The Influence of Emotions on Tourism and Economic Development

A Research Report in partial fulfilment of the requirements for the award of
Master of Science in International Cooperation Policy

XUEBO XU December 2015

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ACKNOWLEDGEMENTS

I would like to thank my supervisor, Professor Cooper, who has been supportive of my efforts in writing this Report. Not only for help with this paper but also for helping me with my graduate school life. I talked with him almost every week, and he supported me by providing excellent ideas to improve this paper, and we talked about many things from politics to social science, from history to contemporary society.

I completed this research report at Ritsumeikan Asia Pacific University, Japan. I am grateful for the University's free academic environment and also the high quality of living conditions.

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ABSTRACT

Theories that attempt to explain the behavior of consumers within an economy have been under development since the days of Adam Smith and before. Those that do the same for tourism and tourists are more recent, but are just as important. It is now recognized that tourism can strongly influence an economy's development, and the consumption patterns of the individual tourist can also provide feedback data to economists on that influence. Studies of the tourist consumption phenomenon may be based on Classical economic theory, its Neo-classical version, or Chaos theory, and be carried out at either the Micro or Macro level, but it is important to note that any useful economic theory has to explain *actual* human behavior. Economic theories that do so began to be put forward from the 1700s, when massive changes in human productivity, and ultimately in consumer behavior, began to be seen in the early industrial revolution in Northern Europe. At that time economists did not know how to incorporate personal profit-maximizing and personal consumption behavior in a fixed and effective theory, even though it was beginning to be recognized that these would be very important to the future of economics as a predictive science. To fix this situation and explain what was happening in the industrial revolution, and to predict the future, the concept of the market economy was put forward, and then subsequently, productivity theory, utility theory, labor economics theory, and so on, were developed as refinements of this. Utility theory, or the calculation and understanding of personal choice within the market economy, is one such approach to the refinement of the predictive power of economics. This report examines tourist purchasing behavior through the lens of utility theory, and in doing so seeks also to

understand the impact of tourism mega-events on local and national economic development.

Key Words: Tourist behavior, FIFA World Cup, positive and negative emotions of tourists, impacts of mega-event tourism on local economic development.

CHAPTER 1: INTRODUCTION

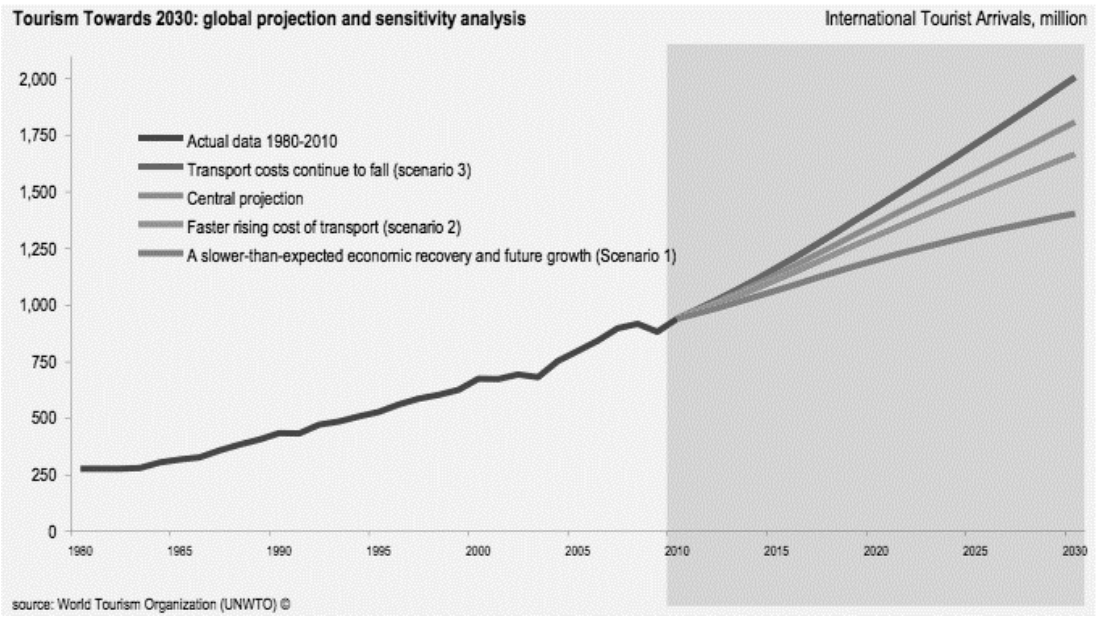
In this research report, the focus is on contributing to the development of one aspect of economic theory that can be used to understand the development of an economy through tourism, namely utility theory. In this report I develop and use a variation of this theory to provide information on how to measure tourist consumption, and to suggest ways to influence local economic development through tourism. This approach looks at *impulse* buying as a tourism area practice, and then analyses the impact of this on local economic development when it is combined with sports mega-events such as the FIFA World Cup (soccer), the Olympics, or the Americas Cup yacht race (Hudson 2002). The report also formulates a direction for further research on this form of utility theory.

Tourism is not a new concept, nor is the importance of its economic impact. From ancient times until now, human beings have travelled. While in the past the predominant nature of this travel was for trade, military or migratory purposes, there has always been an element of tourism in all of these situations (Mathieson and Wall 1882; Collier 1994; Weaver and Lawton 2014). Nevertheless, even when engaging in exploration and leisure pursuits, prior to the 1900s most people travelled only short distances, if at all. As the industrial revolution developed and deepened in Northern Europe and North America however, there appeared a new class of traveler, the tourist in search of leisure and recreation in destinations further away from home. There are many examples and a very extensive literature that can be used to show how tourism began (Mathieson and Wall 1982; Collier 1994; Hall 2006), and what is more, to show how tourism has long had a very close relationship with the economy of many

countries (Funck and Cooper 2013; Weaver and Lawton 2014). This report can however only briefly touch on this literature due to space considerations. As a general statement on the impact of tourism we can say that tourists spend money to travel, and local businesses and workers can get money from servicing this industry through the sale of their products and services.

International tourism (travel and passenger transport) currently accounts for 30% of the world's exports of services and 6% of overall exports of goods and services (WTTC 2014). The UNWTO recorded 1100 million visitors in 2014, and as a worldwide export category, tourism ranks fourth after fuels, chemicals and good, while ranking first in many developing countries (UNWTO 2014), and suggests that the growth trend is to continue (Figure 1).

Figure 1.1: Projected Growth in Tourism to 2030



Source: Hall (2014).

The world-wide economic contribution of tourism has also been analyzed by Oxford Economics for Amadeus Travel Trends (http://blogamadeus.com/wp-content/uploads/2014/04/AmadeusTravelTrends.pdf). This recent research shows that global travel rebounded rapidly from the 2009 global financial crisis, and is forecast to grow considerably over the next decade. The indicator of this, g*lobal overnight visitor flows* will grow at 5.4% per year over the next decade, in line with an expected expansion in global trade flows (5.8%). In terms of regional overnight visitor flows, it is predicted that the Asia Pacific, the Middle East and Africa will be the fastest growing regions over the next 10 years, with the Asia Pacific growing at nearly double the rate it recorded during the period 2002-2012. In terms of outbound travel spend, the Asia Pacific region will also be the growth leader over the next ten years, overtaking Europe to dominate global outbound travel spend by 2023. However, non-OECD countries accounted for 44% of global air traffic in 2013 and this is forecast to rise to 51% in the next ten years, driven primarily by the expansion of large emerging markets, especially China, but also including the markets of Brazil, Russia and India. Non-OECD air traffic is also increasingly dependent of developed country markets, with "South-South" journeys accounting for 40% of global air traffic in the past five years.

All this suggests that developing economies like Brazil will attract an increasing share of the world-wide tourism market, so this study of the impact of one of the major attractors of tourism, the sports mega-event, on Brazil is timely and may show how these trends can be capitalized on. To achieve this (at least partial) understanding, this study is on one aspect of this tourism travel transactional

situation: the utility tourists obtain from spending (consumption) in a destination, and how this affects destinations.

1.1: The Study of Human Behavior in Economics

The study of consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items, a very wide field. According to Samuelson (1983), consumer behavior is a study of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires. The commonly accepted definition of consumer behavior given by economists is 'the process and activities people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires' (Samuelson 1983; Song et al. 2009; Krugman and Wells 2013). Behavior occurs either for the individual, or in the context of a group, or in the context of an organization. The analysis of consumer behavior involves the use and disposal of products as well as the study of how they are purchased. For this study, we want to stress the consumers' predisposition to act in a certain way. This involves the consumer in a search evaluation process, which is influenced by attitudes and emotions. The actual purchase process is influenced by the personal utility gained from this process (Abdallat and El-Emam 2009).

In order to reach an understanding of the nature of the utility function, this study investigates the addition to local economic development brought about by changes in tourist emotions arising from their involvement in sports mega-events

(Hudson 2002), specifically the FIFA World Cup games in Brazil in 2014. For this study, data collection was carried out in two ways, the first being to gather the published reports on the economic impact of this event, and the second was to use a stratified random sampling approach to gather consumption data and motivations from a sample of tourists (n=413) mainly located in 5 cities of China, but including some respondents from Japan, Europe, and America interviewed in Beppu. The results suggest that there is a direct relationship between tourist attachment to a destination and to both the positive and negative emotions people hold towards the final results of a game. This attachment is what stimulates consumer spending, so what we wish to achieve here is the calculation of the additional consumption derived from positive emotional change, as well as looking at tourist perceptions of positive and negative impacts on spending patterns.

1.2: Summary

The layout of this report is as follows: the study is introduced in Chapter One; Chapter Two gives examples of sports tourism activities that impact on the economy; Chapter Three describes utility theory and the tourism relationship; Chapter Four introduces the case study of consumer emotions that were changed by football (sports) tourism; in Chapter Five impulsive consumption in tourism is discussed, incorporating an analysis of the survey data; and finally, Chapter Six is the conclusion.

CHAPTER 2: SPORTS TOURISM AND THE ECONOMY

2.1. Introduction

This study uses sports tourism, specifically that relating to mega-events, to illustrate the importance of emotion in tourist consumption patterns. Mega-events such as the FIFA World Cup and the Olympic Games for example, and the major leagues in any sport in any country, can have a large impact on both long and short-term term tourism (Hudson 2002; Getz 2005). The 2014 *English Premiership* football competition for example generated 3.4 billion pounds in revenue, and the 2014 Spanish *La Liga* generated 3.2 billion Euros in total revenue. Football, along with other major sports, is fast becoming one of the most profitable industries world-wide, and as part of that development the top clubs of many nations have become tourist destinations in their own right (viz. Manchester United, Real Madrid, Bayern Munich; PwC 2011). Events like the FIFA World Cup and the Olympics are an even bigger prize, as they can be a catalyst in stimulating national and regional economies, and can contribute to social and cultural change in the host nations (Hiller 1998; Hiller 2000; Fourie and Gallego 2010; Pappas 2014). But while such mega-events can give an impetus to economic development, revenue generation, city branding, social innovation and enterprise; they can also involve the use (and sometimes loss) of substantial capital, and can have or lead to negative environmental impacts (Whitson et al. 2006; Pappas 2014).

In spite of possible negative impacts, prospective host communities will invest significant amounts of time and resources in preparing bids and winning the competition to host sports mega-events (Ritchie and Aitken 1985; Gursoy and

Rutherford 2004; Weaver and Lawton 2014). This is because such successes are a means of global image creation to make their destinations more attractive to future tourists (Kotler et al. 2013). Recent examples include Brazil, Russia, the Middle East, Japan, and other Asia Pacific countries (PwC 2014). The international publicity gives recognition and an opportunity to showcase their economic maturity (PwC 2014). While the pre-event process of bid preparation, submission and award processing can be complex, time consuming and costly, such events can nevertheless lead to forward linkages in the economy, such as short or long-term employment generation, enhanced development of background objectives, and to parallel linkages from or side-effects of the mega-event itself (Hiller 1998).

