

Essays on Well-being and Quality of Life in Latin America

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## **DEDICATION**

This dissertation is dedicated to my son Ulysses Chaslus who has patiently waited and supported me unconditionally. It is also dedicated to all my beloved ancestors, and my parents Sergio Cuartas, and Clotilde Jaimes, who gave me life. This work is also dedicated to all my loved and respected teachers who help me realize my full potential. Finally, this work is tenderly dedicated to all, whom it may benefit, especially the children living in the streets, for they are the fire that fuels my intention, attention, and diligent efforts. May this work lessen ill-being everywhere; bring humans a little closer to being healthy, safe, free, peaceful, and happy.

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## LIST OF ABBREVIATIONS

Anterior Cingulate Cortex.....	ACC
Attention Deficit Hyperactivity Disorder .....	ADHD
Behavioral Activation Scale .....	BAS
Behavioral Inhibition Scale.....	BIS
Corruption Perception Index.....	CPI
Do-It Yourself.....	DIY
Dorsolateral Prefrontal Cortex .....	DLPFC
Deoxyribonucleic Acid .....	DNA
Food and Agriculture Organization .....	FAO
Fuerzas Armadas Revolucionarias Colombianas.....	FARC
Gross Domestic Product .....	GDP
Geographic Information System .....	GIS
Gross National Happiness Index.....	GNH
Global Peace Index .....	GPI
Human Development Index .....	HDI
Human Immunodeficiency Virus .....	HIV
Happy Planet Index .....	HPI
Latin America and the Caribbean .....	LAC
Millennium Development Goals.....	MDG
New Economics Foundation .....	NEF
Organization for Economic Cooperation and Development.....	OECD
Orbitofrontal Cortex.....	OFC
Positive Emotions, Engagement (flow), Relationships, Meaning, Accomplishment.....	PERMA
Prefrontal Cortex.....	PFC
Purchasing Power Parity .....	PPP
Post-Traumatic Stress Disorder .....	PTSD
United States .....	U.S.
United Nations .....	UN
United Nations Development Program.....	UNDP
Ventromedial Prefrontal Cortex.....	VmPFC
World Database of Happiness.....	WDH
World Bank Development Indicators .....	WDI
World Health Organization.....	WHO

## **ABSTRACT**

### **ESSAYS ON WELL-BEING AND QUALITY OF LIFE IN LATIN AMERICA**

Beatriz Cuartas, Ph.D.

George Mason University, 2017

Dissertation Director: Dr. Kenneth A. Reinert

Elevated Latin American well-being rankings are controversial. The dissertation explores the relationship between well-being and other performance measures covering 134 countries in 2011. A correlation analysis tests the relationship across country rankings, such as the Happy Planet Index, the World Development Indicators, the Global Peace Index, and the Corruption Perception Index. The empirical findings suggest that life satisfaction becomes statistically insignificant for the region when correlated with other measures including peace-security, and corruption. The findings also indicate that an increase in per-capita-income, war, and corruption tend to have little to no effect on the given HPI country ranking.

## **CHAPTER 1. PATTERNS OF LATIN AMERICAN GROWTH AND WELL-BEING: AN OVERVIEW**

“The most perfect system of government is one which produces the greatest possible sum of happiness, social security, and political stability.”

--Simon Bolivar, Speech before the Angostura Congress of 1819

### *Abstract*

This chapter examines broad patterns in historical Latin American growth. The chapter lays out an analytical framework to examine the importance of the role of the government in securing well-being. It identifies three fundamental gaps that arise from the literature, which will be the focus of this dissertation. The chapter concludes by providing a brief discussion of the research questions this dissertation addresses, the contributions to the literature on well-being measures for Latin America this dissertation will make, as well as a preview of the empirical findings.

### **1.1 Introduction**

Francis Fukuyama, an American political scientist, has stated that Latin America’s history influenced its growth patterns (Fukuyama 2010). Poverty, inequality, and conflict have deep historical roots in Latin America (Goldin & Reinert 2012). Latin America’s past has stunted its political, social, and economic institutions, giving rise to growing poverty, inequality and violence in the region. Fukuyama (2010) makes an

eloquent connection between the government, income, and the falling behind of Latin America in development. In particular, he supports two of this dissertation's main concerns: peace-security and unequal access to basic goods. Fukuyama (2010) links political instability (weak institutions), with income inequality, and lagging growth. He links the role of inequality in conflict, coupled with "bad institutions, that is, institutions that protected the power of the already powerful by not educating the masses, limiting political rights, preventing the masses from availing themselves of economic opportunities, keeping internal markets small, and, as a consequence, retarding growth as well as perpetuating inequality" (pp. 178-179). Fukuyama also asserts that "inequality intensifies conflicts over distribution which result in diverting resources from production to fighting and impeding collective actions oriented towards providing public goods" (Fukuyama 2010). Well-being is treated in this dissertation as a public good. In order to grow well-being, institutions need to protect it and support it.

