and wage payments limit doctors' freedom. Nevertheless, capitation and decent salaries make doctors pay careful attention to each and every patient rather than make them perform a quick check up of many people in order to gain more profit.

Free market in the health-care sector is valuable, but most importantly it governs market competition for the public modest welfare, otherwise it turns into a devastating system. The same can be applied to decentralization and privatization. Practice shows that private insurance companies compete solely for low-risk individuals by cream-skimming tactics (Theodore M. and Claus W. 2011). Health-care cost containment might become rewarding by merit of relevant simultaneous social-political adjustment. The health-care systems of Japan, South Korea, Taiwan, Hong-Kong, and Singapore are actively coordinated by their governments by framing standards and managing a remuneration system, while service arrangements are largely private. Market mechanisms mostly have an adverse impact on health care. Only influential clans can gain profit, while income inequality keeps rising. One example is American health care, which is considered to be the most expensive and biased. Moreover, Americans are less healthier than their advanced counterparts on other parts of the earth (Theodore M. and Claus W. 2011).

The World Health Organization promotes the notion of "Healthy cities", where district eagerness should be supported by the government. Positive results of a certain city or district in the country can inspire less motivated cities to enhance the health of their inhabitants. Foreign experience is important, but adopting the same foreign model might result in deterioration because it does not take the domestic environment into account. There are three main basic health-care insurance models in operation around the world: The first is what is well-known in the UK as the "National Health Service" (Beveridge), which is identified by universal coverage, national general tax financing, national ownership, and control of the factors of production. In other words, the government is a key operator in this model (Theodore M. and Claus W. 2011).

Regarding the second model, which is widely run in Germany and France, is the "Social Insurance" (Bismarck). It is outlined by compulsory universal coverage operated within a framework of social security and financed by employer and individual contributions through non-profit insurance funds, and public and private ownership of factors of production. As for the third model, it is established as private insurance (consumer sovereignty). It is defined by an employer-based individual purchase of private health insurance coverage, and financed by individual and employer contributions and private ownership of the factors of production. Health-care insurance has been financed differently across nations, with some countries mostly leaning on broad taxation (UK and Italy), others depending on payroll taxes (France and Belgium), and the rest based on employers' and employees' premiums (USA, Japan, and Switzerland) (Theodore M. and Claus W. 2011).

The reimbursement system is an important and decisive part of health-care financing. For instance, in Germany and Japan, insurance funds directly reimburse health-care providers, while in Belgium and France, remuneration is paid to patients by insurance funds immediately after they settle all financial costs with the medical provider. In a similar manner, cooperation and magnitude with reimbursement mechanisms can have serious impacts on quantity and quality provision by health-care providers. Although this may be true, health-care costs very much depend on every decision made by physicians. If a health-care system is based on fees for services, physicians inherently provide more services, and as a result, expenses rise. However, in a per-head payment system, doctors tend to reduce medical care, while supporting a patient's health condition. Nevertheless, in a capitalist system, health-care providers are inclined to refer patients to different curative specialists and agencies (Theodore M. and Claus W. 2011).

Another important issue is that the quantity of medical workers must not exceed demand, otherwise a physician surplus might become one of the drivers for up surging costs. Command and control health-care systems are able to handle resource deficits, restrain costs, and undertake unbiased resource distribution among different strata populations and regions. Nonetheless, it is slow to meet fast social and economic, as well as market, demands and changes. Medical services and insurance plans are decentralized in Japan, but billing and remuneration are centralized; thus, payments are made via national health insurance funds. Another key point is that command and control health-care states (UK, Sweden, Australia, the Netherlands, and Singapore) possess the following features: broad public access, significant public oversight of costs, hospitals,

and soft control over medical innovation. Meanwhile, corporatist health-care states (Germany, Japan, and New Zealand) conduct balanced policies regarding costs, hospitals, and medical innovation issues (Theodore M. and Claus W. 2011).

In the meantime, supply health-care states (USA) are characterized by shallow control over public access, costs containment, and hospitals, and have no limitations on medical modernization. The insurance market cannot be totally free because it encounters many challenges such as free riders, biased risk selection, and other market deficiencies. Thus, insurance, particularly competition in the above-mentioned market, ought to be managed carefully. Managed competition by government is able to accurately guide the market, and everybody has the chance to enlist in a certain health plan. Also, it can facilitate quality improvement and cost reduction (Theodore M. and Claus W. 2011).

There are four types of physician remuneration: 1. Fee for service payment - this payment usually takes place in private hospitals, particularly in the USA. 2. Fee for service in accordance with a fee schedule. 3. Capitation payment - a doctor is paid based on the quantity of patients they examine. 4. One salary payment - this is commonly used in Germany at public hospitals. National health insurance programs consistently generate conflicts of interests between government and medical associations. To be precise, physicians dislike losing their independence, freedom, and income. However, the government tends to unload fiscal burdens (Theodore M. and Claus W. 2011).

2.13. Health issues in Eurasia, Europe and Russia.

Unhealthy people are very vulnerable, weak, and moreover, threatens economic and democracy headway (Rachel E. 2011).

The author argues that, due to Soviet Union ruination in 1991, countries that gained independence encountered diversified challenges such as economic disorder, civil wars, emigration, penetrable borders that facilitated dissemination of infectious and non-infectious diseases such as a HIV/AIDS, and drug addiction. Meanwhile, the inherited soviet out-of-date health care was unable to handle rising threats (Rachel E. 2011). Health-system financing is a core source of people's health and prosperous social and economic shift. Findings suggest that public spending for health needs is strongly correlated with improved or poor health. Nevertheless, everything does not depend solely on financing, but on many other factors that could contribute to better health. One of these factors is that governments, civil societies, and the media should persistently empower their populations in order to live a healthy lifestyle, and educate them on their medical entitlements and obligations.

It might be true, that poor and ill people in post-soviet countries are afraid to seek treatment from doctors in hospitals, even for certain free services, because of undesirable behavior of medical workers and possible transfer of infectious diseases through blood by the use of unpurified medical instruments (Rachel E. 2011).

2.14. Health policy in Britain and Canada.

It is been the case that shortages of medical staff in remote areas of the country might negatively impact the health and financial wellbeing of certain inhabitants considering frequent trips to areas where particular treatment is available. This causes additional heavy costs for patients. In order to solve this problem, the government should financially and materially motivate medical workers so they work in remote countrysides (Christopher 2009).

Thus, the health sector in the country asks for a centralized and unified mechanism in order to better coordinate and manage health facilities. Moreover, unifications facilitate equitable and improved health-care services. The UK's national health service took a similar approach in 1974 (Christopher 2009). For this reason, there should be a platform where policy makers and the medical association constantly interacts, negotiates, and bargains. This might help with conducting timely and efficient adjustment in the healthcare sector. In deed, there are different health care systems around the world, but all of them have the same problem, i.e., substantial financial shortfall despite government increases in funding for the health-care sector annually. If extra financial backing does not help, governments are obliged to pursue policies that would seriously increase the efficiency of medical service providers, otherwise the UHC system might deteriorate and collapse (Christopher 2009).

Nevertheless, the public expenditure of the UHC would probably not be so burdened if the wealthy strata of the population and prosperous companies were to purchase health policies for their employees from private insurance. Overall, studies have shown that high expenditures especially occur during childbirth and among aged people in the UK. People ranging from 5 to 64 years of age tend to be very healthy, and as a result, contribute significantly low costs to the UHC. Henceforth, in order to keep health-care costs stable, the government should permanently promote healthy lifestyles and increase physical activity among the population, (i.e., prevent smoking, alcoholism, drug addiction, and obesity, as well as limit other sickly habits).

Reliable statistical data on reduction and increments of serious diseases such as cancers, heart diseases, stroke, tuberculosis, and others is a must for the purposes of

proper funding allocation (Christopher 2009). According to the author's observation, arguments are raised regarding how politicians, who are charged to establish UHC or promote reforms in the health sector, are inexperienced and outside of this field, or have very limited knowledge. Proper reforms and investment in health care does not bring about immediate changes. Thus, it takes time for outcomes to become noticeable. Additionally, initial outputs are expected to be poorer before results improve. Enhancement is occasionally balanced and linear; in other words, progress can cause development in one area, as well as stagnation in another area at the same time. Nevertheless, if a reliable and in-time date is available, efficient adjustment might assist. Inspection is needed during health-care reforms in order to keep the pace and productivity. Officials are advised to involve physicians, specifically the frontline workforce in health-care reforms, in order to strengthen the leverage network from decree-enacting to ground implementation (Christopher 2009).

The Canadian government, from the first step of the UHC introduction, believed that risks of disease were born within the community (Neena and Margaret 2009). Predicting the magnitude of illness and prevention of diseases is less costly than the treatment of the disease itself. Edited by (Pierre. F., Gregory P. and Tom Mc., 2004).