While the commercial dynamics of sport and entertainment have always overlapped, the two are now closer than ever before (PwC 2011). At the most basic level, people buy tickets to sports events and subscribe to TV services carrying exclusive sports content expecting to be entertained. If they are not, they will cease to be interested, and this lack of interest will soon be followed by the media and sponsors seeking other opportunities. In many cases, sporting entertainment and commercial success are now seen as two sides of the same coin. And as such trends gain momentum, local destinations and the sports industry continue to face challenges on the financial and commercial front. Many of these relate to the impact of economic uncertainty and consumer caution, which are affecting all consumer sectors but also governments and sporting associations when they consider preparing bids to host a major event. However, there is a way to offset this uncertainty problem to some extent, and that is to place more emphasis on the increased consumption that occurs when "your" team wins (or even makes it to competing) at the mega-event. This is the core

of the utility model of impulsive consumption (Sydsæter et al. 2006) that will be introduced in the following chapters.

2.2. The 2014 FIFA World Cup in Brazil

On October 30 2007, the FIFA Executive Committee appointed Brazil as host of the 2014 World Cup tournament, the fifth country to have held this event twice (joining Germany, Mexico, Italy, and France). The extent of the socioeconomic impact of this event – for the well-being of the Brazilian population – was perceived to be the result of the country's ability to: obtain the necessary investment and construct/refurbish infrastructure in time for a successful event; to capitalize on the Cup's considerable legacy, turning this into a permanent asset; and, finally, to reach these objectives in an economically effective manner, avoiding excessive disbursements and poor allocation of resources or opportunity costs (Ernst & Young Terco 2011). A pre-event study done by the economic analysis firm of Ernst & Young suggested that:

> "in addition to the R$22.46 billion (Currency unit Brazilian Reals) to be spent by Brazil on the World Cup to ensure adequate infrastructure and organization, the tournament will bring an additional R$112.79 billion to the Brazilian economy, with indirect and induced effects being produced thereafter. In total, an additional R$ 142.39 billion will flow in the country from 2010 to 2014, generating 3.63 million jobs/year and R$ 63.48 billion of income for the population, inevitably impacting the domestic consumer market. This production will also result in an additional tax collection of R$18.13 billion by local, state and federal governments. The World Cup's likely direct impact on the Brazilian Gross Domestic Product (GDP) is thus estimated at R$ 64.5 billion for the period 2010-2014 – an amount equivalent to 2.17% of the country's 2010 GDP" (Ernst & Young Terco 2011, 6-7).

However, as any World Cup is a one-time event (Hudson 2002), most of its systemic impacts on a destination are not permanent. In fact, once the event has taken place, any positive impact will only remain if the local community develops an ability to benefit from the event over time. This fact is a major reason why one of the aspects that most attracts a country to host a mega-event of this type are the *tourist flows* generated by such an event– not only directly, from fans who will watch the games, but also indirectly from an increase in visits to the country and its regions as a result of the international exposure given by the initial event. The importance of securing these flows can be seen in the case of Brazil in the pre-cup investment of some R$53 billion in 2013, and in the impact of the rapid growth of tourism's contribution of tourism to GDP, which was approximately 9.5% in 2014, having grown from 5% between 2013 and 2014 (WTTC 2014). The Ernst & Young study indicated that:

> "once the actions required to enable the country to capitalize on the opportunities generated by the Cup are completed, the event may result in an increase of up to 79% in inbound tourists to Brazil in 2014, with *possibly higher impacts in subsequent years* (author emphasis). Tourism entails a significant inflow of funds, notably to the hospitality, transportation, communications, culture, entertainment and retail industries. The tourist inflow directly and indirectly induced by the World Cup is expected to account for additional income of up to R$ 5.94 billion to the Brazilian community" (Ernst & Young Terco 2011, 7-8).

Subsequent to the holding of the world cup, the Brazilian Ministry of Tourism published a survey of the domestic and international visitors to the event in July 2014 (http://www.copa2014.gov.br/en/noticias). This survey showed that the country hosted tourists from 203 different countries during the World Cup. The Ministry said that one million foreign tourists visited the country during the Cup competition period, while a total of 3,056,397 Brazilians travelled around the country during the tournament. For most of the inbound tourists (61%), it was their first time in Brazil

and they praised the infrastructure and tourism related services. The items that scored the highest points were hospitality and cuisine, with 98% and 93% approval rates respectively. The survey also showed that Brazilians are more critical than foreign nationals. Services and hospitality were considered positive by 90.5% of domestic tourists, while 83.8% of them thought the same of security. The venues were approved by 92% of Brazilian nationals, while 98.2% of the foreign visitors approved of the venues for the Cup competition.

At time of writing this report, preliminary figures on economic impact put the direct impact at about R$30 billion, approximately half of that predicted by the Ernst & Young study for 2010-2014, but this was generated over a much shorter time period around the Cup itself (http://www.copa2014.gov.br/en/noticias), so the final figures will be greater. Direct employment was estimated to be some 910,000, approximately 700,000 of which were full-time fixed jobs. The approximately 1 million international tourists during the competition period are estimated to have spent R$102 million, with domestic tourists spending R$346 million (http://www.copa2014.gov.br/en/noticias).

Thus mega events, such as sports competitions, business conferences, and festivals are some of the important motivators for tourism, and they have played a major role in the development and marketing of tourist destinations such as Brazil (Getz, 2005). However, research on the impact of mega-events on local communities, and the extent of community support for those events is still limited (Kim and Petrick 2005). Organizing such events involves the construction of appropriate facilities, and the economic analysis of events includes the cost of building infrastructure and event associated facilities, revenue generation from visitor spending, receipts from events, media exposure, capital accumulation through

corporate sponsorships, and the commodification of entertainment (Hiller 2000; Whitson et al. 2006). Hosting mega-events such as the various World Cups, Olympic Games, or Winter Olympics involves host region/country commitment of resources (financial, physical, managerial and technical) in a significant way (Jeong and Faulkner 1996). The planners and architects of such events normally make decisions for such investments in the hope that successful implementation of mega-events can led to positive outcomes, such as enhancement of the profile of the city/region "image" in the international arena, and the development of infrastructure.

The next chapter puts this impact into the context of the utility theory of economics, after which I return to the methodology and results of the study of consumption patterns that was carried out in order to identify the role of utility in determining the extent of such expenditures, and to measure their influence on the assessment of the worth of holding such mega-events.

CHAPTER 3: THE FRAMEWORK OF UTILITY THEORY

3.1 Introduction

Experiences as a tourist have important implications for the development of destinations. Any attempt at theorizing about tourism's impact on the economy must take this fact into account. The importance of experiences to decision making about travel can be shown in the application of econometric models to tourism (Cooper 1993; Song et al. 2009; Morley et al. 2014), where the motivations of tourists can be explored in terms of the impact of their consumptive behavior on economic activity in a given economic space.

As a background to the construction of these models there are two aspects of economic theory I want to consider: the first is the general evolution of economic theory that resulted in the important notion of Chaos theory that was initially established by Jacques Hadamard in 1898 (Hadamard 1898), and has since been strongly developed; and the second is the role of emotion in consumer decision making. Chaos theory is a mathematical modelling system that studies the behavior and condition of dynamic systems that are highly sensitive to initial conditions (Lorenz 1963). Small differences in initial conditions (such as those due to rounding errors in numerical computation) can yield widely diverging outcomes for such systems, making long-term prediction almost impossible but dealing successfully with the 'chaos' at the start (Kellert 1993). From the beginning of the 20th century and over the next 100 or so years, Chaos theory began to appear more and more as an explanation of the observed behavior of human systems, including the economy, and, given its emphasis on non-linear processes and complex adaptive systems, paved the

way for a better understanding of that behavior within economic transactions (Gleick 1987; Strogatz 2003).

3.2: Chaos Theory and Utility Theory

Chaos theory concerns deterministic systems whose behavior can in principle be predicted, however chaotic systems may only be predictable only for a while and will then 'appear' to become random (Kellert 1993). The amount of time for which the behavior of a chaotic system can be effectively predicted depends on three things: How much uncertainty we are willing to tolerate in the forecast, how accurately we are able to measure its current state, and a time scale depending on the dynamics of the system. Famous applications of this theory include the Lorentz weather prediction models, the 'butterfly effect', and Mandelbrot sets (Lorenz 1963; Mandelbrot 1977).

For the purposes of this study, Chaos theory as an important recognition of complexity of human behavior can also be applied outside the natural sciences. By adapting the model of tourism impact on economies to include a chaotic (complex) interpretation of the relationship between consumptive behavior and the economic benefits of sports mega-events, it is possible that better suggestions can be made to governments on appropriate policy directions relating to the decision to invest in such events. This benefit will be further discussed in Chapter 5, but in the meantime it is possible to say that that economic models can be improved through an application of chaos theory, but predicting the health of an economic system and what factors influence it most is an extremely complex task, and this is where the concept of *utility*

becomes a useful addition to the ability of this theory to describe the complexity of human behavior (Song et al. 2009; Juarez 2011).

Economic and financial systems in the real world are fundamentally different from those in the physical and natural sciences; since the former are inherently stochastic in nature as they result from the interactions of people, and thus pure deterministic models are unlikely to provide accurate representations of the forces at work (Huang 1966; Krugman and Wells 2013). The empirical literature that tests for chaos (complexity) in economics and finance presents very mixed results however, in part due to confusion between specific tests for chaos and the more general tests for non-linear relationships (Brooks 1998; Riley 2012). Again, utility theory can assist here, by helping in the coding of that human behavior in terms of how decisions are made.

A further development is that the concept of emotion began to be included in utility theory through the attempts by economists to further explain the workings of the real world. The latter can be shown in the innovational time and space economics book: "*International trade theory: Capital, knowledge, economic structure, money and prices over time and space*." In this book, Wei-bin Zhang (Zhang 2008), initially deals with isolated space-less economies, and then considers isolated economies with a spatial structure, the influence of regional and international trade on national economies, and finally discusses the performance of economies with frictional elements, one of which is emotion. This study applies the concept of emotion as developed by Zhang (2008).

In developing theory to account for the workings of economies, those relating to economic development have been influenced by the international impact of

different sectors of human activity, and tourism is now one of the most important of these (WTTC 2014). In terms of tourism, economists talk about resource division, labor productivity and gains from trade, whether between town and country, or across countries (Pike 2002). Actually, from Smith (1776) onwards, economists have discussed the concept of the division of labor, and therefore of human behavior, as a "fundamental principle of economic organisation." Smith has also been noted to have contributed "the most important substantive proportion of economics," and the foundations of *resource-allocation theory*, through which under competition, the resource owner seeks a course of action that can provide the most profit, resulting in an equal rate of return for all uses in equilibrium (adjusted for apparent differences arising from such factors as training and unemployment) (Samuelson 1983; Riley 2012). This concept can be applied using utility theory to the consumption by tourists in a given destination (Henderson and Thisse 2004; Song et al. 2009). Unfortunately, in Smith's time the economics of tourism were not developed very well, and therefore economists could not analyze its real contribution, nor develop models of economic behavior to account for that.

Subsequently, economists have discussed the incorporation of behavioral theory of value into economic theory, with a view to explaining the influence of emotions on economic decision making (Riley 2012; Krugman and Wells 2013). With this development we associate the names of 19th century economists like Keynes, Jevons, Menger, and Walras (Samuelson, l983). Following the development of computing power in the 20th Century, more and more new innovative ideas were put forward in econometrics, from "*learning by doing*" to "*the Theory of Value*", to refinements of "*Chaos Theory*" (Gleick 1987; Brooks 1998; Song et al. 2009). These

enabled the codification of the large volumes of behavioral data that were beginning to emerge as the basis for theory, and the development of its clear relationship with policy making in the real world.