Additional literature supports Fukuyama. Salvatore, Coatsworth, and Challu (2010) state that natural resources, land and labor, the allocation of production factors, weak policy institutions and frameworks, and macroeconomic factors have influenced the region's growth pattern. Further, Fukuyama (2010) explains that, in the 1700s, Latin America had marginally lower per-capita gross domestic product (GDP) than the United States (this fact is interesting, given the today's economic gap between Latin American Economy and the U.S).

Latin American economies prospered in the 1700s. Mexico and other Latin American economies experienced virtual parity in per capita income with the British

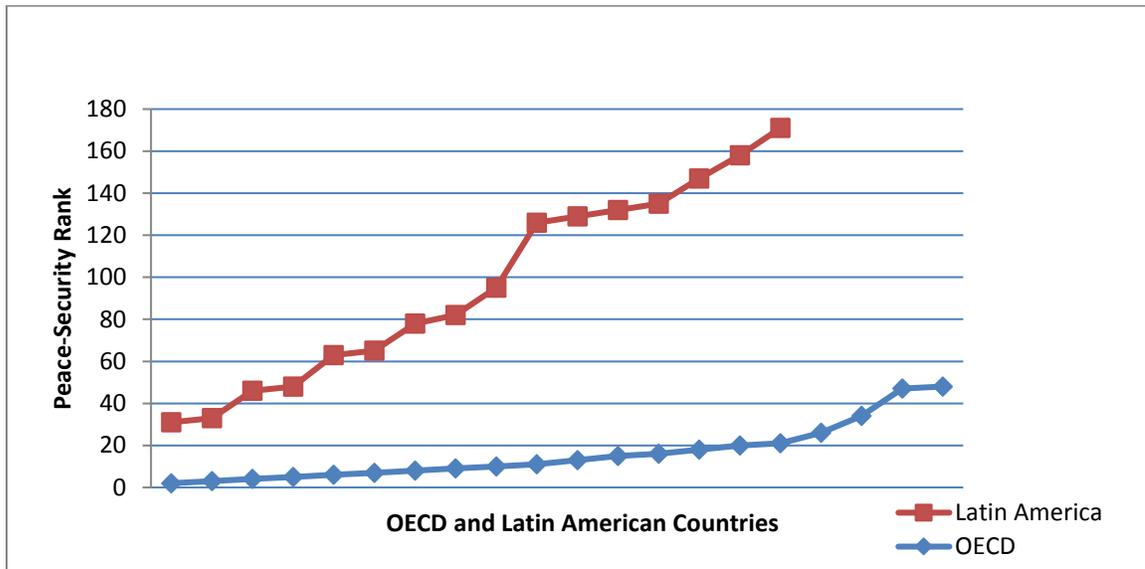
colonies at the time (Sokoloff and Engerman 2000). Fukuyama (2010) added that in the 1800s, Latin America had tremendous wealth, but the entire region fell behind.

According to Sokoloff and Engerman (2000), the U.S. and Canada began to grow and pull ahead of most of the economies in by the 1800s. However, it was not until industrialization got underway that the major diverges between the U.S. and Canada and the rest of the hemisphere became evident. Later, in the 1980s, most Latin American countries entered a debt crisis. Fukuyama (2010) identified the causes of the gap as “history, culture, conditions, and context of the society.”

Douglas North (1990), who studies Latin America through a historical lens, suggests the transition from a traditional (colonial) economy to a modern economy gave rise to ineffective institutions. Ineffective government institutions contributed to a collective lack of welfare and gave rise to growing poverty and inequality that fueled violence in Latin America. There is a large body of literature focusing on Latin American lagging health, education, economic, institutional development, and poverty and inequality. This dissertation will not dwell on subjects that have already been studied.