CHAPTER 3

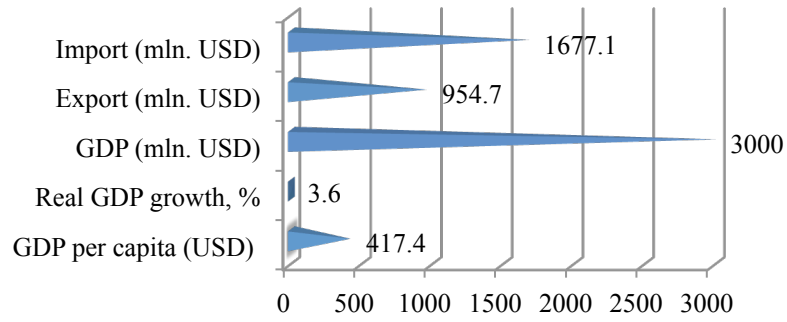
TAJIKISTAN HEALTH CARE PROFILE

3.1. The Tajikistan Constitution as a free medical assistance guarantor.

According to the Constitution, Tajikistan is social oriented state and shall provide decent life for every person in the country, especially to mothers, children and orphans, as well as handicap children Besides, everyone has entitlement to enjoy charge less medical assistance in the state medical facilities (president, 2017).

For the last decade, Tajikistan could achieve significant economic growth of 7 percent annual average. As the result poverty almost reduced twice from 53 percent to 31 percent, nevertheless the quality of education and health care needs to be enhanced (NDS-2030).

Figure 3.1: Economic indicators (average year s of 1994-2013)



Source: Tajikistan National Development Strategy for the period 2030

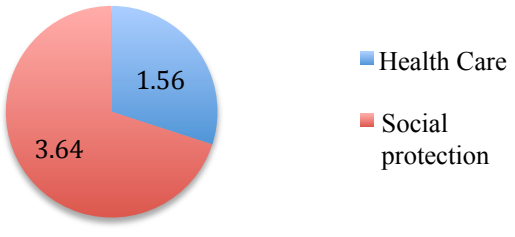
www.minfin.tj; www.stat.tj

In other words, the level of maternal and child mortality, and the incidence of tuberculosis remains relatively high, especially in remote districts. Additionally, worrisome problems continue to grow, such as HIV/AIDS. Moreover, chronic malnutrition still affects 26% of the population, which negatively impacts the efficiency and productivity of the people (NDS-2030).

3.2. Contribution of the Republic of Tajikistan's National Development Strategy for the Year 2030

Under those circumstances, Tajikistan has elaborated and adopted new National Development Strategy of the Republic of Tajikistan for the period 2030 in order to provide prudent welfare and enhance significantly the life quality of both urban and rural inhabitants. The given document holds three main possible development scenarios up-to 2030: Inertial, industrial and industry-innovational. In case of achieving best of the development scenarios, health care spending may reach 4.4 percent, as a share of GDP until 2030 that positively would impact Tajikistan population life expectancy (NDS-2030).

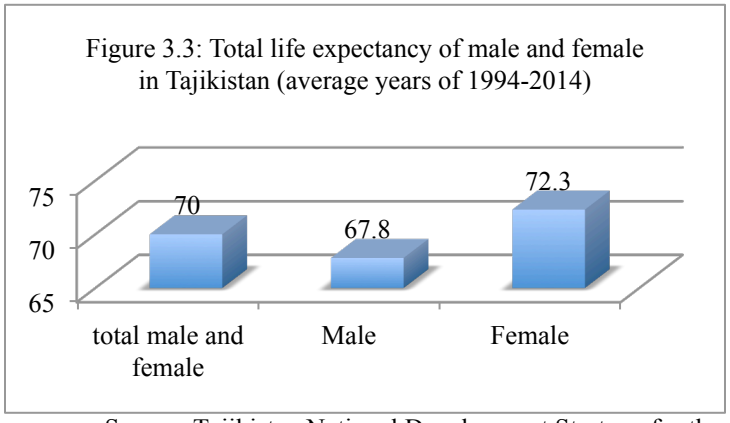
Figure 3.2: Tajikistan government spending on social protection and healthcare as a GDP share (% average years of 2005-2013)



Source: www.minfin.tj and www.stat.tj

Nonetheless, huge amount of investment 118.1 billion US dollars are required for the sake of implementation of all targets by 2030.

At the present time, informal economy is more than 30% of Tajikistan's GDP and besides, country still dependence on labor migrants` remittances that accounts for more than 40% of GDP. Furthermore, in each year, at least 600 thousand people are involved in the process of labor migration as a consequence creates vulnerable social institutions "wives of migrants" and "street children". (NDS-2030)



Source: Tajikistan National Development Strategy for the period 2030; www.minfin.tj; www.stat.tj

On the positive side, the population of Tajikistan is growing steadily and by 2030 it may reach 11.5 million people. The bulk of the population about 60% will be the working-age population from 15 to 64 years old, which is driving force for the economic growth (NDS-2030). Fortunately, the government of Tajikistan has prioritized human capital development in the long run, such as promotion of the social sector through

improved access to quality services, including education, health care, social protection, water supply, and sanitation (NDS-2030).

Health-care priorities include provision of decent public health for the purpose of enhancing life standards, implementing coherent reforms in the health sector, improving the accessibility, quality, and efficiency of health services, as well as evolving existing health-care capacities, and introducing healthy lifestyle models. As a result, in 2015, the average total life expectancy at birth in Tajikistan was 73.5 years (i.e., 71.7 years for men, and 75.5 years for women). Moreover, health-care financing from the state budget increased 6.3 times during 2007–2015 and at present, total state expenditures on health constitute 2.1% of the GDP (NDS-2030). Consequently, ensuring decent public health is provided is an inter-sectorial issue, the solution of which depends on literacy of the population, their lifestyle, the ecological condition of the environment, working conditions, nutrition, the standard of welfare, and the efficiency of the health-care system. Thus, complex approaches and resolutions are required (Ghafur Kh., 2016).

3.3. Tajikistan`s main health care challenges.

Nonetheless, at present, the health sector of Tajikistan encounters the following challenges:

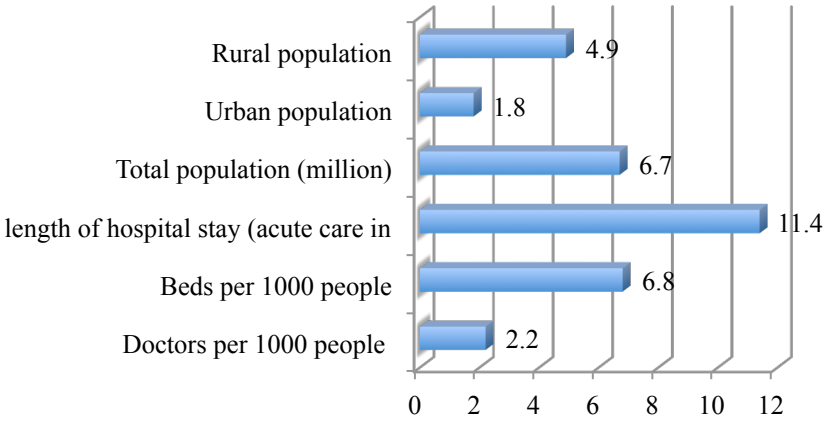
- Poor performance of the health-care system, which requires constant technological and medical personnel upgrading;
- Weak motivation to work by health-care stakeholders;
- Insufficient public funding;
- A gap between rural and urban populations with regard to level of access and medical care; and

- A population that is less motivated to pursue a healthy lifestyle (MoF, 2010).

For this reason, Tajikistan currently adheres to undertaking coherent healthcare reforms such as:

- Introduction of insurance financing mechanisms;
- Creation of a stable regulatory and practices for the development of public-private partnerships in the health sector;
- Formation of a competitive environment in the market of medical services;
- Establishment of a state guarantee system for the provision of free medical care that covers the costs of acute care (emergency care) and treatment of socially significant diseases for vulnerable population groups;
- Development and implementation of mechanisms for protecting the rights of patients and medical personnel;
- Formation models of drug supply, quality improvement, and productivity of medicines;
- Development of the practice of per capita financing of primary health care; and
- Improvements in the system of procurement and financing of medicines, including medications for outpatients (MoF, 2010, NDS-2030)

Figure 3.4: Tajikistan Demographic and medical indicators
(average of years 1994-2013)



Source: Tajikistan National Development Strategy for the period 2030; www.minfin.tj; www.stat.tj

Another key point is that per capita financing for primary health-care service establishments have been implemented through piloting in Tajikistan since 2005 (MoF, 2010). Moreover, Tajikistan has a State Guarantee Benefit Package. It consists of seven parts and identifies the forms of provision of medical services: emergency and urgent medical aid, primary health-care service, specialized ambulatory service, medicines at the primary health-care service level, hospital service, dental service, and sanitary and hygiene service. The State Guarantee Benefit Package identifies the list of guaranteed free medical services, and lists additional services where patients make partial and full payments (copayment) for services rendered (MoF, 2007).