In this research report, I develop an addition to the econometric model of utility to be able explain and give advice about tourism development, and to enable us to recognize within economic theory that tourists as emotional not rational beings, especially in regard to destination choice and buying activities. This will be illustrated in the field of football mega-events, as sports tourism has been a new and innovative niche market for tourism since the 20th century. Football tourism is also very closely connected with human emotions. However, there is a problem that must be faced in constructing this model, and that is that in classical economic theory the first assumption is that "people are rational", although it is not clear whether this was put forward by Adam Smith or not. But as Smith said, in competition, people will fact only do things which are good for themselves (*that is, maximize their own utility*) even if this appears not to be "rational". This assumption is the most significant in the economic research field for the present study, and forms the basis for the discussion of utility theory in the next section.

3.3. Utility Theory

Most economists are in no doubt about the usefulness of classical utility theory (Gleick 1987; Brooks 1998; Gilboa 2009; Riley 2012), but at the same time this form of utility theory is based on "rational explanations of specific situations" (Krugman and Wells 2013). In order to get over this rationality problem a number of scholars

have used non-linear econometric methods to research the impact of unpredictable factors (such as emotion) in economic activity (Song et al. 2009). Most of these agree that incorporating such factors into economic theory is good for the successful modelling of economic development, and can also aid in the better understanding of how the market changes under the influence of these factors (Sharpe 1964). Thus, studies incorporating residents' and tourists' perceptions of tourism (from the emotional angle) generally suggest that their positive influence on social and environmental impacts might enhance support for tourism, and any negative influences might lead to the withdrawal of support for tourism activities (Long and Kayat 2011).

Utility theory considers consumer demand and is based on neoclassical economic theory (Song et al. 2009; Riley 2012). Utility theory can explain general consumer behavior, so it therefore can also explain tourist consumption patterns. For this purpose, all tourists are consumers; they shop, enjoy local entertainment, eat and drink in hotels and restaurants, and buy accommodation and travel, which is collectively known as tourism demand. Host communities supply these products, which is called supply. We can use utility theories to obtain the demand and supply curve, explaining why consumers would like to choose one thing but not another, and why they choose one place to practice tourism and not another place.

Tourist final demand is not accidental. For example, when tourists begin to choose their destinations to visit, this means that they have high expectations of satisfying their utility functions in those places (Song et al. 2009). Functionally, utility theory tries to explain how pleased a consumer is with each choice, and also to estimate how much they get in real terms. This approach needs however to enable

us to understand the influence of emotions on choice if it is to provide the sort of guidance on consumer behavior that the stakeholders of mega-events (and any other organization or community that is promoting tourism) require to base their investment decisions on. While it is true that tourists as human beings make choices based on many factors (Rosenbloom 1987; Crouch 1995), one of the main ones is satisfaction. Since we cannot *directly* measure someone else's benefit or satisfaction from a good or service, economists instead have devised ways of representing and measuring utility in terms of economic choices that can be measured. In the simplest sense, economists consider utility to be revealed in people's willingness to pay different amounts for different goods. Utility is usually applied in such constructs as the indifference curve, which measures the combination of commodities that an individual or a society would accept to maintain a given level of satisfaction based on their utility (Berger 1985; Gilboa 2009; Riley 2012).

3.4. Utility theory incorporating emotion

We can use the situation of two goods often consumed by tourists (and the general population) as a model example to show the influence of emotion on utility (Berger 1985). In traditional utility theory marginal utility decreases from time zero, since with a commodity like water a person drinks primarily to satiate thirst, but beyond a certain point the consumption of more water might make the person uncomfortable, leading to diminishing marginal utility for this product. So at the

beginning of this analysis, we assume that the emotional function is fixed, and then see it as a decreasing linear function (Bradley 2013).

The first set of goods we use to illustrate how the concept of utility might be used to analyze and predict the economic results of a sports mega event is that of the consumption of food and drink. If we take the consumption of food and drink for example, we may see the following relationship in action as a result of the emotion generated by such an event. If a tourist is a football fan he or she may see going to a premiership game or the World Cup football as their main travel purpose. But supposing they go to a restaurant and plan to have dinner after watching a game where there are just two dishes - Pizza and Hot dog. If we assume that the prices for the pizza and hot dog are P_1 and P_2 respectively, the utility of these consumers is then *"U"*. However, as we will show in most cases there is also a variable that represents the emotionally variable factors relating to the decision to eat and drink, and how much to consume. Let us also assume if they were intending to eat and their team lost the game, they would be very disappointed, sad or even angry, and may change their intentions, and therefore this parameter (in econometric terms *"τ"*) can be seen as being necessary to describe negative emotional factors. On the other hand, if their team wins the game, they will be happier than previously, so that happiness can also be seen as *"τ"*. Considering this issue in this simple way, emotional factors have just two aspects, namely positive and negative (assuming

that there is just one emotional factor for each good and that this will influence final choices in some way).

For the FIFA World cup mega event, this situation can be illustrated very easily using the consumption of beer, a drink traditionally associated with football games (Hiller 1998). For example, in 2014, during the Brazil world cup football games, beer consumption across the nation was 27 times greater than normal (FIFA 2015). During the first game, *Brazil vs Croatia*, the consumption of beer was more than 20 thousand liters, considerably more than normal. Emotion is the answer as to why people can consume more in this situation - there are four basic emotional factors involved – patrons feel excited, sad, disappointed, glad. The other factor is that football fans have a tradition of beer drinking, but the amount consumed will depend on the particular situation. Beer is used to celebrate a win, but also to cover/recover from a loss.

Emotion is thus a subjective, but conscious, experience characterized primarily by biological reactions and mental states (Long and Kayat 2011). If we want to use emotion in a practical way to understand the tourist decision making process, we need to find a practical way to add it to utility theory. Utility means the level of satisfaction people have about the benefits they are likely to or do receive

from a given course of action (Rosenbloom 1987; Crouch 1995; Song et al. 2009). This addition is is modelled econometrically in the next section.

3.5. The Revised Utility Model

The classic utility function for the choice between two goods χ_1 and χ_2 is written as follows:

$$U(x_1, x_2) = f(x_1) + f(x_2)$$

Where: the function $U(x_1, x_2)$ means the total utility of all goods; $f(x_1)$ means the the utility of the 1st good; and $f(x_2)$ means the utility of the 2nd good.

As early as 1854, Gossen is credited with presenting the situation of more than two goods in graphical form (Riley 2012; Krugman and Wells 2013). If we have more than two goods, what is being described is essentially the marginal utility of choice between them. This is assumed this to be a decreasing linear function of the quantity of any particular good, so the function will be:

$$U = K + (a_1 x_1 - b_1 x_1^2) + (a_2 x_2 - b_2 x_2^2) + \ldots$$

Where: K is a constant and a, b are specific variables relating to each good.

Jevons, writing fifteen years later than Gossen, proposed that the utility function be written as the sum of utilities pertaining to each goods separately. Then the result is: when $p1>p2$ (price), the marginal utility of choice is then expressed as $MU_1<MU_2$ (Samuelson 1983; Riley 2012; Krugman and Wells 2013).

So in traditional utility theory, consumer choice is primarily affected by price. However, if we consider the possible influence of emotional factors, the function describing consumer choice will need to be be different. To see how this works, we consider the situation where there are two emotional factors operating at the same time. We cannot measure directly (we cannot ask all consumers to report their motivations based on emotion) which emotional factor plays the most significant role in the final choice, so it is necessary to measure them using surrogates and put this data in a function to get a clear result (Song et al. 2009). We also confirm that the relationship between products and emotional factors cannot be fixed (needless to say, the fixed situation is meaningless as the marginal emotional utility is zero). All this means that in the utility function we need to add another parameter τ to account for emotion.

The revised utility function can then be written as:

$$U(x_1, x_2) = f(x_1) + f(x_2) + \tau$$

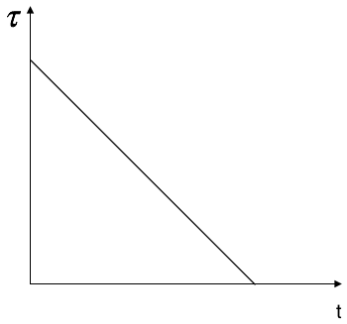
Where: τ can be positive and negative, it is not fixed, and it can be changed by time and also by emotion.

Here, we can give a example to explain our new parameter τ. We construct τ to represent the influence of emotional factors (Xu 2012). If τ is a negative factor, like anger or sadness, we know that some people will eat more if they are angry, while others will lose their appetite. From the theory of ordinal utility, the former should be positive and the later should be negative before they eat (Song et al. 2009). There is also a special situation in which a few people will be “rational”, and in this case τ would be zero. Also, when we have emotions about a specific issue, these emotions will decrease over time according to consumer theory (Song et al. 2009; Riley 2012).

This can be understood as emotional factors decreasing in a linear way, where τ can be positive and negative, it is not fixed, and it can be changed by time and also by emotion. Therefore, τ is a linearly decreasing function by time, which can be shown graphically as follows:

$\tau = at+b(P \geq 0, a<0, b>0)$

If we assume that τ is a linear function the graph should be:



Where: t equals time.

Using this relationship as an example, we can see that the relationship between utility and price is described by the following equations:

$$\tau_1 = a_1 t + b_1 (a_1 < 0, b_1 > 0)$$
$$\tau_2 = a_2 t + b_2 (a_2 < 0, b_2 > 0)$$

3.5.1: Impulse buying

We can use this function to explain the results of our study of tourist behavior at the FIFA World Cup. Here, we are describing the impulsive buying or consuming of goods like food and beverage, airline seats, and accommodation in a world cup setting as a case study of the utility theory of consumption. We use the classical utility

equation to show how impulsive buying changes the normal utility function, and then we can see how tourism consumption can be analyzed in the context of sports mega-events. If there are two kinds of goods, χ_1 and χ_2, adding the emotional factors means that the total utility function can be written as follows:

$$L = x_1^2 + x_2^2 + \tau_1 x_1 + \tau_2 x_2 - \lambda(p_1 x_1 + p_2 x_x)$$

Where: $p_1 x_1 + p_2 x_2 = I$ is the income function; the emotion function is $\tau_1 x_1 + \tau_2 x_2 = \tau$; $\tau 1$ is the emotion attached to the first good; $\tau 2$ is the emotion attached to the second good, and τ is the total emotion relating to the two goods.

This equation is the normal mathematic expression of the utility function (Song et al. 2009; Riley 2012).

The first good's utility function can be expressed as:

$$x_1 = -\tau_1 \frac{p_2^2}{2(p_1^2 + p_2^2)} + \frac{p_1 p_2 \tau_2}{2(p_1^2 + p_2^2)}$$

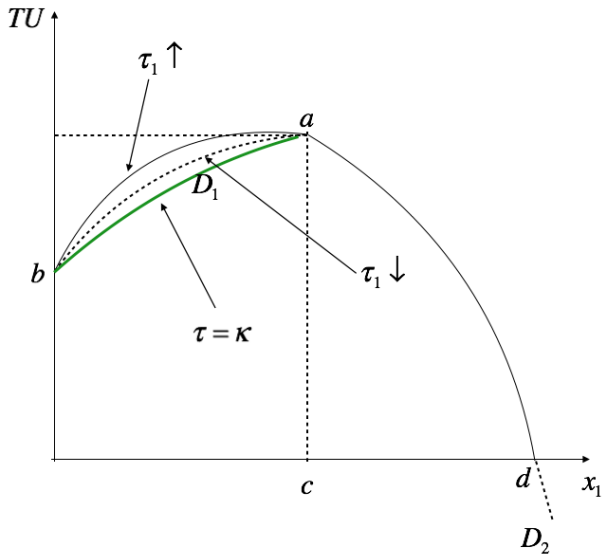
So, we can get the basic situation about the impact of utility on price as:

$$\frac{P_1}{P_2} = \frac{\tau_1 + \frac{\partial U}{\partial x_1}}{\tau_2 + \frac{\partial U}{\partial x_2}}$$

This is the new utility equation derived and tested in this study. We can see the equation is basically the same as the traditional utility equation, with the only difference being that the perimeter τ has been added. This is the basic procedure

mentioned as necessary at the start of this report, if we are to incorporate the effects of emotion on consumption behavior.