This dissertation will focus on governmental institutions. Evidence of lacking effective peace keeping institutions in Latin America can be observed in Figure 1.1. It displays overall global peace rankings for Latin America and Organization for Economic Cooperation and Development (OECD) countries. The Global Peace Index measures a country’s peacefulness from 1-160. The best number a country can rank is 1<sup>st</sup> and 160<sup>th</sup>

is the worst. Factors examined include levels of violence, crime, war, and political stability.



Note: This Figure shows the Global Peace Index Ranking for 160 countries and compares the OECD and Latin American regions. The best a country can rank is 1, and 160 is the worst.  
Source: Author with Global Peace Index data found at [visionofhumanity.org](http://visionofhumanity.org)

**Figure 1.1 Global Peace Index Rankings OECD and Latin America**

In Figure 1.1, OECD countries hold the best scores and can be described as safe and secure societies with low violence, crime rates, and incidence of terrorism. The figure also shows that Latin America has been ranked as one of the most violent regions in the world. The region's countries can be described as unstable, lacking safety and security, with high crime rates, violence, armed conflict, and displacement. Colombia has the worst ranking (150<sup>th</sup>) for the region and one of the lowest in the world (GPI 2014).



Source: Author with Happy Planet Index data found at [happyplanetindex.org](http://happyplanetindex.org)

### **Figure 1.2 Happy Planet Index Ranking OECD and Latin America**

In Figure 1.2, Latin American countries hold the best HPI ranks. According to this ranking, Latin America can be described as the happiest in the world because it has highest well-being, most happy life years in terms of Latino barometer<sup>1</sup> (life satisfaction and the world values survey (WVS)<sup>2</sup>, and lowest ecological footprint. On the other hand, the figure shows that the OECD has been ranked as one of the least happy regions in the world. According to the HPI, the region's countries can be described as low in happiness, well-being, and with high ecological foot prints. Luxemburg has the worst score of 138<sup>th</sup> for the region (HPI 2011).

Driven by the confusing results in the area, like the 2015 Latino Barometer report that affirms that it is “too late and too little” for Latin America (pp. 3), this dissertation will attempt to study *one* important dimension of well-being measures in Latin America, *the role of the government*, with a focus on the three specific domains of national security, governmental accountability, and access to basic infrastructural goods and services. The object of this study encompasses objective and subjective conditions for individuals and groups to be well (means, and ends). The conditions include physical, and mental well-being: health, food, and nutrition, access to clean water and sewage,

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<sup>1</sup> <http://www.latinobarometro.org/lat.jsp>

<sup>2</sup> <http://www.worldvaluessurvey.org/wvs.jsp>

peace and security, corruption and transparency, education, poverty, inequality, and ultimately development in Latin America. This is different from wellness (optimal health) and happiness (subjective mental states). This dissertation will focus on the study of the dependent variable HPI rank, and how it interacts with the independent variables of peace-security (GPI), and corruption-transparency (CPI), and other independent variables including income inequality access (GINI), GDP, ecological footprint, life expectancy, and life satisfaction.

The remainder of this chapter will focus on the study of historic Latin American growth patterns. Specifically, Section 1.1 presents a schematic of the related literature that helps place well-being in Latin America in context. Section 1.2 outlines some historical Latin American growth patterns and links them to well-being. Section 1.3 summarizes the empirical governmental determinants that influence health, education, poverty, inequality, and violence trends in the region. Section 1.4 explains the inequality patterns that influence the region. Section 1.5 will introduce themes that this dissertation sets out to examine.

## **1.2 The Scope of Well-being in Latin America**

In recent decades, several well-being reports have been issued with the intention to improve quality of life. Over the last decade, the availability of country well-being assessments has grown considerably. These reports contribute to the field by providing country studies that do not focus solely on GDP, they also include subjective well-being.