CHAPTER 4

RESEARCH METHODOLOGY

4.1. Research design:

This research was conducted based on qualitative and quantitative methods by using secondary data collection such as academic papers, textbooks, a variety of insurance-related literature, as well as official reports, research works, and statistics. Furthermore, this research focused on exploratory study of UHC of developed and developing countries.

4.2. Data set

The data set consisted of 12 OECD countries: such as Japan, the USA, the Netherlands, Switzerland, Sweden, Germany, France, Denmark, UK, Canada, Turkey, Mexico. Also, there is a separate data set of three Shanghai Cooperation Organization (Hence after SCO), such as People`s Republic of China, Russian Federation and Republic of Tajikistan for the analysis purpose too.

Additionally, it encompassed variables such as: total life expectancy of males and females, number of beds per 1000 people, number of physicians per 1000 people, health spending as a GDP share, pharmaceutical spending as a GDP share, length of hospital stay (acute care in days), total health spending per capita (USD), total GDP per capita (USD) and total medical graduates per 100 thousand population. Besides, a 20-year timeframe *(1994–2013)* was covered.

4.3. Data analysis

Qualitative analysis mostly focuses on the author's claim that Tajikistan might not be able to introduce UHC for the next 13 years due to insufficient economic growth and meager health spending allocation as a GDP share. Hence, the qualitative analysis is supported by an extensive literature review and detailed examination of the Tajikistan National Development Strategy for the year 2030.

In relation to quantitative analysis, OECD and SCO country panel dataset that covers 20 years (1994-2013) has been created with the inclusion of the above-mentioned variables, in order to run an ordinary least squares (OLS) regression method by application of Stata package. The goal of the analysis was to disclose main contributors of life expectancy in OECD and SCO countries and imply the outcomes of the estimation to Tajikistan case by answering below questions:

1. How much should health spending be as a GDP share (%) in Tajikistan in order to introduce UHC and ensure its durable operation for the purposes of population longevity?;
2. How many doctors and beds should there be per 1000 people, and how long should hospital stay be in Tajikistan in order to reach the average life expectancy of OECD countries (an average of 78.41 years over 20 years), as well as Tajikistan's NDS-2030 longevity targets (75.7 – 80 years)?

4.4 Regression model

OECD and SCO`s data were converted to country panel dataset analysis because this helps to determine the performance of the above-mentioned countries across a significant period of time; in this case, the timeframe covered 20 years, from 1994 to 2013. Fixed and random techniques were used for the purpose of panel data analysis in Stata software. An ordinary least squares (OLS) regression method, as well as linear function, were used for the estimation.

In order to choose between fixed or random effects, a Hausman test was ran.

As a result, there were two main different estimations in the analysis:

1. The first estimation covered all 12 OECD countries, as well as, related health care and life expectancy variables.
2. As regard to second estimation three SCO countries, such as People`s Republic of China, Russian Federation and Republic of Tajikistan were included.

It is important to mention that in accordance to Hausman test," fixed-effect techniques were appropriate to above-mentioned estimation.

4.5 Limitations

The main limitation is the lack of primary data that could be collected through relevant interviews and questionnaires distributed to major health-care stakeholders in Tajikistan, such as the Ministry of Health and Social protection, the Ministry of Finance, hospitals and clinics, physicians and patients, as well as state and privately owned insurance companies. The interview and meetings could possibly give closer insights into the health-care sector, and the life expectancy and willingness of its stakeholders to support UHC introduction in Tajikistan. Nevertheless, it will definitely be pursued in future PHD research.

CHAPTER 5

RESULT AND DISCUSSION

This results and discussion chapter consists mainly of two parts: the first part is about qualitative analysis, and the second part is about the quantitative approach used.

Part I: Qualitative Analysis:

5.1. Analysis of the Republic of Tajikistan's National Development Strategy for the Year 2030.

In accordance with the results of much related literature on UHC, significant spending by the government is required. Furthermore, serious political, cultural, economic, and financial reforms in the country are needed.

As for Tajikistan, this country has elaborated and adopted the National Development Strategy of the Republic of Tajikistan for the year 2030 (MEDT, 2016). The National Development Strategy of the Republic of Tajikistan for the year 2030 (hereinafter referred to as NDS-2030) was developed on the basis of the provisions of the Constitution of the Republic of Tajikistan, the Law of the Republic of Tajikistan "On State Projections, Concepts, Strategies and Programs of Social and Economic Development of the Republic of Tajikistan", in accordance with the country's long-term goals and development priorities. This was indicated in messages delivered to the Parliament of the Republic of Tajikistan in 2014 and 2015 by the Founder of Peace and National Accord - the Leader of the Nation, the President of the Republic of Tajikistan, His Excellency Emomali Rahmon (NDS-2030).

Furthermore, the NDS-2030 took into account the international obligations of the Republic of Tajikistan regarding Sustainable Development Goals endorsed by the 70th session of the UN General Assembly in September 2015 (NDS-2030).

The following lists the priorities of the NDS-2030: education; health care; employment; inequality issues; combating corruption; ensuring food security and nutrition; effective management; social protection of the population; prevention of potential conflicts, as well as energy security, ecology, and management of demographic processes (NDS-2030). As can be seen in the above, health care occupies a crucial part and is considered one of the top priorities in the NDS-2030. Nevertheless, when we examine it financially, e.g., healthcare spending as a GDP share, it is far less than that of education and social protection sectors (NDS-2030, MoF, 2010).

It is important to mention that prior to the Tajikistan NDS-2030, there was also a similar strategic document (NDS-2015) that encompassed Tajikistan's goals and targets for the long-term. The NDS-2015 has contributed important macroeconomic results such as: poverty was reduced by almost two times (from 53% in 2007 to 31% in 2015), stable economic annual growth at the average level of 7% was achieved, and the annual state budget increased by almost nine times (NDS-2030). All in all, the NDS-2030 is a very vital strategic document, which directs precise actions for the purpose of Tajikistan development and the provision of a decent life for the population.

Thus, in harmony with the NDS-2030, Tajikistan holds three main development scenarios leading up to 2030: Inertial, industrial, and industry-innovational. Health-care financing very much depends on the achievement of certain development scenarios.

First, the inertial development scenario assumes sluggish social-economic development with no major changes in the economic structure of the country. As a result, within the inertial development scenario, expenditure for the purpose of health care and social protection as a GDP share should reach 7.5% until 2030 (NDS-2030). With regard to the industrial development scenario, it is presumed that the largest energy facilities and related infrastructures will successfully operate. Moreover, this scenario envisages negative external factors mitigation and prevention measures. In this approach, the following outputs are expected: the total volume of industrial production will increase 4.2 times, with the mining industry increasing 5.7 times, the manufacturing industry increasing 4.3 times, and the production and distribution of energy, water and gas increasing 2.9 times. Moreover, the GDP for the whole forecasted period will increase by 2.6 times, with its per capita volume increasing by 2.0 times. As a consequence, the given scenario estimates government spending on health care and social protection, with a GDP share reaching 8%–9% by 2030 (NDS-2030).

Concerning the industrial-innovative scenario, it is supposed that major and critical reforms in the education sector will take place by training and raising creative, modern, and skilled scientists and entrepreneurs. Strong intellectual property protection is a must in an innovative economy, which might favor the growth of both domestic private and foreign direct investment. This will lead to rational use of human capitals, development of the country's transit infrastructure, diversification of the national economy, and a significant increase in the export of goods and services.

Correspondingly, if all targets of the industrial-innovative scenario are achieved, government spending on health care and social protection, as a GDP share, will reach 10% by 2030 (NDS-2030).