Graphically, we can now describe how when the emotion factor τ is changing, utility of choice changes. The following graph shows how total utility changes: when τ is increasing, the change rate will be larger than when τ is decreasing, and also larger when τ is equal to zero. The meaning for the case study outlined in this report is that the emotion perameter τ is a real number which can influence total utility, and that that impulsive consumption factors are a real influence on consumer behaviour. The graphical representation of this is as follows:



Where: *TU* equals total utility; D_1 and D_2 are the demand curves relating to consumption, $\tau 1$ and $\tau 2$ are the emotional utility consumption functions; and $\chi 1$ is good 1. This relationship can be replicated for as many goods as there are being analyzed.

If we add emotional factors, when these increase the total utility result should be at a higher (positive) level than found in the traditional utility theory result. In order for

χ_1 to be positive though, we should require that the ratio of two prices must be lower than the ratio of the emotional parameters:

$$\frac{\tau_1}{\tau_2} > \frac{p_1}{p_2}$$

The second-order condition as well as the first order condition must be satisfied to ensure that a maximum is actually reached (Riley 2012). Denoting the second direct partial derivatives of the utility function by two factors, and the second partial derivatives by two points, the second-order condition for a constrained maximum requires that the relevant bordered Hessian determinant be positive. Generally speaking, the demand curve is always downwards sloping, and is determined by the marginal utility function (Song et al. 2009). As we know, the demand curve has certain special cases such as the Griffen goods situation, when the demand curve is always up sweeping (Riley 2012; Krugman and Wells 2013). We can use income and exchange effect theory to explain this. On the other hand, based on the assumptions of utility developed in this study, the normal goods demand curve can be explained, as well as special cases such as the Griffen curve.

According to the above assumptions and results, we can see that the price for each good is determined by two factors, the emotional and rational. At any one time, if the emotional factor is positive, the demand curve must be downwards sloping. On another hand, if the emotional factor is negative, the demand curve must be upwards sloping. When the demand curve is going up, emotional factors play a negative role. In this study we therefore assume that the emotional function is linear, but as we know, no emotional factor can be linear because it can change due to the passage of time.

Thus the emotional and consumption environments, as well as many other internal and external factors are important influences on economic development.

So now let us assume that the emotional function is non-linear, but the others are unchanged. In this case, the income function and utility function can be written as:

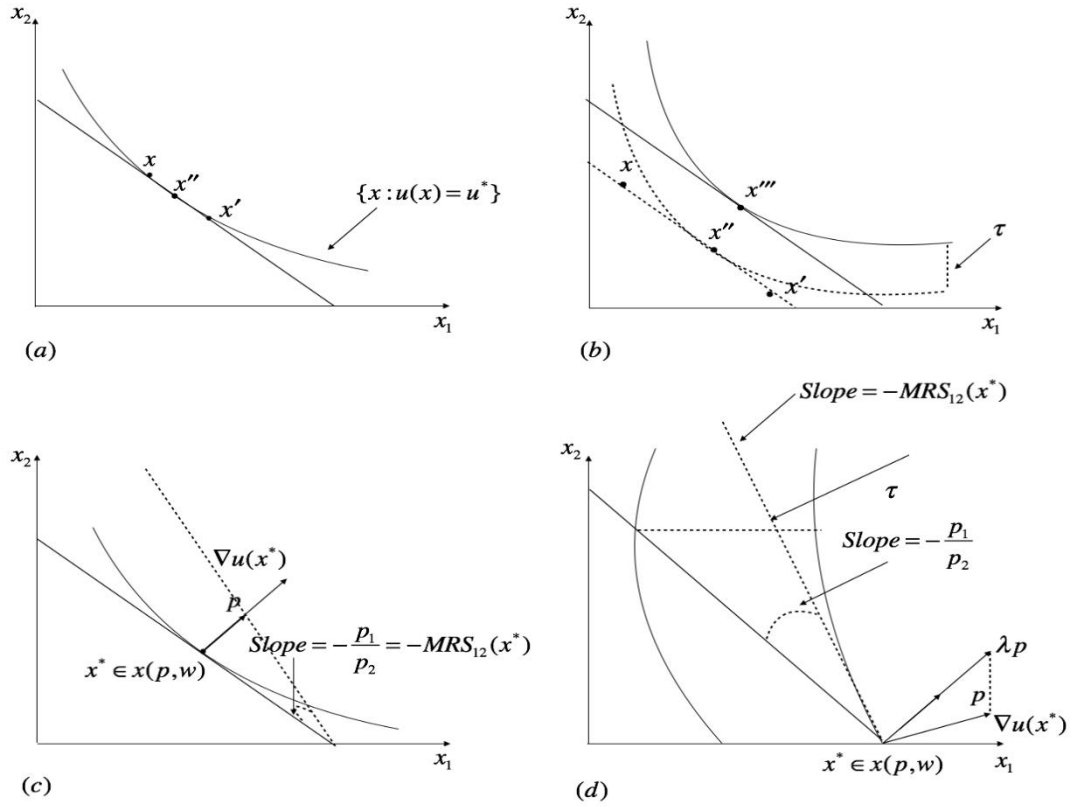
$$I = p_1 x_1 + p_2 x_2$$

$$U = \varphi(x_1, x_2) + \tau_1 x_1 + \tau_2 x_2$$

Here we know there are three solutions (Samuelson 1983; Riley 2012). When the first factor is increasing, the others will increase as well. When the second is increasing, the others will decrease. In the final case, when the first is increasing, the second will increase as well. However, in each part, there are also three different situations, which are:

$$\Delta(\tau_1 x_1^{t_1-1}) > \Delta MU_1,\ \Delta(\tau_1 x_1^{t_1-1}) < \Delta MU_1,\ \Delta(\tau_1 x_1^{t_1-1}) = \Delta MU_1$$

So, without incorporating the emotional factors described in the new function in the form of the added parameter τ, we obtain the changing demand curve under conditions of total utility, which is depicted as a positive rate with an increasing line. However, if the emotional factor is added to the new function, a demand curve which may have a different shape is obtained. The following four diagrams show that the indifference curves change according to emotional factors:



We can see that, first, the indifference curve (a) shows no emotional factor influence, but when emotional factors are added, it appears as in (b). Graph (c) shows the slope of the resulting curve, and Graph (d) shows how the slope will change after the emotional factors are added. So, if the emotional factor is added to the utility function, a demand curve which has a different shape compared to that described by traditional utility theory may be obtained. The four diagrams thus show that the indifference curve changes according to emotional factors. In the following chapter, we will use this new function to analyze the impact of the FIFA World Cup on the development of tourism in relation to sports mega-events; looking at how consumption influences tourism, and how it may change tourism development

policies. This allows us to measure the influence of emotional states on tourist consumption.

Tourists change their emotional state frequently, especially when they are experiencing different places and are making different decisions than they may have had to at home (Gilbert 1991; Kwon and Armstrong 2002; Weaver and Lawton 2014). We will use the revised utility model to analyze how they choose goods, and how those decisions are exhibited in consumer behavior, positively and negatively. For example, in the situation where emotion impacts on patterns of impulsive consumption, consumer behaviour will be changed. In the context of the 2014 FIFA World Cup, as we will see in the next chapter, beer consumption increased considerably, then after the competition was over, it decreased to normal levels. If we use the new function developed in this chapter, we can explain this without difficulty. As τ is the impulsive consumption parameter, the play of emotions relating to the outcomes of games can be seen to have affected the impulsive consumption of this good. We can track this emotion in three ways, as a positive effect, as a negative effect, or an as usual effect (normal). So when the emotion factor is added, we get the following price relationship, and this can be used to model the impact of emotion on consumption behavior (Xu 2012):

$$\frac{P_1}{P_2} = \frac{\tau_1 + \frac{\partial U}{\partial x_1}}{\tau_2 + \frac{\partial U}{\partial x_2}}$$

For clarification on the use of this revised model of consumption, we assume that good 1 is beer and good 2 is pizza. During a football match the consumption of

beer is known to increase, which means τ_1 is in the positive, but the consumption of pizza could be positive, negative, or normal (as consumption is not influenced by the football match directly). According to this result, τ_1 must bigger than $\tau_{2,}$ which means people are more likely to consume beer than pizza, regardless of price, so this function can easily explain the impulsive consumption phenomenon. The utility of people at the game or watching it on TV is affected by their emotion towards what is happening (especially if they are a fan of one or other of the teams involved), and beer is a more important consumption good in this situation than pizza.

But before applying this revised utility function to the World Cup event situation, a further brief clarification of the form of buying associated with emotion is required. In 1986, Cobb and Hoyer (1986) said that impulse buying has no prior planning and no schedule for purchasing. This special buying behavior is a very short time-based activity. The consumer activity it represents tends to be spontaneous and without a lot of reflection. (i.e., it is "impulsive"). This does not include buying a simple reminder good (souvenir). Rook and Fisher (1995) said that this form of consumption is a pervasive aspect of consumer behaviors, and a focal point for considerable spending. In the study of impulse consumption, emotional factors determine the most important unplanned purchase behaviors represent between 27 to 62 percent of all department store purchases (Bellenger et al. 1978). Even though it

is difficult to analyze, this topic has generated considerable research interest for over thirty years (Bellenger et al. 1978; Cobb and Hoyer 1986; Rook and Fisher 1995).

3.6: Summary

A lot of economic research has focused on the situational aspects that can influence impulse buying. For example, Rook in his early work explored the impulsive nature of impulse buying, and later focused on the normative influences affecting it (Rook and Fisher 1995). Rook and Gardner (1993) examined and discussed the influence of impulse purchasing. Recently, impulse buying has been treated as an individual difference variable, which is likely to influence individuals across situations (Rook and Fisher 1995; Weun, Jones, and Beatty 1998). However, in the previous research there is no full understanding of the meaning of impulse buying. For example, past studies have tended to investigate only a single situational or individual variable, while failing to more fully model a set of both variables (Xu 2012). Thus, the objective of this research report is to more fully model this set of both situational and individual variables in relation to tourism and sports mega-events through the use of the new consumption function outlined above.

CHAPTER 4: THE INFLUENCE OF THE BRAZILIAN FIFA WORLD CUP ON TOURISM CONSUMPTION PATTERNS

4.1. Introduction

We have seen how the Brazilian FIFA World Cup impacted on the economy of Brazil in the short time during 2014 that it was happening. On the wider stage, the total worldwide TV viewers of the event are estimated to have been around 3 billion, and 4.2 million people viewed the official webpage (Tourism Brazil 2015). In the survey carried out as part of this study of the impact of consumer utility on expenditure patterns and thus of the national and local revenue streams resulting from these, more than 90% of inbound tourists who visited Brazil for the World Cup said they felt very welcome at the games venue cities, and they also recommended Brazil as a relaxing destination for a vacation. And as we know, the co-hosted FIFA World Cup in Japan and Korea also stimulated a significant gain in GDP for both countries, and a considerable knock-on effect in later years due to the pay-off of public and private investment in equipment and infrastructure (Kim and Petrick 2005).