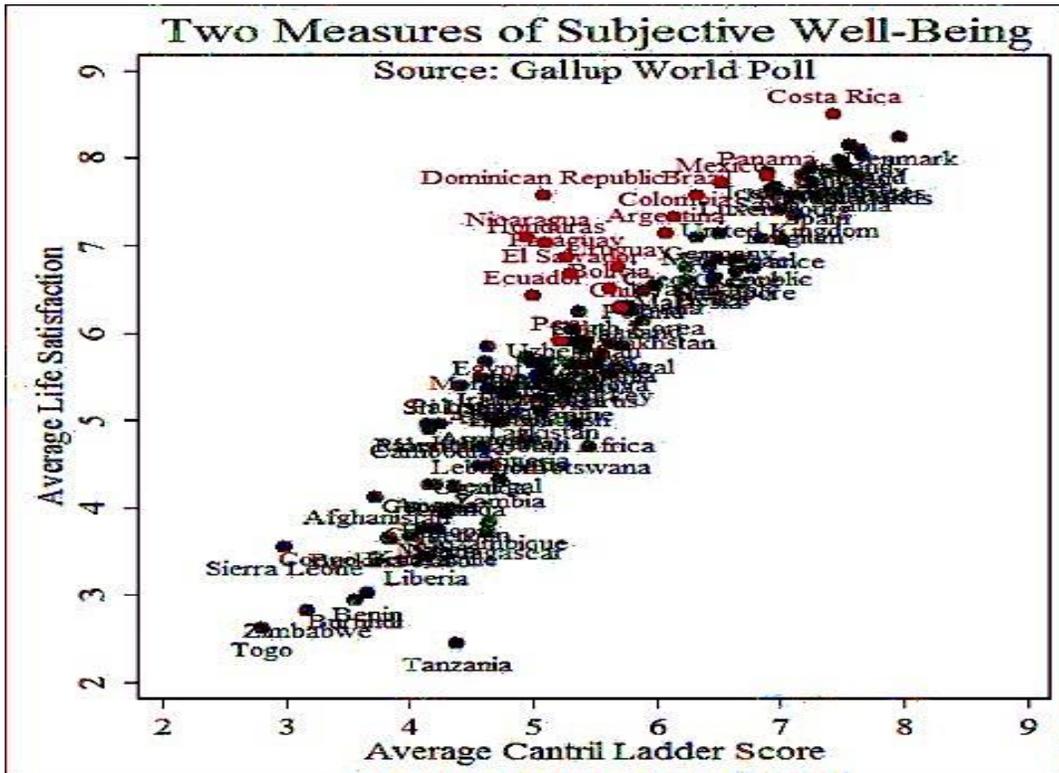
In 2013, in a study conducted by the New Economics Foundation (NEF 2013), the HPI ranked seven Latin America countries among the top ten happiest countries in the

world. The United Nations World Happiness report (UN 2013) said the Latin America's future is looking bright. According to the report, over half of the countries with improved well-being scores were in Latin America. Overall, Latin America's population-weighted-average happiness increased by seven percent. The report noted that the region also saw a decline in inequality of happiness and reported lower corruption perceptions. Violence and corruption continue to be a pervasive problem in Latin America.

In some ways, the increase in Latin America's well-being ranking is not surprising, as the region has seen positive economic and democratic changes in recent years. On the political front, Latin America has seen regional changes with more freely elected governments, the strengthening of some democratic institutions, and an increase in citizen participation. Military rule is less common, and military impunity is decreasing. Several Latin America governments have built new partnerships with economic actors including the United States (Fukuyama 2010) and China. Also on the economic front, GDP has grown, while poverty and inequality has decreased in the past decade. According to Gallup, Latin America's quality of life has increased as governmental and economic effectiveness increased. Gallup's subjective well-being poll (Figure 1.3) displays the upward quality of life trend for Latin American. The red dots pinpoint many Latin American countries' quality of life as higher than most other countries in the world.

Even with these advancements, Latin American countries still have some of the highest levels of inequality in the world, as well as high levels of poverty, and violent conflict. The 1995-2015 Latino barometer Report affirms that the region has reached a

growth deceleration point, where inequality and security issues remain the core political, social, and economic challenges for the region (Latino barometer 2015). However, as can be seen on Figure 1.3. the results on the Cantril ladder score on Figure 1.3 are in direct contradiction with the Latino barometer results.



possible life for you and the bottom of the ladder the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?”

Gallup is reporting that the same countries ranked with high inequality, and violence (Latino Barometer 2015), also have high well-being scores (Gallup 2009).

The debates on measuring growth and well-being have intensified (Baker 2014, Graham 2009, Alkire 2009) because there is a growing desire to measure more than GDP. Research shows that there is a rising tide worldwide demanding that public policies be more closely aligned with what really matters to people: “well-being” (UN 2013). More and more world leaders and policy makers are recognizing the importance of well-being, and they have begun a trend to embed the concept into national policies. For instance, Bhutan has built the country’s political economy around the concept of Gross National Happiness (GNH). Britain, France, Denmark, Ecuador, Mexico, Colombia (Alkire 2014) and others also begun to measure their populations’ well-being. However, these countries are still confronted with the challenge of defining and measuring well-being, as part of their growth, and tailoring it to their own regional reality.