Table 5.1 Tajikistan development scenarios for the year 2030

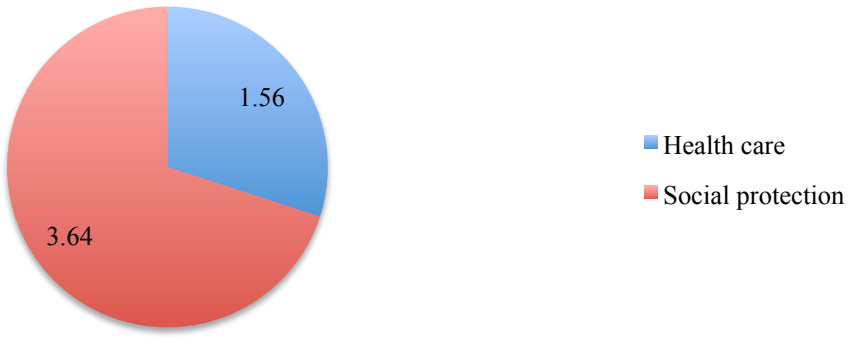
Version features	**2013**	**Inertial**	**Industrial**	**Industry-innovational**
Profile	Agro-industrial model is kept	Agro-industrial model is kept	Successful implementation of existed and started energy and infrastructure projects	Creation of innovation development foundations in country's economy, institutionalization empowerment take place
Activity	Slow infrastructure problems resolution. High dependency from external shocks, import of goods does not change	Slow infrastructure problems resolution. High dependency from external shocks, import of goods does not change	Rational application of water, energy and other resources. Enhancement of manufacturing and agricultural capacities	Formation of innovational approaches in order to provide economic and social resolutions
Growth stimulation	Demand on foreign financial resources	Demand on foreign financial resources	Successful structural reforms in real sector and public management system	Efficient application of new international opportunities
Parameters				
Spending on education and science as a share of GDP	4.7%	5-5.5%	5.5-6%	7%
Spending on healthcare and social protection as a share of	5.7%	7.50%	8-9%	10%

GDP				
Share of agriculture in GDP	23.45%	22.5-23%	19-19.5%	17-18%
Share of industry in GDP	12.08%	19-19.5%	20-20.5%	20-21%
Share of construction in GDP	10.22%	15.5-16%	18.5-19.5%	19.2-20.2%
Share of direct and indirect taxes in structure of GDP	14%	12.50%	12.50%	12%
Trajectory development				
GDP growth (annually average)	7.40%	4-5 %	6-7%	8-9%
GDP growth for the period 2030		2 times	2.7 times	3.5 times
GDP per capita in PPS	1053.5	4000-5000 $	5500-6500 $	7000-7500 $

Source: NDS-2030 and Ministry of Economic Development of Tajikistan

Nonetheless, if Tajikistan reaches the best positive development scenario (industry-innovational) and projected health-care spending as a GDP share, the NDS-2030 will be insufficient to introduce UHC and ensure its durability. As an illustration, if a split existed between data from 2005 to 2013 on health-care spending and social-protection spending as a GDP share, we could clearly see that average social-protection spending as a GDP share would be more than 2 times bigger compared with health-care spending.

Figure 5.1: Tajikistan government spending as a GDP share (% average years of 2005-2013).



Source: www.minfin.tj, (MoF, 2007), (MoF, 2010)

Most social-protection spending (65%) is attributed to social insurance expenditures such as pension payment to relevant strata of the population such as retirement pension, handicap pension, orphanage pensions, and military and law protection workers' pension. However, the allowance for a sick individual is a very measurable allocation: 41 million TJS in 2013 (9 million USD)**.** With regard to health-care costs: approximately 60% of the health-care budget is allocated to medical workers' salaries, and more than 26% is allocated to capital investment (construction of medical facilities as well as medical equipment provision) (MoF, 2010).

With this in mind, the tendencies of the Republic of Tajikistan's economic development testify that there are premises for the probable implementation of the second scenario (NDS-2030). As a result, within the industrial development scenario, expenditure for the purpose of health care and social protection as a GDP share should reach 8% or 9% until 2030. Henceforth, health spending will most likely account for 3.44% or 3.87% of the GDP share. Nonetheless, the ultimate goal of the NDS-2030 is to

provide decent welfare and to significantly enhance the life quality of both urban and rural inhabitants. In order to implement all goals and targets of the NDS-2030, 118.1 billion USD is required. The government of Tajikistan projects that 54.7 billion USD (46.3%) would be attracted from the private sector, 56.1 billion USD from budget funds (47.5%), and the development partners' contributions would likely be 7.3 billion USD (6.2%) (NDS-2030).

5.2. Brief literature review justification of the above mentioned arguments.

The above-mentioned arguments are consistent with the statement that poor countries carelessly review health-care financing; whereas high-income countries very much focus on financing and incentive issues. An interesting example can be observed in Ghana, where the government insured a certain percentage of its population. This was done because low- and low-middle-income countries were unable to insure their whole population. This method started from the more vulnerable and low-income strata of the population and slowly increased the percentage of the insured (Maria-Luisa, 2010).

Similarly, Peru launched a pro-poor health-insurance scheme that targeted maternal and child health care. Furthermore, China adopted a national policy for rural health care, which covered almost 90% of the agrarian population of China (Maria-Luisa, 2010). Nevertheless, in accordance with a study that was undertaken by Wastaff and Moreno-Serra (2007) in Eastern Europe and Central Asia, improved health results might not be generated in the distant future due to insufficient health care funding.

Evidence suggests that generally, politicians in low-income countries promise many benefit packages for the indigent, and premium exemption for some strata of the population such as children, elders, and government employees. They even introduce

UHC in order to win the votes of electors, but in the long run, this type of UHC is fated to fail owing to serious challenges, which makes the situation worse. For instance, a similar issue occurred with Ghana's national health insurance scheme, where the issuance of health insurance identity member cards was significantly slowed down owing to unknown reasons. Moreover, the insured received medical care less than noninsured people, which saw a rise in adverse behavior and intentional delays to determine who were insured by health-care providers in order to gain illegitimate rewards. Moreover, the reimbursement system used by Ghana's national health insurance scheme for claims was not revised well, which served as a health-provider stimulus to provide more services and more expensive drugs than what was actually needed in exchange for more earnings because their system was based on fees for services. Overall, there were many cases of fake claim submissions, delays in claims payment, as well as adverse selection problems.

High employment in a country positively correlates with sustainable UHC, and along this line the more workers in a country, the stronger their UHC becomes. If the government decides to introduce UHC, it has to be ready to subsidize UHC mainly at the initial steps. UHC requires decades and consistent enhancement in order to work out unbiased comprehensive medical care for all strata of a population (Maria-Luisa, 2010). Successful health-care reforms require all stakeholders: particularly government institutions such as ministries and related health committees, to come to a consensus as soon as possible, otherwise reforms would be introduced rather slowly and inefficiently.

If we take as an example, a few pilot cities in China: Dandong, Huangshi, and Zhuzhou, government agencies could not reach agreement due to divergent interests and visions. For instance, the state commission for restructuring the economic system

supported the idea of diminishing government implications in health-care funding, but the Ministry of Health was against this because it was afraid of reducing hospitals' and doctors' profits (Sabrina Luk, 2014). As per usual, the Ministry of Finance desired to bear less public financial plummet due to growing health-care costs. Conversely, the Ministry of Labor asked for unloading of the fiscal hardship of enterprises and recommended cost sharing and risk pooling. As can be seen, different government agencies have conflicting interests that hinder the productive process.

In general, the same problem has been raised with regards to introducing the UHC in Tajikistan. Explicitly, in 2008, the law on mandatory health insurance was enacted, but due to how the Ministry of Finance and the Tax Committee opposed it owing to financial shortages, as a result, the application of the given law was postponed and suspended for an unknown period (Asia-Plus, 2016).

Health-care financing reforms entail additional financial burden for the population' hence, it is very important for the government to gain credibility from its population in order to process reforms smoothly. Besides, health-care financing reforms require strong unity, solidarity, and a centralized government. With regards to Singapore, a significant advancement in public health care took place, whereby the government increased the quantity of hospitals, clinics, and number of nurses and doctors across the island. Preventive measures and enhancement health literacy was mostly stressed too. Moreover, rehabilitated drinking water and sewage infrastructure contributes widely to the health-care protection of the population. Furthermore, it is important to mention that speedy economic growth, about 9% annually, through exporting sophisticated technologies and industrializing the economy, was made possible by reaching high

employment. Correspondingly, the solvency of the individual was notably raised. All in all, health-care financing reforms undergo an endless procedure that asks for reactions toward dynamic economic and politic changes over a set period; otherwise reformed health care can become extremely complex and much worse than the original health-care system (Sabrina Luk, 2014).

Health expenditure in many countries in South America such as Argentina, Brazil, Chile, Costa Rica, and Uruguay involve a significant share of the GDP, from 4.5% to 8% in order to reach UHC. Meanwhile, some OECD countries allocate more than 10% as a GDP share for the health-care sector (Tania D., Gisele A., 2009). Also, in the long run, pharmaceutical spending is very crucial for introduction and maintenance of UHC, as an illustration, the government of Japan allocated more than 27 trillion yen (237.6 billion USD) to health-care needs, including 7.5 trillion yen (66 billion USD) for drug use throughout Japan in 1995. This is the reason behind why Japanese spending on pharmaceutical products is one of the highest in the world, higher than that of the USA, France, and Germany (Koichi K., 1998). Nonetheless, health care costs keeps rising in Japan and in OECD countries and currently, cost-containment debates among policy makers take place in developed countries owing to the fact that GDP growth was left behind relative to health-care-costs pace (Theodore M. and Claus W., 2011). Fortunately, a well-managed UHC has the potential to transfer a country into one of the largest employers in the world and to become a driving force in the economy (Christopher, 2009).

As a results, world practice testifies that introduction and operation of UHC is very costly and requires to be spend from 5 to 10% of GDP share thus low-income and

middle-income countries, including Tajikistan might not be able to introduce UHC. If UHC were introduced in the above-mentioned countries without considering significant budgetary spending, its operation would be seriously undermined.

Part II: Quantitative analysis:

5.3. Comparable data:

Table 5.3 Table comparing variables between OECD countries and Tajikistan for average of twenty years (1994-2013).