In this chapter, we look at a methodology for predicting these consumption patterns, and thus to quantify the impact of them on sports mega-events development policy. The essential problem is to uncover the additional consumption stimulated by the impact of the events on the emotions of tourists, and to incorporate this into a variant of traditional utility theory. Given the propensity to consume beer at such events (see Chapter 3), this is considered to be a suitable indicator of the consumption of food and drink at such events, while hotel and airline bookings are suitable surrogates for travel consumption. Beer

consumption data in normal years can be compared with beer consumption at the FIFA World Cup, since this form of drink is well documented in Brazil, as it is in other countries. The difference should enable us to find out how much additional consumption there was, and how to use the modified utility model to explain how it came about. Airline and hotel bookings can be treated in a similar fashion.

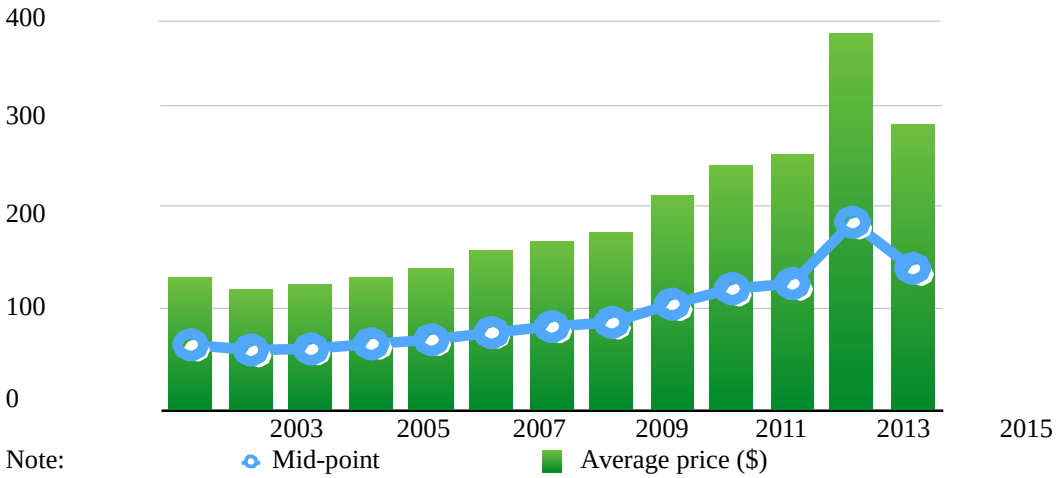
4.2. The 2014 FIFA World Cup as a case study

The approximately 1 month of the 2014 FIFA World Cup brought in about R$13.4 billion in revenue to Brazil (http://www.copa2014.gov.br/en/noticias). The 2014 FIFA World Cup also generated total revenue of US$4,826 million for FIFA, and the organization incurred total expenses of US$2,224 million. Total revenue for the 2014 World Cup cycle comprised, in particular, income from the sale of TV rights of US$2.43 billion, marketing rights of US$1.58 billion, ticketing rights of US$527 million, hospitality rights of US$184 million, and licensing rights for merchandise of US$107 million. According to the Government there were about 900,000 tourists who came to Brazil for the Cup (http://www.copa2014.gov.br/en/noticias), and the consumption of those tourists increased the total consumption from tourism about 42% compared with normal patterns (non-mega event tourism). At the same time, domestic tourist consumption was about R$8.2 billion.

The total revenue generators include, inter alia, five aspects: air travel, accommodation, food and beverage consumption, and the revenue gained by tourism destinations. For air travel, the available data show that more than one million passengers traveled in Brazil during 2014, and total revenue per passenger kilometer

(RPK) rose 18% over 2013. In this pattern, the international increase was about 23%, and the domestic increase was 13%. The occupancy rates of hotels in Brazil increased by 23 percent compared with 65.9% in 2013, so in 2014 the occupancy rate was 88.9% (http://www.copa2014.gov.br/en/noticias). The average price of hotel rooms was around $370 per night in Rio de Janeiro. These data were developed from the results found on the Travelog, Booking.com, and Agoda websites, three main hotel internet booking engines. The data from 170 hotels in Rio de Janeiro was used to calculate average hotel occupancy data and then to identify the impact of the world cup on hotels in that city. Over the past ten years, average hotel prices in that city were increasing slowly except for 2014, so 2014 shows a different consumption pattern. In 2014, the average price of Rio hotels was over 60% higher than in 2013, and has not fallen back to the previous level (Figure 4.1).

Figure 4.1: Average Price of Hotel Rooms in Rio de Janiero 2003 - 2015

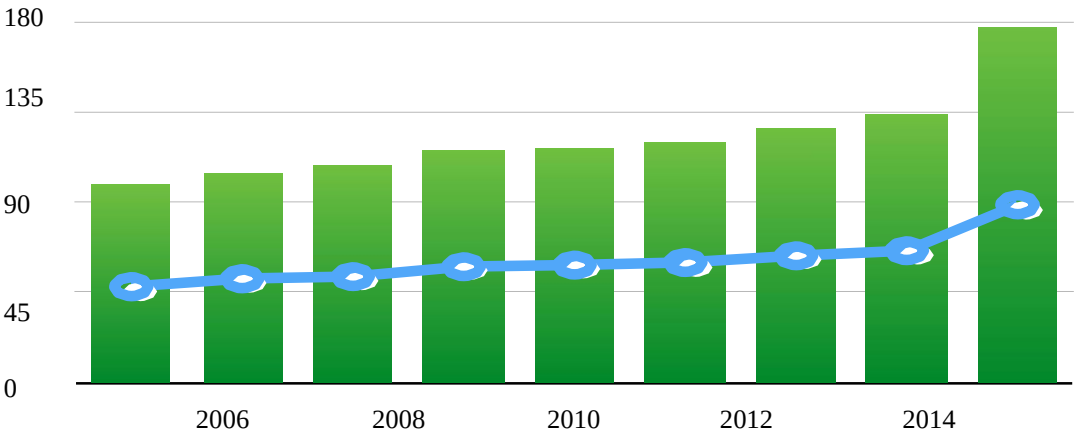


Note:
Source: Tourism Brazil, various.

In the food and beverage area, it was obviously too hard to survey all the restaurants in Brazil. To solve problems like this in econometrics we look for a surrogate measure. Having observed the changes in beer consumption associated with

previous world cup events in Germany, the USA, and Japan, I decided to use beer consumption as the surrogate for the effect of impulsive consumption of food and beverage. In 2014 beer consumption in Brazil rose by 138% (Figure 4.2).

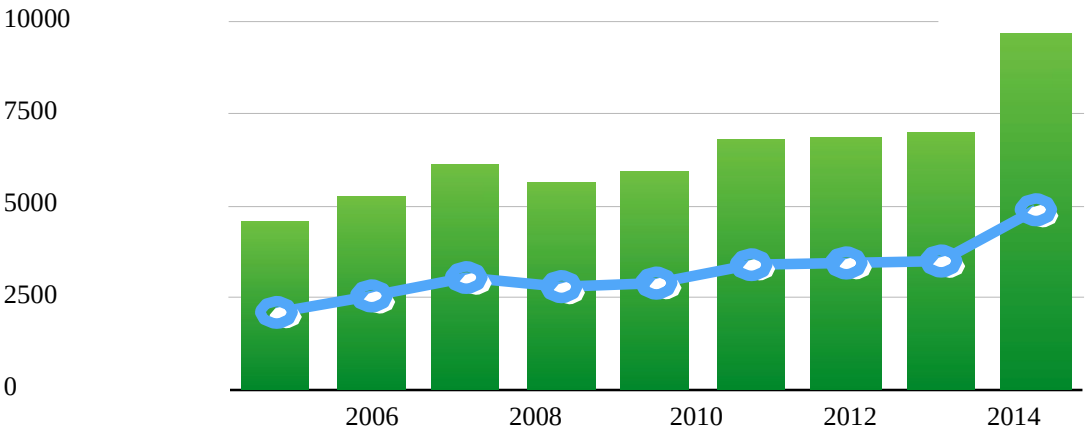
Figure 4.2: Beer Consumption (KL) 2006 - 2014



Notes:
Source: Tourism Brazil, various.

The last factor is destination revenue. Figure 4.3 shows the same pattern: compared with 2013, total tourism revenue increased about 38% in 2014.

Figure 4.3: Tourism Revenue to Brazil 2006 - 2014



Note:
Source: Tourism Brazil, various.

4.2.1. Impact prediction using a modified form of Utility Theory

In relation to utility theory, these graphs show that there was a spike in consumption resulting from the FIFA World Cup that lasted up to a year (the data cannot be disaggregated so this is not a precise measure), and that needs to be explained by the theory. The utility function for any good (and consumer) is defined by how much is consumed, and over time the utility of each consumer decreases as they consume more in the traditional model. However, in the re-formulation of the theory supported by this study, it is assumed that consumer utility increases first at a faster rate than predicted by the traditional theory, and may only then decline, if at all. This situation can be understood by building in to the utility model a term that accounts for the impulsive consumption brought about by the emotions generated during a sports mega-event like the FIFA World Cup.

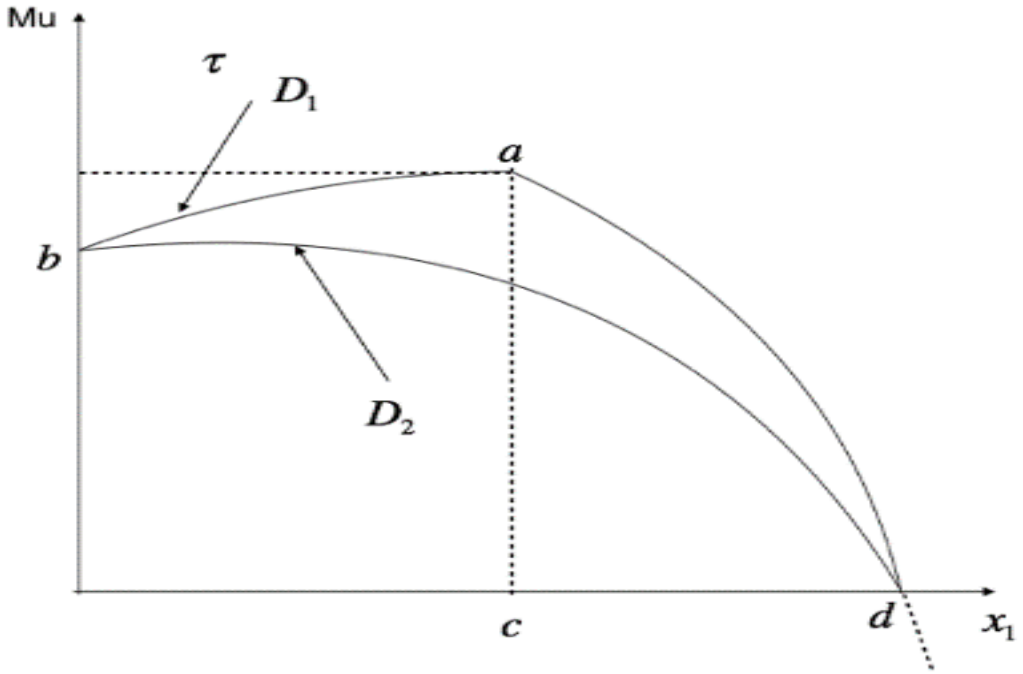
In the beginning, football fans may consume at relatively low (defined as normal) levels, but following their team's success they will be very happy, and think it is more comfortable to live in their hotel/host city (perhaps buying more souvenirs and/or staying longer) and to consume extra beer and food in celebration, so their utility will increase. Normally then, the traditional slope rate should be changed from 0% to 100%, but if this extra consumption is impulsive and briefly high, the slope will be positive (above 100%). Of course, the opposite may occur if their team loses. So, while this form of consumption cannot be explained by traditional utility theory, if we add a parameter *"τ"* (positive or negative), to account for peoples' emotions (see Chapter 3), then we can explain the impact of the change in total revenue (or facility use) in a more precise and quantifiable way. In Chapter 3 we

developed the utility model based on emotions by adding the parameter τ to get the function:

$$\frac{P_1}{P_2} = \frac{t_1 + \frac{\partial U}{\partial x_1}}{t_2 + \frac{\partial U}{\partial x_2}}$$