### **1.3 Latin America’s Historical Growth Patterns**

How Latin America’s economic growth path differentiated from the developed world sparked the curiosity of many political economy historians including North (1988) Engerman and Sokoloff (1997), Coatsworth (1993, 1998), Acemoglu, Johnson and Robinson (2000), Engerman, Haber and Sokoloff (2000). Fukuyama (2010) pointed to the colonial historic legacy of the region. Robinson (2010) and Donghi (2010) agree that Latin America’s political, economic, and social institutions emerged from the Spanish

colonies and resulted in underdeveloped economies. The contributing weakening factors include lack of property rights, (Robinson 2010 and Donghi 2010), lack of human capital investment (Bertola et al 2009), and the perpetuation of the institutional power status quo. Latin America's institutional framework has allowed a small number of elite individuals to hold the power and have access to resources.

According to Franko (2007) and Fukuyama (2010) the Columbian Exchange brought on remarkable losses in terms of human, natural, and cultural capital. The Columbian Exchange refers to the widespread exchange of people, ideas, technology, food, culture, and disease between the American and Afro-Eurasian hemispheres in the 15th and 16th centuries, related to European colonization and trade after Christopher Columbus' 1492 voyage (Crosby 1973, 2003). Disease, plantation slavery (*encomiendas*), and mine slavery (*mercantilism*) caused a demographic, natural, and cultural catastrophe in Latin America. Colonial disease decimated most of the native population. These European diseases included small pox, diphtheria, meningitis, malaria, and the bubonic plague (Franko 2007 and Fukuyama 2010).

The Spanish *encomienda* relied on monopoly control over land, mines, and indigenous and African slaves. According to Dobyns (1966) and Cardoso and Helwege (1992) Latin America's population in 1500 was roughly ninety million indigenous people. By 1900, only five million indigenous people remained. Colonization, disease, and slavery caused the millions of deaths the plantations and in the mines. Later, the *encomienda* was institutionally translated into the *latifundias*, a system where a few owners held most of the land. Other monopolies included the withholding of taxation by

the elites to prevent public school funding and voting for the masses. As stated by Franko (2007), “the fundamental pattern of asset ownership reinforced the highly unequal pattern of growth in the region”(Franko 2007 pp. 49).”

### **1.3.1 How Lack of Growth Affected Latin American Well-Being**

If one looks at Latin America through a historical lens, the transition from a colonial to a modern economy gave rise to ineffective institutions that contributed to a collective lack of welfare. It gave rise to poverty and inequality within the region. Latin American governments and institutions were stunted by their colonial legacy, and ultimately were ineffective. There was no investment in human capital. Latin American countries were characterized by low-skilled labor often because the institutions withheld participation and investment in education. There were few incentives for domestic direct investments and the region became dependent on foreign financial aid. Finally, debt crisis and import substitution allowed the region to fall behind.

Fukuyama (2010), Franko (2007), and Challu (2010) agree that the independence and post-independence period (1750-1840) was particularly disastrous for Latin America. The struggle for independence was both financially and demographically costly for the region. Challu (2010) points to evidence of deteriorating health conditions and nutrition during this period that resulted in stunted physical, educational, and economic growth for the region. The severed ties with Spain undercut economic growth during the independence period, which in turn denied Latin America access to some markets, technology, and the institutional framework.

Beginning in the late 1800s, the GDP of most Latin American countries increased, a trend that continued until the start of the Great Depression. After World War II, Latin America entered a period of import substitution industrialization (ISI) development (Bruton 1998). ISI was an inward political subsidy and tariff strategy to stimulate Latin America's economy. ISI policies promote national industrialization that would result in a production of expensive imports alternatives (Brutton 1998). However, the strategy did not work because Latin America substituted the import of some technologies for others, creating a market economy with similar dependencies as those from the departure. ISI led governments in Latin America to become large providers of economic goods and consequently, oppressive economic regulators. Latin America, already dependent on imports from the industrialized market economies, worsened the dependency with ISI policies (Colman and Nixon 1985) characterized by exporting primary commodities, such as mined and agricultural goods, while capital equipment and technology was mostly imported from abroad. Multinational corporations that transferred direct profits abroad dominated the region's economy (Robinson 2006).