Variables	OECD	Tajikistan
Average life expectancy (total years);	78.41	70
Ave. no of beds per 1000 people;	5.52	6.8
Ave. no of physicians per 1000 people;	2.56	2.2
Ave. health spending as a share of GDP;	8.76%	1.56%
Ave. pharmaceutical spending as a share of GDP;	1.31%	No data
Ave. length of hospital stay (acute care, days);	8.18	11.4
Ave. health spending per capita (USD);	2874.91	170
Ave. GDP per capita (USD);	30424.80	417.39
Ave. elderly population 64 years old and over;	14.29%	5%
Ave. population-million persons (mln.)	71.81	6.735

Source: www.data.oecd.org, www.stat.tj, (M. finance, 2010), TNDS-2030, Gh. Khodjamurodov-2016, (M. economy, 2015)

Prior to proceeding with the quantitative results, a comparable data table is referred to in order to reveal differences between social-economic indicators of Tajikistan and OECD countries. As shown below, for a few indicators, Tajikistan is more than or close to the OECD countries' average, such as: average number of beds per 1000 people is more in Tajikistan for 1.28 beds than in OECD, average length of hospital stay is more in Tajikistan for 3.22 days than in OECD and average number of physicians per 1000 people is slightly less in Tajikistan for 0.36 physician than in OECD countries. Although

Tajikistan and other Central Asian countries have more hospital beds and provide longer stay in hospitals than most of the OECD countries, but unfortunately, the given health care resources are being used in a very ineffective way. As regard to most of OECD countries, technological development in medicines and high-quality standards of curative approaches had caused significant shorter hospital stay due to the quick healing time. In other words, technological advantage of OECD countries able them to undertake medical diagnosis and surgeries in a very qualitative and efficient way that a patient does not need to stay in hospital for a long time. Nonetheless, there are also cost containment issues, behind less hospital beds and shorter hospital stay in OECD countries as well (M. Hensher, 1998).

Similarly, this might be consistent to the explanation that Tajikistan`s health care still has predominantly soviet health care legacy. In other words, during Soviet era quantity of physicians and beds per 1000 of people were 4 times higher than in the USA but the quality of medical care was lower than by world standards due to the fact that in Soviet Union many medical diagnosis were made solely through physicians interview of patients, without any application of sophisticated medical technology, whereas, the western world had less physicians and beds but were advanced with medical diagnostic technologies, which helped to undertake qualitative diagnosis of the diseases in the early stages. But in the Soviet Union, most of the medical diagnosis were inaccurate as a results patients had to stay longer in hospitals, where physicians could directly monitor sick man and adjust his or her treatment as patients got cured or on the contrary got worse (Mark B. 2015).

Nevertheless, as for the other indicators are concerned, such as health care and pharmaceutical spending as a GDP share Soviet Union, including Tajikistan, seriously has been lagging behind. Although there are relatively more number of beds and longer stay in the Tajikistan`s hospitals and clinics than in OECD countries, but as for medical diagnosis technology is concerned, Tajikistan`s hospitals and clinics are not equipped as it is in OECD countries, where medical technologies play critical role in efficient and qualitative treatment of patients.

5.4. The estimation`s results on total life expectancy of males and females in OECD countries.

Correspondingly, the earlier-mentioned dataset that covers a 20-year timeframe for 12 OECD countries was converted into country panel data and inputted into STATA software in order to run necessary regression. As a result following outcomes emerged:

There are two models in the given estimation: first one is fixed effect model and the second one is random effect model (attached in appendix). They both have been estimated by function store “fe” and store “re” and after that function of hausman test fixed and random has been ran (attached in appendix). As a result, P-value (Prob>chi2=) is 0.0000 it means that null hypothesis is to be rejected in favor of alternative hypothesis and as a consequence fixed effect model is appropriate in estimating total life expectancy of males and females in OECD countries.

Moreover, in accordance of the above-mentioned regression`s summery output, we have 240 observations (number of obs=240) due to the fact that analysis has been ran with twenty years of data (1994-2013) and covers 12 OECD countries. Besides, there is

probability for F-test, T-test, and coefficient for T-test as well as R-squared in the estimation.

Table 5.4 OECD estimation:

```
. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot Medicalgraduate
> stotalper100, fe

Fixed-effects (within) regression               Number of obs      =       240
Group variable: countrynum                      Number of groups   =        12

R-sq:  within  = 0.7786                         Obs per group: min =        20
       between = 0.0294                                        avg =      20.0
       overall = 0.1255                                        max =        20

                                                F(5,223)           =    156.82
corr(u_i, Xb)  = -0.3554                        Prob > F           =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |  -.2479887   .1297832    -1.91   0.057    -.5037471    .0077697
Healthspend~P |   .2895664   .0569294     5.09   0.000      .177378    .4017547
lengthofhos~c |  -.0755406   .0282079    -2.68   0.008    -.1311287   -.0199524
Grossdomest~t |   .0001067   .0000111     9.61   0.000     .0000848    .0001286
Medicalgr~100 |   .0333853   .0240021     1.39   0.166    -.0139147    .0806853
        _cons |   74.19757   1.066267    69.59   0.000     72.09633    76.29882
--------------+---------------------------------------------------------------
      sigma_u |   3.093765
      sigma_e |  .67356239
          rho |  .95474482   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(11, 223) =    77.68             Prob > F = 0.0000
```

P-value for F-test, the null hypothesis for F-test means that R-squared is equal to zero (0), therefore, it explains no variation in the dependent variable. As regard to alternative hypothesis, it does not equal to zero (0).

In this case, P-value is greater than F (Prob>F=0.0000), ideally should be less than 0.1, 0.05 or 0.01, thus it corresponds to 95 percent of confidence level. To put it another way, the P-value for F is 0.0000, hence, it means variables statistically significant in all significant levels. For this reason, we are 95 percent confident to reject null hypothesis. In other words, we conclude to alternative hypothesis that R-squared does not equal to zero (0).

Furthermore, F-test has shown that the given regression model has explanatory power and it can be worked with. If the P-value in F-test would be above 0.1, it means that regression model is not good to work with.

As for R-squared value is 0.7776, R-squared takes value between 0-1 and also known as a coefficient of termination. The closer it is to 1 the better is our model, if it closer to zero the worse is our model. Thus R-squared value is 0.7776 and it means that 77.7 percent of the variation of total life expectancy of males and females in OECD explained by independent variables of the given regression model, however 22.3 percent is not explained which is error. In other words, dependent variable (total life expectancy of male and females in OECD) has strong correlation with independent variables in the given analysis.

As for P-value for T-test is concerned. P-value for T-value ideally must be less than 0.05 thus in this case P-value for variable of total health spending as a GDP share is 0.000 in this manner, we reject null hypothesis. This means that we are confident at 95 percent level that total health spending as a GDP share has a significant effect on total life expectancy of males and females in OECD countries.

Another key point is that coefficient of variable of total health spending, as a GDP share is 0.2895664. This is positive number, which display that total health spending as a GDP share and total life expectancy of males and females in OECD positively correlated with each other. Thus, in the final analysis, we can conclude that one unit increase in total health spending as a GDP share cause 0.2895664 increase in total life expectancy of males and females in OECD.

By the same token, the estimation testifies that total life expectancy of males and

females in OECD countries is mostly associated with two variables, such as: total health spending as a GDP share (P-value is 0.000 and coefficient is positive 0.2895664) and total GDP per capita (P-value is 0.000 and coefficient is positive 0.0001067).

As regard to other independent variables, such as: the number of beds per 1000 people (P-value is 0.057 and coefficient is negative -0.2479887), length of hospital stay (P-value is 0.008 and coefficient is negative -0.0755406) and medical graduates (P-value is 0.166 and coefficient is -0.0333853) have the negative and non-significant impact on total life expectancy of males and females in OECD countries.

5.5. The estimation`s results on total life expectancy of males and females in SCO countries.

SCO dataset that covers a 20-year timeframe for three SCO countries was converted into country panel data and inputted into STATA software in order to run required regression. As a result following results turned up:

There are two models in the given estimation: first one is fixed effect model and the second one is random effect model (attached in appendix). They both have been estimated by function store “fe” and store “re” and after that function of hausman test fixed and random has been ran (attached in appendix). As a result, P-value (Prob>chi2=) is 0.0000 it means that null hypothesis is to be rejected in favor of alternative hypothesis and as a consequence fixed effect model is appropriate in estimating total life expectancy of males and females in SCO countries.

Moreover, in accordance of the above-mentioned regression`s summery output, we have 60 observations (number of obs=60) due to the fact that analysis has been ran with twenty years of data (1994-2013) and covers 3 SCO countries.