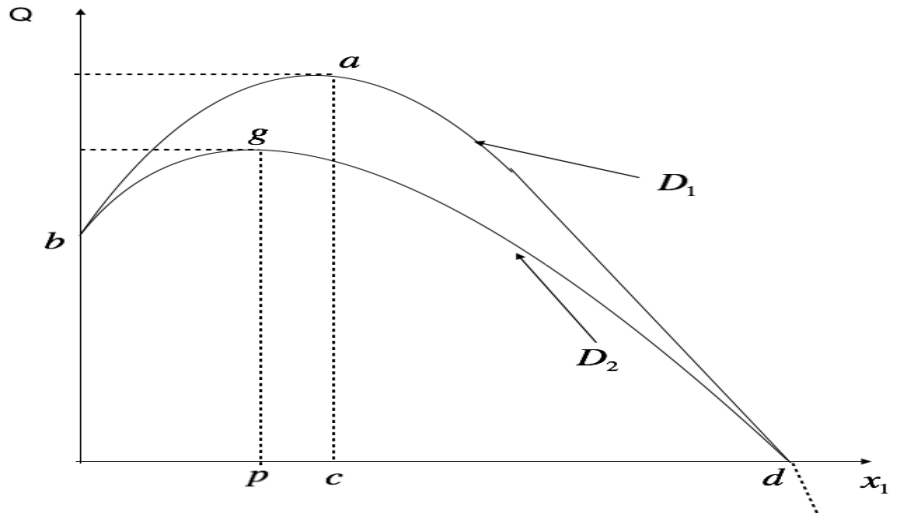
Where: t_1 and t_2 represent impulsive consumption factors based on emotion.

As the impulsive factors add into this function, the marginal utility may increase first (an often noted situation), and then decrease, or just decrease directly. If we use a graph to show this, it can be written:

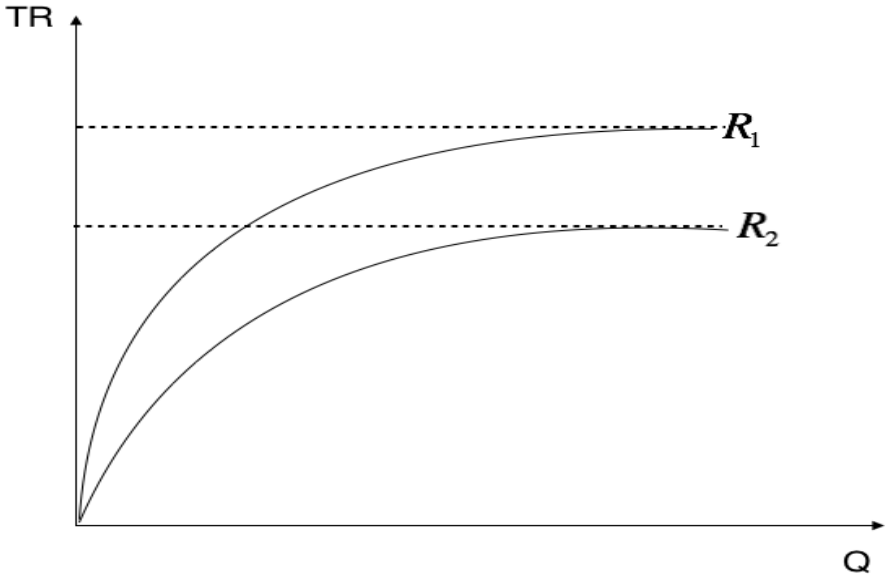


Where: D_1 is the demand curve which first increases to *a* then decreases to *d*, this curve adds the impulsive factor t ; D_2 decreases directly and is the curve without impulsive consumption.

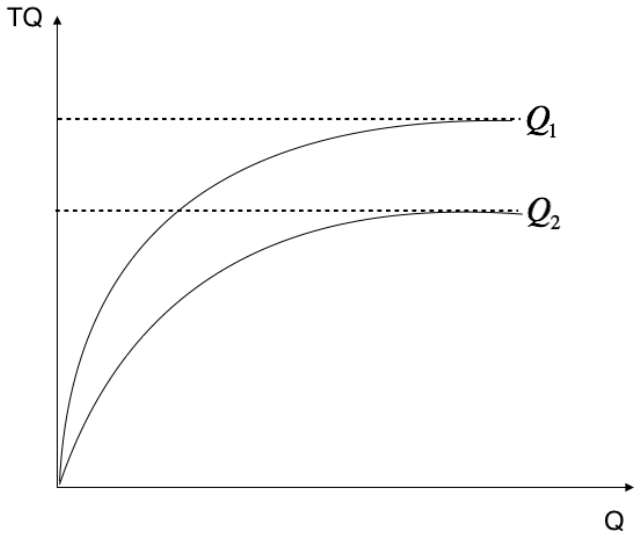
When the marginal utility curves are like this, the total utility curves can be drawn as follows:



The curve D_1, which measures impulsive factors shows that a consumer's total utility is much higher than in normal situations. As the total utility represents how much of those products each consumer will buy, so the total consumption quantity and revenue curves can be drawn as follows:



And the total consumption *TQ* can be depicted as follows:



In this case R1 can be seen to be larger than R2, and total revenue has increased after impulsive consumption has occurred.

So we can see that impulsive consumption is a real form of consumer behavior in an event situation such as the FIFA World Cup in Brazil, and is not just related to purchases made in souvenir shops and the like. People of course use always use emotion to make choices when they consume, the point here is that different situations also produce different emotional consumption patterns, and football tourism is one of the most obvious of these. The pattern of additional consumption here though involves entertainment and an increased willingness to be more involved with the destination (game venue). This can also be seen in another dataset relating to football derived from a separate small study carried out by the author in 2014. In Manchester, UK there is a football themed hotel called the *Hotel Football Old Trafford*. From each of the dishes in the restaurant to the living environment in the rooms, all areas of the hotel are rendered in a very classical football concept. Most tourists visiting this hotel are football fans, and they are Manchester United fans. The average room price is around 200 pounds, and bookings are required one month

in advance. Although this hotel is four stars, the living fee a night is almost as same as five-star hotel such as the Hilton hotel in the same city. This specialized football hotel relies very strongly on emotional consumption; football fans pay a lot of money to enjoy everything connected with football and 'their' club.

Football tourism can thus be characterized as a form of tourism heavily influenced by situational emotions; people consume extra amounts through increased emotion brought on by the game (or club), not by their rational assessment of their needs. They prefer to see an important game, and they like to use money which can connect them with football super stars. Indeed, it is important to understand the *festival* nature of football events such as the FIFA World Cup (Getz 2005). Impulsive consumption exists very strongly at the time of such events, and is the reason why in each FIFA World Cup, both the holding country and FIFA can gain large revenues profits from it. When the visitors to these events choose to consume, they do not consider price; when they are happy, they buy anything and everything without considering the impact on their monetary resources - this situation is what we assume to be *emotional* consumption. As noted above, we need to know how to measure this form of consumption, and how to show it in graphical form. Modified utility theory shows us how to do this.

CHAPTER 5: THE CASE STUDY

5.1. Introduction

We have explained the need to modify traditional utility theory in order to understood the nature of the special factors that bring this emotion-based consumption situation about, and have been able to prove this in graphical form. In doing this, we have given the concept of mega-event related increased consumption the name *impulsive consumption*. This concept is in fact quite a normal aspect of consumer behavior (Rook 1987). In many retail outlets for example, different kinds of incentives are put in front of consumers in order to persuade them to purchase. The retail sector gives so many different discounts that consumers find it very easy to enter into impulsive consumption activity. Impulsive consumption in this context is sudden and finished in a very short time. During this short time, consumers have a very strong will to purchase, but it is also an activity which a consumer not thought to do before he or she entered that situation. Thus, impulsive consumption is decided by purchase time, place, and the impulsive tendency exhibited by the consumer. This study has shown that the modelling of such behavior can be extended to the experience of tourists at sports mega-events. Here, impulsive consumption becomes the main consumption activity, based on emotion.

The early marking literature described impulse buying simply as unplanned purchasing (cf. Cobb and Hoyer 1986). However, this approach has been criticized by Rook and Hoch (1985) and Rook and Gardner (1993). An impulsive purchase by definition *is* unplanned, but it is not only about this - it also involves experiencing

an urge to buy. This is felt suddenly and strongly and is often irresistible. Rook (1987:191) defined impulse consumption as buying something immediately without much consideration. To operationalize this definition, we should consider four factors at work on the consumer: time, money, shopping enjoyment, and the impulsive buying tendency. Figure 5.1 shows how this works in practice, where the impulse to buy is translated into action through the joint influence of all the factors in the context of immediately available goods to purchase (instore browsing).

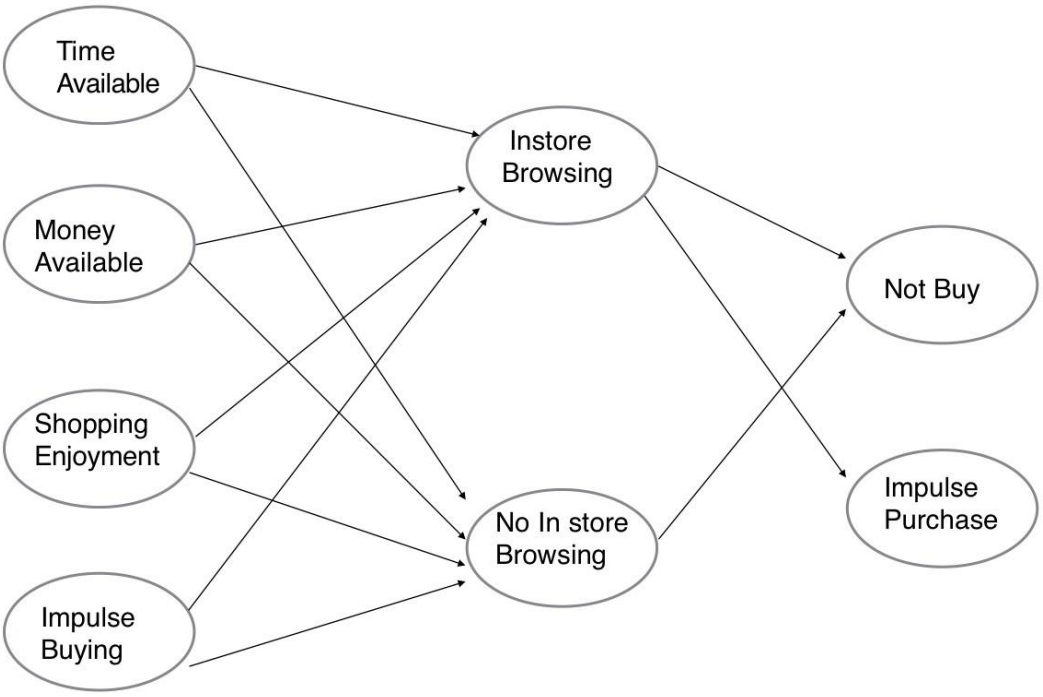


Figure 5.1: The relationship between the four motivational factors in consumption and impulsive purchases

5.2. Methodology

In order to understand the structure and impact of impulsive consumption in tourism, a small sample survey of tourists was carried out in China and in Japan, in the last half of 2014. This was done to quantify how much impulsive consumption existed

in the normal course of tourism, how to define impulsive consumption in practical situations, and how to measure it in percentage terms. The data obtained from the survey were then related to the economic benefits of the 2014 Brazilian FIFA World Cup in order to provide data for the calculation of the impact of impulsive consumption. The final number of respondents was 413, comprised of people who came from China, Japan, Europe, and America. The respondents were identified and secured through approaching travel agents in the Shanghai region of China, Chinese and other students at APU, and surveying a small number of international tourists (10) to Beppu using the services of the Beppu International Tourism Office (Beppu station office). All care was taken to abide by the research ethics regulations of APU and the wishes of the sources of respondents as detailed above.