Later, from 1950 to 1970, Latin America's GDP increased again. The last three decades of the twentieth century, Latin America experienced numerous internal violent conflicts due to poverty and inequality. Authoritarian regimes were unable to adjust to the external economic environment. According to Roett and Gonzalez (2010), the 1980's debt crisis struck Latin America due to fiscal deficits, hyperinflation, and the overvaluation of exchange rates.

The Washington Consensus imposed structural reform policies on Latin America in the 1980s (Williamson 1990, 1993, 1997). The growth reform “identified 10 key reforms including fiscal discipline, trade liberalization, tax reform, competitive exchange rates, privatization, liberalization of foreign direct investment (FDI) flows, deregulation, and market-determined interest rates” (Williamson 1990, 1993, 1997). There were several problems with the structural reforms proposed, including the exacerbation of poverty due to trade liberalization effects (Goldin and Reinert 2012). The reforms did not take into account the role of the political institutions in the achievement of a structural reform (Szirmai 2005). Although, Latin American countries had some resources to provide basic infrastructure, they lacked institutional capability to provide the rule of law, public health, education, and poverty reduction. Consequently, the gap between the region’s GDP and the developed world widened. In the 1990s, trade and other neo-liberal policies to “refocus the effectiveness of the state” (Roett 2010) added to the internal economic inequalities.

In the early 2000s, Latin America experienced a severe economic crisis, which continued to exacerbate the issues of inequality and poverty, and the takeover of underequipped leftist populist regimes. The results indicated that Latin America needed legal, political, regulatory, anti-corruption, labor market, financial standards, poverty and violence reduction, and health-education reform. The problem with the “poverty and exclusion that remained deeply rooted and the persistent inequality” is that the society’s expectation for change is relatively low (Roett, 2010). However, Latin America has

recently started to see a decrease in the headcount and the absolute number of the poor, and in the inequalities percentages within the region.

## **1.4 The Role of the State in Latin America's Inequality and Poverty Reduction**

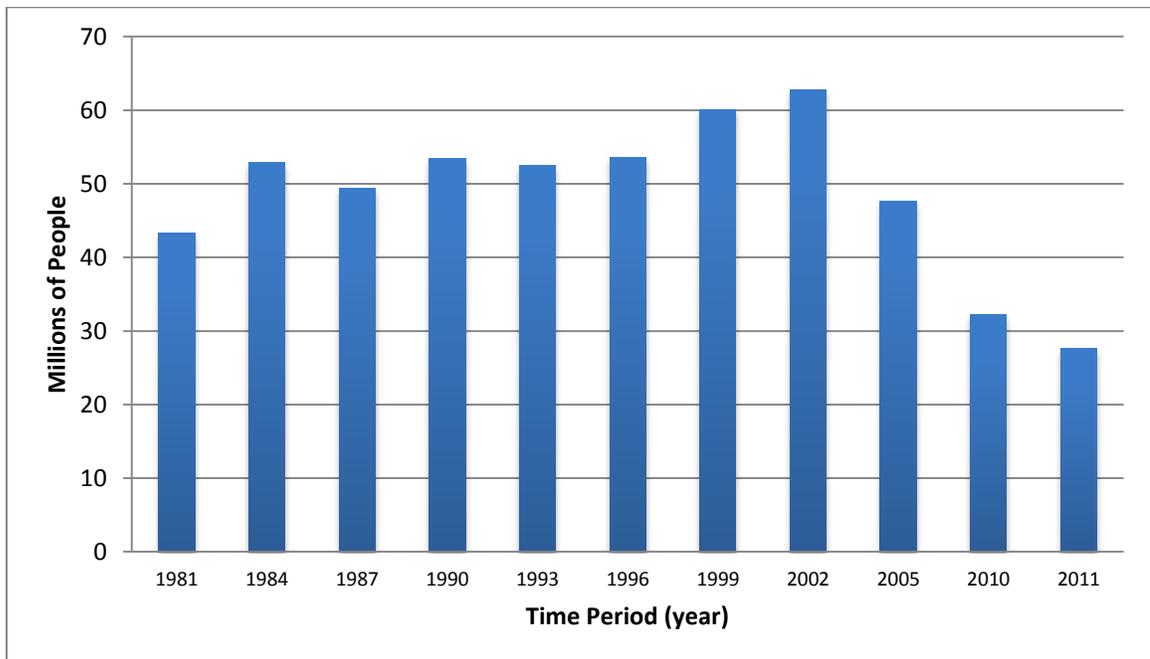
In Latin America, the issues of poverty, inequality and violent conflict are closely related to government performance. Recently, a welcomed reduction of inequality and poverty in the region was brought on by lowered wage inequality in the labor market and conditional cash transfers, introduced by the governments to promote better health, education, and financial well-being. Still the poverty that remains both in general and in the Latin American region is multidimensional, reflecting deprivations in income, health, education, working conditions, and empowerment (Goldin & Reinert 2012).