Table 5.5 SCO estimation:

```
. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot, fe

Fixed-effects (within) regression               Number of obs      =        60
Group variable: countrynum                      Number of groups   =         3

R-sq:  within  = 0.8980                         Obs per group: min =        20
       between = 0.2892                                        avg =      20.0
       overall = 0.0026                                        max =        20

                                                F(4,53)            =    116.66
corr(u_i, Xb)  = -0.7998                        Prob > F           =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |   .4598589   .1849948     2.49   0.016     .0888064    .8309115
Healthspend~P |    1.38389   .2151777     6.43   0.000     .9522982    1.815482
lengthofhos~c |  -.8623016   .1040618    -8.29   0.000    -1.071023   -.6535801
Grossdomest~t |   .0000587   .0000396     1.48   0.144    -.0000207    .0001381
        _cons |   70.86164   2.484239    28.52   0.000     65.87889    75.84439
--------------+---------------------------------------------------------------
      sigma_u |   6.329848
      sigma_e |   .70271001
          rho |   .98782564   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(2, 53) =    31.65                 Prob > F = 0.0000
```

P-value for F-test, the null hypothesis for F-test means that R-squared is equal to zero (0), therefore, it explains no variation in the dependent variable. As regard to alternative hypothesis, it does not equal to zero (0).

In this case, P-value is greater than F (Prob>F=0.0000), ideally should be less than 0.1, 0.05 or 0.01, thus it corresponds to 95 percent of confidence level. To put it another way, the P-value for F is 0.0000, hence, it means variables statistically significant in all significant levels. For this reason, we are 95 percent confident to reject null hypothesis. In other words, we conclude to alternative hypothesis that R-squared does not equal to zero (0).

Furthermore, F-test has shown that the given regression model has explanatory power and it can be worked with. If the P-value in F-test would be above 0.1, it means that regression model is not good to work with.

As for R-squared value is 0.8980, R-squared takes value between 0-1 and also known as a coefficient of termination. The closer it is to 1 the better is our model, if it closer to zero the worse is our model. Thus R-squared value is 0.8980 and it means that 89.8 percent of the variation of total life expectancy of males and females in SCO explained by independent variables of the given regression model, however 10.2 percent is not explained which is error. In other words, dependent variable (total life expectancy of male and females in SCO) has strong correlation with independent variables in the given analysis.

As for P-value for T-test is concerned. P-value for T-value ideally must be less than 0.05 thus in this case P-value for variable of total health spending as a GDP share is 0.000 in this manner, we reject null hypothesis. This means that we are confident at 95 percent level that total health spending as a GDP share has a significant effect on total life expectancy of males and females in SCO countries.

Another key point is that coefficient of variable of total health spending, as a GDP share is 1.38389. This is positive number, which display that total health spending as a GDP share and total life expectancy of males and females in SCO positively correlated with each other. Thus, in the final analysis, we can conclude that one unit increase in total health spending as a GDP share cause 1.38389 increase in total life expectancy of males and females in SCO.

As a result, estimation showed that total life expectancy of males and females in

SCO countries is mostly associated with variable such as: total health spending as a GDP share (P-value is 0.000 and coefficient is positive 1.38389).

Nonetheless, other independent variables, such as: the number of beds per 1000 people (P-value is 0.016 and coefficient is 0.4598589), length of hospital stay (P-value is 0.000 and coefficient is negative -0.8623016) and total GDP per capita (P-value is 0.144 and coefficient is 0.0000587) have the negative and not statistically significant impact on total life expectancy of males and females in SCO countries, including Tajikistan

5.6. The comparison of estimations` outcomes of OECD and SCO countries.

Table. 5.7 OECD countries

No	Variable	Coefficient	P-Value for T-Test
1	Number of beds per 1000 people	-0.2479887	0.057
2	Health spending as a GDP share	0.2895664	0.000
3	Length of hospital stay (acute care in days)	-0.0755406	0.008
4	GDP per capita (USD)	0.0001067	0.000
5	Total medical graduates per 100 thousand people	0.333853	0.166

SCO countries, including Tajikistan

No	Variable	Coefficient	P-Value for T-Test
1	Number of beds per 1000 people	0.4598589	0.016
2	Health spending as a GDP share	1.38389	0.000
3	Length of hospital stay (acute care in days)	-0.8623016	0.000
4	GDP per capita (USD)	0.0000587	0.144

The results brought in the above table indicate that, number of beds per 1000 people has a negative impact on total life expectancy of males and females in 12 OECD and 3 SCO countries, including Tajikistan.

Concerning healthcare spending as a GDP share, it has positive effect on both total life expectancy of males and females in 12 OECD and 3 SCO countries, but its impact is

very small (coefficient 0.2895664) in OECD rather than in SCO (coefficient 1.38389). This is because, the average healthcare spending as a GDP share for twenty years (1994-2013) in 12 OECD countries, accounted to be 8.76 percent, whereas 3.95 percent healthcare spending as a GDP share in average of the same period in three SCO countries. Hence OECD spent more than two times for health care rather than SCO countries due to technological advancement, aging population and constant increment of healthcare`s costs. Nonetheless, in accordance of law of diminishing return, marginal benefits of health-care spending diminish as more is spent on healthcare". Besides, it is important to mention that USA is one of the OECD countries and its health spending as a GDP share is twice larger than that of other OECD members, but health care is less efficient. As an illustration: The health service in the USA compared with the rest of the world is extremely expensive; in other words, the cost of MRI is less than 100 USD in Japan, compared with 1200 USD in the USA (Damien B. 2010). Likewise, almost 700 billion USD does not improve the American people's health at all. As a result the USA occupies last position among developed countries in terms of unnecessary death and "ranks 29th out of 37 countries for infant mortality" (Damien B. 2010).

On the other hand, SCO countries, including Tajikistan`s health care is under shortages of funding, as a consequence average total life expectancy of males and females in Tajikistan seriously below (70 years) compare to average total life expectancy of males and females in OECD countries (78.41 years). Nevertheless, in conformity of SCO estimation`s outcomes: the coefficient of healthcare spending as a GDP share is very significant 1.38389. It means that if healthcare spending in Tajikistan as a GDP share becomes 5 or 6 percent annually, correspondingly, total life expectancy of males

and females in Tajikistan would increase significantly and faster than in OECD countries. Ultimately, total life expectancy of males and females in Tajikistan may converge to average total life expectancy of males and females of OECD countries in a short period of time.

As for variable of length of hospital stay is concerned, it has negative impact to both total life expectancy of males and females in 12 OECD (coefficient -0.0755406) and 3 SCO (coefficient -0.8623016) countries due to the fact that average length of hospital stay in SCO countries (11.27 days) longer than that in OECD (8.18 days) countries. The reasons behind longer stay in SCO hospitals are medical technological disadvantages and low quality of disease diagnosis, surgeries, pharmaceuticals and other therapies. Nevertheless, length of hospital stay in OECD (8.18 days) is not that small compare to SCO countries, because as population gets older the process of recovery of old person gets longer too, besides if elderly people live alone, they are very frail to care themselves alone at home (NAO. 2016). As a result in some OECD countries such as Japan, Germany, United Kingdom and Canada length of hospital stay even is longer than in SCO.

Regarding to variable GDP per capita, it has positive but very small impact to total life expectancy of males and females in 12 OECD (coefficient 0.0001067) and insignificant impact to 3 SCO (P-value 0.144) countries.

In order to estimate quality of healthcare in OECD and SCO countries, proxy of medical graduate per 100 thousand people was used in the estimation but in accordance the output of estimation medical graduate per 100 thousand people has insignificant influence to total life expectancy of males and females in 12 OECD countries (P-value

0.166). As regard to SCO countries, sadly, data on medical graduate per 100 thousand people was unavailable; nevertheless, the analysis of the given variable would be pursuing in the future researches.

As a matter of fact, if Tajikistan wants to introduce UHC and reach the average life expectancy of OECD countries, (78.41 years), as well as Tajikistan targets, which is mentioned in NDS-2030 (75.7 – 80 years), it would need to increase total health spending as a GDP share by 5 to 6 units.

In other words, Tajikistan might be able to introduce UHC, in which case, the population may live up to 78.3 years, if the total health spending as a GDP share would be 5 to 6 percent, which is also consistent to the recommendation made by World Health Organization for developing countries: to spent minimum 5 percent of GDP for healthcare needs. (William D. 2007). Tajikistan healthcare spending would be less than that in OECD for 2.76-3.76 percent but on the contrary, Tajikistan people would have average life expectancy as it is in OECD.

Unfortunately, in accordance with Tajikistan's National Development Strategy for the year 2030, the government of Tajikistan projected smaller expenditure for the health-care sector as a GDP share (3.87%), which is inconsistent with the above-mentioned findings. As a consequence, the introduction of UHC and reaching a life expectancy of 78.3 years in Tajikistan might be unfeasible for the next 13 years.