5.3 Results

Table 5.1 details the demographics of the respondents. Two thirds of the sample were female, the majority came from China, and the median age group was people aged between 22 and 28. Of importance to the consumption patterns found, the median income of the respondents was towards the lower end of the scale used, with 97% of the sample earning less than 1700 US dollars a month, and the majority under 1200 dollars a month. This may indicate that money supply (income) is less important to

impulsive consumption than originally thought, but the study did not seek to examine this question in detail. Further research is needed in this regard.

Table 5.1: Demographics of the Sample

Characteristic		Frequency	Percentage
Gender	Female Male	279 134	67.5 32.5
Origin	China Japan Europe America	393 10 7 3	95.2 2.4 1.7 0.7
Age	18-22 22-28 28-35 over 35	120 257 17 19	29.0 62.0 4.1 4.6
Marital Status	Single Married Divorced	389 20 4	94.2 4.8 0.97
Education	High School/College Graduate Post Graduate Doctor	13 320 73 7	3.1 77.5 17.7 1.7
Income per month	under $800 $800-$1200 $1200-$1700 $1700-$2200 $2200 or over	134 187 80 10 2	32.4 45.3 19.4 2.4 0.5

Table 5.2 lists the responses to the 13 items in the survey. These were designed to record the attitudes (responses) of the sample to the four main factors in consumption detailed in Figure 5.4. The following analysis is without emotional factors, after this simple accounting for impulsive consumption, we will continue to analyze the special situation which considers the emotional factors. The raw percentages of responses are given, along with the standardized score on each of the four variables - Time available, Money available, Shopping enjoyment, and Impulsive buying tendency. The influence of time available was confirmed by 42.7% of the

sample, of money available by 18%, of shopping enjoyment by 84.7%, and of a tendency to impulsive buying by 76%. These factors contributed to a store browsing rate of 97% amongst the respondents.

Table 5.2: Measurement Item Properties

Survey Question	Percentage of responses and factor attribution	Group Standardized Value %
During the trip I found something not originally on my shopping list	74 (Impulse buying tendency)	
On this trip I found something I was very eager to buy	67(Impulse buying tendency)	76.0
I like to use my time for shopping even if it is just to buy a coffee to relax with	87 (Impulse buying tendency)	
I very much like to spend time to visit a shopping outlet	20 (Time available)	
I also like to go shopping as I think that it is 'just looking around' on this trip	17 (Time available)	42.7
I don't have time to enjoy shopping	9 (Time available)	
Shopping is not something for me to enjoy	19 (Shopping enjoyment)	
I think shopping is a waste of time	7 (Shopping enjoyment)	84.7
I like to go shopping even if I do not buy anything	80 (Shopping enjoyment)	
I don't have enough money to buy more during this trip	73 (Money available)	
I have a plan for how much money I can spend, but it can be a little more	20 (Money available)	18.0
I do not care how much money I use on this trip	7 (Money available)	
I devoted most of the spare time I had on this trip to just browsing in shopping outlets	97 (Browsing)	97.0

Having this data now means we can calculate how much is attributable to compulsive consumption in any one of the sample groups. For *time available* the consumption function should be (C_f = 0.427*0.18*0.847*0.76 = 0.0495). This means that in this sample of consumers, 4.95% will shop and undertake in store browsing. Then, amongst that 4.95%, 97% of them finally purchased a product. So the Impulsive Consumption function should be C_{fi} = 4.95% * 97% = 4.8%. This means that there were 4.8% or 20 people in that respondent group that engaged in impulsive consumption. But, this is the result without any emotional factors being formally

considered. We need now to analyze the pattern of consumption with the introduction of emotional factors. Table 5.3 sets out the continuum of emotion from most happiness to most sadness to allow this calculation.

Table 5.3: Happiness - Sadness Continuum

Survey Question	Percentage (Most Happiness)	Standardized Value (%)	Percentage (Most sadness)	Standardized Value (%)
During the trip, there was something which was not originally in my shopping list	100 (Impulse Buying Tendency)		0 (Impulse Buying Tendency)	
On this trip, I felt a sudden urge to buy something which I was very eager to purchase	100 (Impulse Buying Tendency)	100	0 (Impulse Buying Tendency)	0
I like to use my time for shopping even it is just to buy a coffee for relaxation	100 (Impulse Buying Tendency)		0 (Impulse Buying Tendency)	

In this analysis, for simplicity we assume there are two extreme factors which influence respondent emotions, which are most happiness and worst sadness (the actual situation will of course be a continuum). Except for the *money available* factor, all other factors should be at 100% or 0% in terms of these polar types of emotion. For most people, if they are happy, they prefer to consume more. So, according to this understanding, the "happy" consumption function should be C_{fa} = 1*1*1*18% (standardized value from Table 2) = 18%, and on the other hand, if they are sad, it should be (C_{fb} =0*0*0*18%) = 0%, so they will consume nothing. If we combine the two stages of the analysis, we find that negative emotion affects consumption to the extent of [0, 4.95%], and positive emotion produces [4.95%, 18%]. Thus, in the sample survey, if we add the emotional factor, the maximum

impulsive consumption effect should be 18%, which is the money available, so without considering other impulsive consumption factors, money is the only necessary and sufficient context for impulsive consumption. The actual decision to buy is based on emotion.

Figure 5.2: Increase in the consumption of beer in Brazil resulting from the World Cup

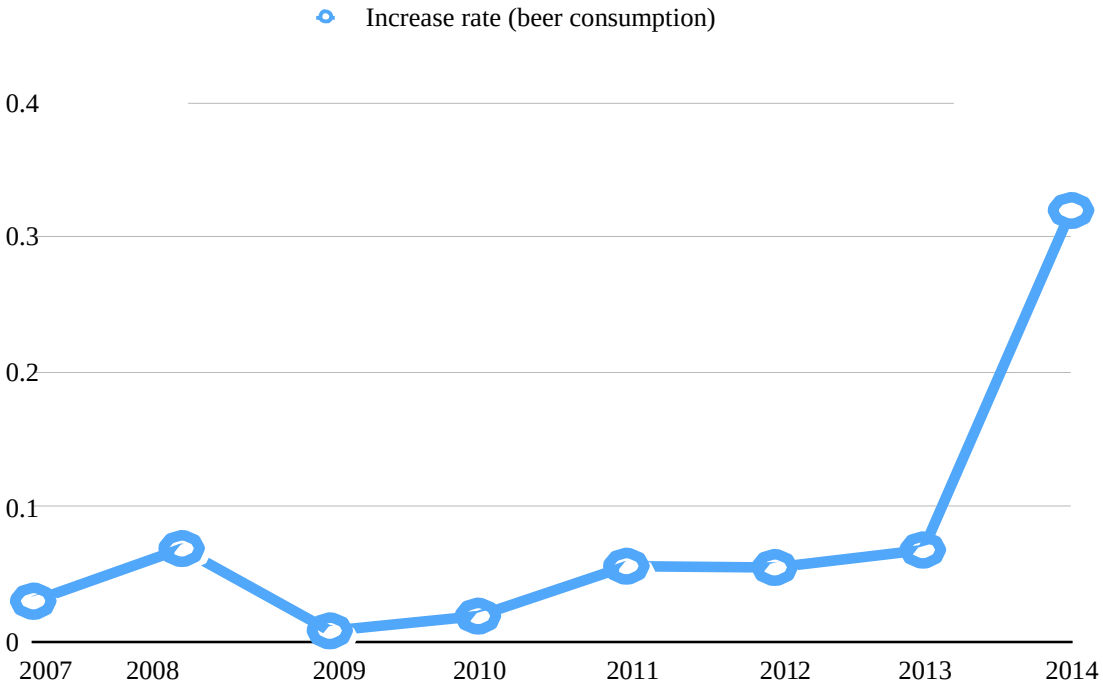


Figure 5.2 gives the increase in beer consumption attributable to the FIFA World Cup in Brazil. Using the impulsive consumption model derived in Chapter 3, we can analyze how much of this consumption is normal and how much is based on impulse. Looking at beer consumption in Brazil from 2007-2014, all consumption

increased, but in 2014 did so by a massive 35%. This is the increase rate attributable to the 2014 football world cup, and some of it is impulse-based.

5.4. Discussion

From the above results, we can see that the impulsive consumption range in this sample of tourists was in general around 4.8%, which means each of these consumers had a 4.8% rate of additional impulsive consumption on average; in a department store, in a restaurant, in a bar, or at a sports event. But the addition of the emotion factor produced a result of up to 18% in additional impulse spending. Suppliers and policy makers can take advantage of this extra spending to lead people to buy and consume goods, but they can also incorporate the win factor with regard to the actual games as an added incentive for impulse spending: let's celebrate!

As we know, more and more advertisements are focusing on how to get consumers to move in this direction (or at least trying to change their audience's mood and get them to buy products). In this seller's environment, we know if we can produce good, reliable and interesting information, consumers are willing to buy. In tourism, advertisements may talk about good environments, harmony within local cultures, and the protection of natural resources, but they also introduce the validity and desirability of impulse buying (Kotler et al. 2013). Thus, if we analyze what percentage of impulse buying emotions can exist in normal consumption, we can use promotional methods to help sellers to purchase goods based on this.

In my view, in the tourism area it is easier to use the concept of emotional-based consumption than in many other areas of economics. The reason is that, as

tourists are very happy to travel to other places, some of them show that they want to have a better place to live, good hotels, delicious food, and convenient travel, and are prepared to pay for these, at least for a short time. If a tourism destination can increase their motivation to seek all of these conditions, it can increase tourist's utility. Nevertheless, it has been very difficult to construct a fixed model of tourism utility until now. This study has progressed this task perhaps a little way towards a useful result, and with the addition of emotional factors in the traditional utility model we can see how impulse buying can occur, and by how much. In the future we will need to improve the model to make it better able to closely simulate consumer reality.

CHAPTER 6: CONCLUSIONS

Impulsive purchasing, generally defined as a consumer's unplanned purchases (Gilbert 1991; Cobb and Hoyer 1986; Holyfield 1999), is an important part of buyer behavior. It accounts for as much as 62% of supermarket sales and 80% of all sales in certain product categories. Although impulsive purchasing has attracted attention in consumer research, this literature has largely focused on identifying its individual-level antecedents, including personal resources and cognitive effort (Dann 1977; Cobb and Hoyer 1996), personal moods (Rook 1987; Elliot 1991; Tice, Bratislavsky, and Baumeister 2011), and self-regulation tendencies (Baumeister 2002). Unfortunately, there is little research on group-level determinants, except that in relation to gender led differences in impulse buying (Coley and Burgess 2003; Xu 2012).