5.8. Brief analysis of literature review justification.

This can be explained by how the efficient distribution of health-care resources more significantly and better affect health outcomes than the amount of health-care spending per capita. In other words, "marginal benefits of health-care spending diminish

as more is spent on health". Even though countries of the world have very diversified health-care systems, based in accordance with their political and cultural establishments, all states must deal with the same challenges, such as access, cost, and quality of medical service. In common, the GDP closely interacts with health spending; thus, the more the GDP grows, the better funding would be provided to the health-care sector (Akira B., Alan H. 1994).

In accordance with a multiple regression model, the average length of stay in a hospital positively correlates with life expectancies of men and women. Additionally, non-health-care spending per capita (nice food, balanced diet, healthy lifestyle, comfortable accommodation, environment, and prudent retirement income) contributes to a longer life. Presumably, longer stays in hospitals makes inpatients live longer, especially if they are old, alone, and are in a volatile situation. However, this is not consistent with the above-mentioned findings. Hence, in our case, the length of hospital stay had a negative impact on longevity. On the whole, the government needs to balance health spending per capita and non-health spending per capita, as well as distribute health-care resources wisely to ensure medical services are efficient, rather than just enlarge health-care financing (Akira B., Alan H. 1994).

Nonetheless, the investigation made in Canada suggests that the less health-care spending caused increments in infant mortality and decline of life expectancy. Longevity and strong health rely on a person's lifestyle and nutrition; nevertheless, genetics, physical and natural environments, and the wellbeing of individuals play crucial roles too. In general, people in Canada are entitled free health care, regardless of their income and inhabitance. However, in some cases, patients have to pay half or full costs of

medicines if they are able to, and are under 65 years old. Usually, after the introduction of UHC, health-care spending as a GDP share might enlarge two or three times for a short period of time. The Canadian example testifies the above-mentioned claim: Health-care spending as a GDP share for the period of 25 years raised from 2.5% to 7.5% after adoption of a related insurance act (Group 1999).

UHC in Canada is the responsibility of each province, but federal government subsidies partially and provide interprovincial norms in order to ensure equitable access to the entire population. Health spending has a robust correlation with health outcomes. High alcohol utilization, smoking, and fat consumption are negatively related to life expectancy. Scrutiny showed that infant mortality increases, and life expectancy decreases if there is an insufficient quantity of physicians too (Group 1999).

In like manner, in accordance with a recent interview with the Minister of Health and Social Protection of Tajikistan, Mr. Nasim Olimzoda, to the Tajikistan news agency "Asia-Plus", who said that currently, Tajikistan health care lacks 7000 medical workers, including 4000 physicians and 3000 nurses. The above-mentioned shortages of medical workers mostly observed in rural and remote districts of Tajikistan (Asia-Plus, 2017). Thus, it has been the case that shortages of medical staff in remote areas of the country might negatively impact the health and financial wellbeing of certain inhabitants. This is likely because a frequent trip to the area where particular treatment is available is needed, which is a cause for additional heavy costs to the patients. In order to solve this problem, the government should financially and materially motivate medical workers in order to make them to work in remote countryside (Christopher 2009).

CHAPTER 6

CONCLUSION

Tajikistan has adopted a law of mandatory health insurance, but, at several times, the introduction mandatory health insurance was postponed due to the fact that the Ministry of finance and the Tax committee opposed it to avoid serious financial shortages in the state budget (Asia-Plus, 2017). This is consistent with Sabrina Luk's (2014) observation that successful health-care reforms require all of its stakeholders, particularly government institutions such as ministries and related health committees, to come to a consensus as soon as possible. Otherwise, reforms would be introduced rather slowly and inefficiently. If we take as an example, a few pilot cities in China: Dandong, Huangshi, and Zhuzhou government agencies could not reach agreement owing to divergent interests and visions. For instance, state commission for restructuring the economic system supported the idea of diminishing government implications in health-care funding. However, the Ministry of Health was against this restructuring because it was afraid hospitals' and doctors' profits would reduce. As per usual, the Ministry of Finance desired to bear a less steep public financial plummet because of growing health-care costs. On the contrary, the Ministry of Labor asked for unloading of the fiscal hardship of enterprises and recommended cost sharing and risk pooling. As can be seen, different government agencies have conflicting interests that hindered productive processes. Nonetheless, in accordance with the National Development Strategy of Tajikistan for the year 2030, the Tajikistan government adhered to providing decent health care for its population and to undertaking sound health-care reforms for the next 13 years. In other words, everything depended on the economic performance of the country. Moreover,

Tajikistan NDS-2030 stakeholders and economists projected that Tajikistan might achieve industrial development up to 2030, and as a result, there might be decent health-care spending as a GDP share (3.87%). However, one may question whether this allocation is enough to be able to introduce UHC and to ensure its durable operation for the longevity of Tajikistan's population?

Thus, economic development is closely interrelated with decent health-care coverage provided by the public sector. The more a population is vulnerable to disease, the less labor time is contributed to economic development (Johannes, 2005). Although this may be true, literature analysis has disclosed that health expenditure in many countries in South America, such as Argentina, Brazil, Chile, Costa Rica, and Uruguay, involves a significant share of the GDP, ranging from 4.5% up to 8% in order to introduce the UHC. Meanwhile, some OECD countries allocate more than 10% as a GDP share for the health care sector (Tania D., Gisele A., 2009). Furthermore, the investigation conducted in Canada suggested that less health-care spending caused an increment in infant mortality and a decline in life expectancy (Group 1999). Nevertheless, the efficient distribution of health-care resources has better significance on health outcomes rather than the amount of health-care spending per capita. In other words, "marginal benefits of health-care spending diminish as more is spent on health" (Akira B., Alan H. 1994).

Moreover, ongoing increments in public health-care spending do not always mean positive outputs for people under medication. However, it rather indicates the inefficiency of the health-care system (Tania D., Gisele A., 2009). In reality, when introducing universal health care, governments must make sure not to allow

transformation of doctors, health centers, clinics, and hospitals into profit-seeking entities that would do anything in order to gain more and more revenue. Hence, the government can avoid the given issue through efficient supervision and hand over decent subsidies to health-care providers (Maria-Luisa, 2010). Correspondingly, health-care reforms toward health insurance, especially toward a universal one, need piloting stages and experiments. These should start from basic and develop into comprehensive health-care coverage. Moreover, they should start from local to nationwide dissemination (Sabrina Luk, 2014). In addition, proper reforms and investment in health care does not bring immediate changes, thus it takes time for noticeable outcomes. Furthermore, initial outputs are expected to be poor before results improve. (Christopher 2009).

In the same manner, many studies have argued that pooled financing and equity are important components toward UHC. That is, all health mandatory contributions should be combined into a single pool in order to provide equity and subsidy to the entire population (Tania D., Gisele A., 2009). By the same token, deliberate steps toward UHC calls for major structural changes to purchasing and provider reimbursement, as well as administration systems (Margaret P., Masahira A. 2011). Equally, the cost of drugs plays a very crucial role in the viability of UHC. If a health-care provider is supplied medicines through many second-hand dealers, which markup their own prices above that of manufacturer's (30–40 times higher price), absurdly costly payments for patients could result. In this way, hospitals are recommended to import drugs from producers or single representatives. (Sabrina Luk, 2014).

In the final analysis, Tajikistan might be able to introduce UHC, in which case, the population may live up to 78.3 years, if the total health spending as a GDP share

would be 5 to 6 percent, which is also consistent to the recommendation made by World Health Organization for developing countries: to spent minimum 5 percent of GDP for healthcare needs. (William D. 2007). Tajikistan healthcare spending would be less than that in OECD for 2.76-3.76 percent but on the contrary, Tajikistan people would have average life expectancy as it is in OECD. Nonetheless, efficient and fair distribution of health care resources, such as funding, physicians, modern medical diagnosis technologies and pharmaceuticals are much more important rather than just enlargement of certain quantity of health care variables (Akira B., Alan H. 1994).

Unfortunately, in accordance with Tajikistan's National Development Strategy for the year 2030, the government of Tajikistan projected smaller expenditure for the health-care sector as a GDP share (3.87%), which is inconsistent with the above-mentioned findings. As a consequence, the introduction of UHC and reaching a life expectancy of 78.3 years in Tajikistan might be unfeasible for the next 13 years.

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Appendix 1

STATA Table on OECD estimation outcomes.