Consequently, although Rook (1987) called for research on impulse purchasing "in a social environment (group versus solo buying) context" 20 years ago, researchers still have limited knowledge about the social context of impulsive purchasing. In the 1980s, Rook continued to research into the phenomenon of "Impulsive Consumption." Later researchers have tended to suggest that impulsive consumption almost always happens in the tourism area (Kwon and Armstrong 2002; Whitson et al. 2006; Song et al. 2009). In a tourist trip, it is easy to see that at least some of the consumption by tourists occurs in unplanned situations. If we accept the impact of impulsive consumption on a tourist's overall utility, we can easily to explain why in the context of sports mega-events consumption rates, especially of food and beverage and souvenirs, can increase very quickly. And if we explicitly

acknowledge the role of emotional states in this situation we are closer to finding the reason for such additional consumption, and to being possibly able to quantify its extent. Should we be able to quantify the likely outcomes of impulsive consumption based on emotion we would then be able to predict in a more comprehensive way the revenue outcome and the likelihood of sustainable development after the mega event. And, if we can measure this reliably, governments can use the information to improve consumption and accelerate economic development.

Most consumers buy ultimately meaningless things from tourism areas in the guise of souvenirs, which they regret when they come back from trips. However, this is the very type of impulsive behavior that tourism businesses and tourism authorities look to increase in a destination. To assist them to get this message across, and provide a firmer base for their calculations of the type and level of outcomes, especially those in the revenue area we need to understand the effect of emotion on the tourist's decision making process. This study has shown that there is a way of incorporating emotion into the consumption models (utility models) commonly used to assess the benefits of increasing tourism. While the original utility model could provide some measure of impulsive consumption, it was not very clear in relation to classifying the impact of emotional factors. The classical model only considers the impact of the external environment on tourist decision making; variables such as time available, shopping enjoyment, money available, and the tendency of all consumers to engage in impulse buying. With the model developed in this study it is possible to add emotional factors relating to the likelihood of impulsive consumption to this mix, and show how the impact of these can be calculated.

REFERENCES

Abdallat, M. M. A., and El-Emam, H. El-Sayed. (2009) *Consumer Behavior Models in Tourism: an analysis and study*. Department of Tourism and Hospitality, Faculty of Tourism and Archeology, King Saud University. Riyadh: King Saud University.

Bellenger, D. E., Robertson, D. H., and Hirschman, E. C. (1978) "Impulse Buying Varies by Product." *Journal of Advertising Research* 18: 15-18.

Berger, J. O. (1985) *Statistical Decision Theory and Bayesian Analysis*. Berlin: Springer-Verlag.

Bradley, T. (2013) *Essential Mathematics for Economics and Business*. Chichester: John Wiley & Sons.

Brooks, C. (1998) "Chaos in foreign exchange markets: a skeptical view." *Computational Economics* 11: 265–281.

Coley, A., and Burgess, B. (2003) "Gender differences in cognitive and affective impulse buying." *Journal of Fashion Marketing and Management* 147-186.

Collier, A. (1994) *Principles of Tourism*. Auckland: Longhand Paul Ltd.

Cobb, C. J., and Hoyer, W.D. (1986) "Planned versus Impulse Purchase Behavior." *Journal of Retailing* 62(4): 384-409.

Cooper, C. P. (1993) *Tourism, Principles and Practice*. London: Pitman.

Crouch, G. (1995) "A meta-analysis of tourism demand." *Annals of Tourism Research* 22:103-118.

Dann, G. (1977) "Anomie, ego-enhancement and tourism." *Annals of Tourism Research* 4, 117-124.

Elliot, M. (1991) *The Pleasure Principle*. Economist, March, 27-31.

Ernst & Young Terco. (2011) *Sustainable Brazil: Social and Economic Impacts of the 2014 World Cup*. Buenos Aires: EYGM Ltd.

FIFA World (2015) *The World Cup in Brazil*. http://www.fifa.com.

Fourie, J., and Santana-Gallego, M. (2011) "The impact of mega-events on tourist arrivals." *Tourism Management* 32(6): 1364-1370.

Funck, C., and Cooper, M. (2013) *Japanese Tourism: Spaces, Places and Structures.* Oxford: Berghahn Books.

Getz, D. (2005) *Events Management and Events Tourism*. New York: Cognizant Communications.

Gilbert, D. C. (1991) “An Examination of the Consumer Behavior Process Related to Tourism.” In *Progress in Tourism, Recreation and Hospitality Management*, 78-105, edited by C. P. Cooper. London: Belhaven.

Gilboa, I. (2009) *Theory of Decision under Uncertainty.* Cambridge: Cambridge University Press.

Gleick, J. (1987). *Chaos: Making a New Science*. London: Cardinal.

Gursoy, D., and Rutherford, D. (2004) “Host Attitudes towards Tourism, an improved structural model.” *Annals of Tourism Research* 31(3): 495-516.

Hadamard, J. (1898). "Les surfaces à courbures opposées et leurs lignes géodesiques". *Journal de Mathématiques Pures et Appliquées* 4: 27–73.

Hall, C. M. (2006) “Urban entrepreneurship, corporate interests and sports mega-events: the thin policies of competitiveness within the hard outcomes of neoliberalism.” *The Sociological Review* 54(s2): 59-70.

Hall, C. M. (2014) *Consumerism and Tourism*. A presentation to the Center for Sustainability Studies, Lund University. Lund, Sweden

Henderson, J. V., and Thisse, J. F. 2004. *Handbook of Regional and Urban Economics*. Amsterdam: Elsevier.

Hiller, H. H. (1998) “Assessing The Impact of Mega-Events: A Linkage Model.” *Current Issues in Tourism* 1(1): 47-57.

Hiller, H. H. (2000) “Mega-Events, Urban Boosterism and Growth Strategies: An analysis of the Objectives and Legitimations of the Cape Town 2004 Olympic Bid.” *International Journal of Urban and Regional Affairs* 24(2): 439-458.

Holyfield, L. (1999) “ Manufacturing adventure: the buying and selling of emotions.” *Journal of Contemporary Ethnography* 26, 3-17.

Huang, *D. S.* (1966) *Introduction to the Use of Mathematics in Economic Analysis*. New York: Wiley.

Hudson, S. (2002) *Sport and Adventure Tourism*. New York: Haworth Hospitality Press.

Jeong, G.-H., and Faulkner, B. (1996). “Resident perceptions of mega-event impacts: The Taejon international exposition case.” *Festival Management & Event Tourism* 4: 3-11.

Juárez, F. (2011). "Applying the theory of chaos and a complex model of health to establish relations among financial indicators". *Procedia Computer Science* 3: 982–986.

Kellert, S. H. (1993) *In the Wake of Chaos: Unpredictable Order in Dynamical Systems*. Chicago: University of Chicago Press.

Kim, S. S., and Petrick, J. F. (2005) "Residents' perceptions on impacts of the FIFA 2002 World Cup: The case of Seoul as a host city." *Tourism Management* 26: 25-38.

Kotler, P. T., Bowen, J. T., and Makens, J. (2013) *Marketing for Hospitality and Tourism* (6th Edition). New York: Prentice Hall.

Krugman, P., and Wells, R. (2013) *Microeconomics*. New York: Worth Publishers.

Kwon, H. H., and Armstrong, K. L. (2002) "Factors influencing impulse buying of sport team licensed merchandise." *Sport Marketing Quarterly* 56-114.

Long, P. H., and Kayat, K. (2011) "Residents' perceptions of tourism impact and their support for tourism development: the case study of Cuc Phuong National Park, Ninh Binh province, Vietnam." *European Journal of Tourism Research* 4(2): 123-146.

Lorenz, E. N. (1963) "Deterministic non-periodic flow." *Journal of the Atmospheric Sciences* 20(2): 130–141.

Mandelbrot, B. (1977) *The Fractal Geometry of Nature*. New York: Freeman.

Mathieson, A., and Wall, G. (1982) *Tourism; economic, physical and social impacts.* Harlow: Longman.

Morley, C., Rossello, J., and Santana-Gallego, M. (2014) "Gravity models for tourism demand: Theory and use." *Annals of Tourism Research* 48:1-10.

Oxford Economics. (2014) *Shaping the future of travel*. Amadeus Travel Trends. http://blogamadeus.com/wp-content/uploads/2014/04/AmadeusTravelTrends.pdf.

Pappas, N. (2014) "Consumer Preferences and Key Aspects of Tourism and Hospitality Marketing for Island Destinations." *Journal of Hospitality and Tourism Management* 21: 10-17.

Pike, S. (2002) "*TOMA as a measure of competitive advantage for short break holiday destinations*." *Journal of Tourism Studies* 12(1): 8-15.

Price Waterhouse Coopers. (2011) *Changing the game: Outlook for the global sports market to 2015.* Zurich: PwC.

Price Waterhouse Coopers. (2014) *It's how you play the game: Matching a region's priorities with the right mega – or not so mega – event.* Zurich: PwC.

Riley, J. G. (2012) *Essential Microeconomics*. Cambridge: Cambridge University Press.

Ritchie, J., and Aitken, C. (1985) "Olympulse II: Evolving Residents Attitudes toward the 1988 Winter Olympic Games." *Journal of Travel Research* 23: 28-33.

Rook, D. W. (1987) "The Buying Impulse." *Journal of Consumer Research* 14(September): 189–199.

Rook, D. W., and Fisher, R. J. (1995) **"**Normative Influences On Impulsive Buying Behavior." *Journal of Consumer Research* 22(3): 305-313.

Rook, D. W., and Gardner, M. P. (1993) "In the Mood: Impulse Buying Affective Antecedents." In J. Arnold-Costa and R. W. Belk (Eds.), *Research in Consumer Behavior* 6: 1–28. Greenwich, CT: JAI press.

Rook, D. W., and Hoch, S. J. (1985) "Consuming Impulses." In *Advances in Consumer Research 12*, 23–27, M. B. Holbrook and E. C. Hirschman (Eds.) Provo, UT: Association for Consumer Research.

Rosenbloom, B. (1987) *Marketing Channels: A Management view* (3rd edition). London: The Dryden Press.

Samuelson, P. A. (1983) *Foundations of Economic Analysis*. Mass. USA: Harvard University Press.

Sharpe, W. (1964) "Capital asset prices: a theory of market equilibrium under conditions of risk." *Journal of Finance* 21: 85-110.

Smith, A. (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: W. Strahan and T. Cadell.

Song, H., Witt, S. F., and Li, G. (2009) "The advanced econometrics of tourism demand." New York: Routledge.

Strogatz, S. (2003) *Sync: The Emerging Science of Spontaneous Order*. New York: Hyperion.

Sydsæter, K., Strøm, A., and Hammond P. (2006) *Essential Mathematics for Economic Analysis*. London: Prentice Hall.

Tice, D. M., Bratslavsky, E., and Baumeister, R. F. (2001) “Emotional distress regulation takes precedence over impulse control: If you feel bad, do it!” *Journal of Personality and Social Psychology* 80: 53-67.

Weaver, D., and Lawton, L. (2014) *Tourism Management*. Sydney: Wiley.

Weun, S., Jones M. A., and Beatty S. E. (1998) “The Development and Validation of the Impulse Buying Tendency Scale.” *Psychological Reports* 82: 1123–1133.

Whitson, D., Horne, J., and Manzenreiter, W. (2006) “Underestimated costs and overestimated benefits? Comparing the outcomes of sports mega-events in Canada and Japan.” *Sociological Review* 54(s1): 71-89.

UNWTO. (2014) *Annual report 2014*. Madrid UN World Tourism Organization.

World Travel and Tourism Council (WTTC). (2014) *Travel and Tourism: Economic Impact*. London: WTTC.

Xu, X. (2012) “The Short Trading Day Anomaly.” Presented to *The Eastern Economic Association Annual Conference*, New York, EEA.

Zhang, W-B. (2008) *International trade theory: Capital, knowledge, economic structure, money and prices over time and space*. Berlin: Springer.

Internet Sites Consulted:

Brazilian Government Website on the World Cup, 2015.
http://www.copa2014.gov.br/en/noticias.

Tourism Brazil. (2015) http://www.brazil.org.za.

Tourism China. (2015) http://www.cnto.org.

Tourism Japan. (2015) https://www.jnto.go.jp.