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   12.1   Copyright 1985-2011 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     Special Edition                  College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

25-student Stata lab perpetual license:
       Serial number:  40120573006
         Licensed to:  RitsumeikanAsiaPacificUniversity
                       RitsumeikanAsiaPacificUniversity

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

. import excel "C:\Users\umedkh15\Desktop\OECD  panel data 17.07.17 .xlsx", shee
> t("Sheet4") firstrow

. egen countrynum=group(Countries)

. xtset countrynum
       panel variable:  countrynum (balanced)

. xtset countrynum
       panel variable:  countrynum (balanced)

. xtset countrynum Year, yearly
       panel variable:  countrynum (strongly balanced)
        time variable:  Year, 1994 to 2013
                delta:  1 year
```

```
. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot Medicalgraduate
> stotalper100, fe

Fixed-effects (within) regression               Number of obs      =       240
Group variable: countrynum                      Number of groups   =        12

R-sq:  within  = 0.7786                         Obs per group: min =        20
       between = 0.0294                                        avg =      20.0
       overall = 0.1255                                        max =        20

                                                F(5,223)           =    156.82
corr(u_i, Xb)  = -0.3554                        Prob > F           =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |  -.2479887   .1297832    -1.91   0.057    -.5037471    .0077697
Healthspend~P |   .2895664   .0569294     5.09   0.000      .177378    .4017547
lengthofhos~c |  -.0755406   .0282079    -2.68   0.008    -.1311287   -.0199524
Grossdomest~t |   .0001067   .0000111     9.61   0.000     .0000848    .0001286
Medicalgr~100 |   .0333853   .0240021     1.39   0.166    -.0139147    .0806853
        _cons |   74.19757   1.066267    69.59   0.000     72.09633    76.29882
--------------+---------------------------------------------------------------
      sigma_u |   3.093765
      sigma_e |   .67356239
          rho |   .95474482   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(11, 223) =    77.68             Prob > F = 0.0000
```

```
. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot Medicalgraduate
> stotalper100, re

Random-effects GLS regression                   Number of obs      =       240
Group variable: countrynum                      Number of groups   =        12

R-sq:  within  = 0.7644                         Obs per group: min =        20
       between = 0.5759                                        avg =      20.0
       overall = 0.6146                                        max =        20

                                                Wald chi2(5)       =    706.51
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |    .201745    .087377     2.31   0.021     .0304893    .3730007
Healthspend~P |   .2991134   .0571503     5.23   0.000     .1871009     .411126
lengthofhos~c |  -.0560308   .0291164    -1.92   0.054     -.113098    .0010364
Grossdomest~t |   .0001367   .0000102    13.45   0.000     .0001168    .0001566
Medicalgr~100 |   .0369375    .024973     1.48   0.139    -.0120087    .0858837
        _cons |   70.65907   .7689464    91.89   0.000     69.15196    72.16617
--------------+---------------------------------------------------------------
      sigma_u |  1.0709692
      sigma_e |   .67356239
          rho |   .71656323   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

```
. estimates store fixed

. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot Medicalgraduate
> stotalper100, re

Random-effects GLS regression                   Number of obs      =       240
Group variable: countrynum                      Number of groups   =        12

R-sq:  within  = 0.7644                         Obs per group: min =        20
       between = 0.5759                                        avg =      20.0
       overall = 0.6146                                        max =        20

                                                Wald chi2(5)       =    706.51
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |    .201745    .087377     2.31   0.021     .0304893    .3730007
Healthspend~P |   .2991134   .0571503     5.23   0.000     .1871009     .411126
lengthofhos~c |  -.0560308   .0291164    -1.92   0.054     -.113098    .0010364
Grossdomest~t |   .0001367   .0000102    13.45   0.000     .0001168    .0001566
Medicalgr~100 |   .0369375    .024973     1.48   0.139    -.0120087    .0858837
        _cons |   70.65907   .7689464    91.89   0.000     69.15196    72.16617
--------------+---------------------------------------------------------------
      sigma_u |  1.0709692
      sigma_e |  .67356239
          rho |  .71656323   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. hausman fixed random, sigmamore

Note: the rank of the differenced variance matrix (4) does not equal the number
        of coefficients being tested (5); be sure this is what you expect, or
        there may be problems computing the test.  Examine the output of your
        estimators for anything unexpected and possibly consider scaling your
        variables so that the coefficients are on a similar scale.

                 ---- Coefficients ----
              |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
              |     fixed        random       Difference          S.E.
--------------+----------------------------------------------------------------
Numberofbe~a  |  -.2479887      .201745      -.4497337        .1084024
Healthspen~P  |   .2895664     .2991134      -.0095471        .0215393
lengthofho~c  |  -.0755406    -.0560308      -.0195098        .0082467
Grossdomes~t  |   .0001067     .0001367        -.00003        6.22e-06
Medicalg~100  |   .0333853     .0369375      -.0035523        .0062769
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       30.68
                Prob>chi2 =      0.0000
```

Appendix 2

STATA Table on SCO estimation outcomes.

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   12.1   Copyright 1985-2011 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     Special Edition                  College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

25-student Stata lab perpetual license:
       Serial number:  40120573006
         Licensed to:  RitsumeikanAsiaPacificUniversity
                       RitsumeikanAsiaPacificUniversity

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

. import excel "C:\Users\umedkh15\Desktop\SCO panel data 17.07.2017.xlsx", sheet
> ("Sheet4") firstrow

. egen countrynum=group(Countries)

. xtset countrynum
       panel variable:  countrynum (balanced)

. xtset countrynum Year, yearly
       panel variable:  countrynum (strongly balanced)
        time variable:  Year, 1994 to 2013
                delta:  1 year
```

```
. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot, fe

Fixed-effects (within) regression               Number of obs      =        60
Group variable: countrynum                      Number of groups   =         3

R-sq:  within  = 0.8980                         Obs per group: min =        20
       between = 0.2892                                        avg =      20.0
       overall = 0.0026                                        max =        20

                                                F(4,53)            =    116.66
corr(u_i, Xb)  = -0.7998                        Prob > F           =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |   .4598589   .1849948     2.49   0.016     .0888064    .8309115
Healthspend~P |    1.38389   .2151777     6.43   0.000     .9522982    1.815482
lengthofhos~c |  -.8623016   .1040618    -8.29   0.000    -1.071023   -.6535801
Grossdomest~t |   .0000587   .0000396     1.48   0.144    -.0000207    .0001381
        _cons |   70.86164   2.484239    28.52   0.000     65.87889    75.84439
--------------+---------------------------------------------------------------
      sigma_u |   6.329848
      sigma_e |   .70271001
          rho |   .98782564   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(2, 53) =    31.65                 Prob > F = 0.0000
```

```
. estimates store fixed

. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot, re

Random-effects GLS regression                   Number of obs      =        60
Group variable: countrynum                      Number of groups   =         3

R-sq:  within  = 0.7808                         Obs per group: min =        20
       between = 0.9969                                        avg =      20.0
       overall = 0.9051                                        max =        20

                                                Wald chi2(4)       =    524.73
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |  -.2520215   .0507189    -4.97   0.000    -.3514286   -.1526143
Healthspend~P |   .0815404   .1047411     0.78   0.436    -.1237484    .2868292
lengthofhos~c |  -1.385704    .102283   -13.55   0.000    -1.586175   -1.185233
Grossdomest~t |  -.0000549   .0000345    -1.59   0.112    -.0001225    .0000127
        _cons |   87.29953   1.012482    86.22   0.000      85.3151    89.28395
--------------+---------------------------------------------------------------
      sigma_u |          0
      sigma_e |   .70271001
          rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

```
. estimates store random

. xtreg Lifeexpectancytotalwomenand Numberofbedsper1000inhabita Healthspendingto
> talofGDP lengthofhospitalstayacutec GrossdomesticproductGDPTot, fe

Fixed-effects (within) regression               Number of obs      =        60
Group variable: countrynum                      Number of groups   =         3

R-sq:  within  = 0.8980                         Obs per group: min =        20
       between = 0.2892                                        avg =      20.0
       overall = 0.0026                                        max =        20

                                                F(4,53)            =    116.66
corr(u_i, Xb)  = -0.7998                        Prob > F           =    0.0000

------------------------------------------------------------------------------
Lifeexpecta~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
Numberofbed~a |   .4598589   .1849948     2.49   0.016     .0888064    .8309115
Healthspend~P |    1.38389   .2151777     6.43   0.000     .9522982    1.815482
lengthofhos~c |  -.8623016   .1040618    -8.29   0.000    -1.071023   -.6535801
Grossdomest~t |   .0000587   .0000396     1.48   0.144    -.0000207    .0001381
        _cons |   70.86164   2.484239    28.52   0.000     65.87889    75.84439
--------------+---------------------------------------------------------------
      sigma_u |   6.329848
      sigma_e |   .70271001
          rho |   .98782564   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(2, 53) =    31.65                 Prob > F = 0.0000
```

```
. hausman fixed random, sigmamore

Note: the rank of the differenced variance matrix (2) does not equal the number
        of coefficients being tested (4); be sure this is what you expect, or
        there may be problems computing the test.  Examine the output of your
        estimators for anything unexpected and possibly consider scaling your
        variables so that the coefficients are on a similar scale.

                 ---- Coefficients ----
              |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
              |     fixed        random       Difference          S.E.
--------------+----------------------------------------------------------------
Numberofbe~a  |    .4598589    -.2520215        .7118804        .2641746
Healthspen~P  |     1.38389     .0815404         1.30235        .2948359
lengthofho~c  |   -.8623016    -1.385704        .5234025        .1115101
Grossdomes~t  |    .0000587    -.0000549        .0001136        .0000461
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(2) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       29.93
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```