### **1.4.1 Income Poverty**

Bourguignon (2003) defines poverty as “a shortfall from a threshold on each dimension of an individual’s well-being.” Alkire states that poverty is present when “an individual is poor in one of the poverty dimensions including breadth, depth, and severity of the poverty condition of a person suffering multiple deprivations” (Alkire 2008). The World Bank defines poverty as living on an income below \$2.00 US per day and defines extreme poverty as living on an income below \$1.25 US per day (both adjusted for cost of living in terms of purchasing power parity (Ravallion 2009)). The measure is derived from the amount of income needed to purchase the goods and services necessary for survival. Still, income and GDP per capita are not the only measures of poverty. Reinert (2011) adds to poverty measures with his basic goods approach. His definition includes

infant mortality as a health deprivation, and other basic goods deprivations like lack of access to clean water, sanitation, and electrical power. The most common measure of poverty is known as income poverty (Goldin & Reinert 2012).

Figures 1.4 through 1.11 present poverty data for the past three decades in Latin America. According to the World Bank, there are numerous international poverty lines. The values of the international poverty lines presented in the charts (\$1.25, \$2.00 and \$4.00 per day) represent different standards of poverty (World Bank 2014). According to the World Bank and many poverty experts, the absolute extreme poverty line is \$1.25 per day, typically found in the world's poorest countries (Ravallion and Bidani 1994, Ravallion 1994, Deaton 1997, World Bank 2014).

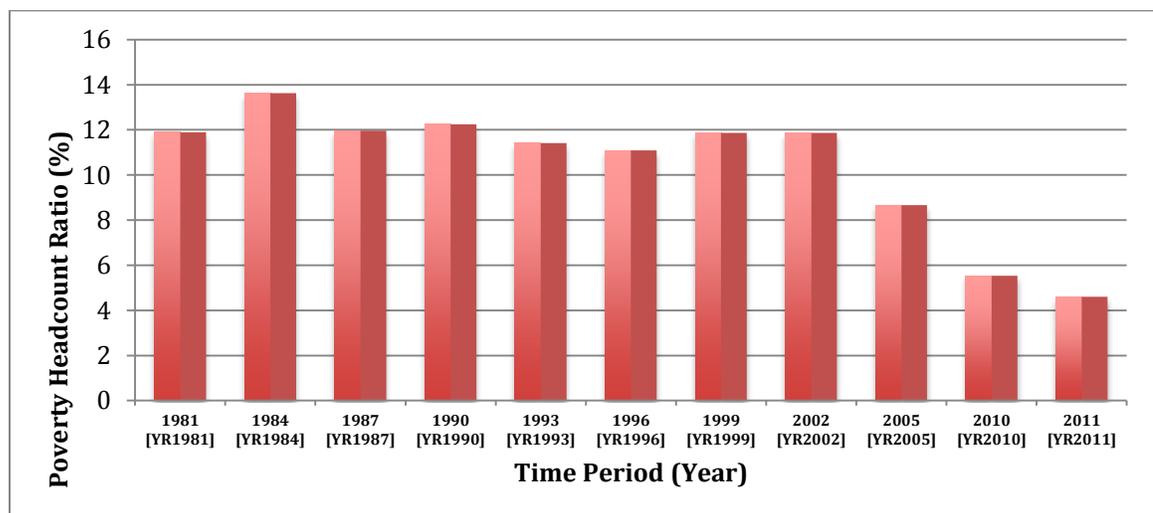


Note: This Figure shows the people in millions living on less than \$1.25 a day from 1981-2011.

Source: Author with data from the World Bank's Database, Poverty and Inequality 2015

**Figure 1.4 Number of people living on \$1.25 a day in Latin America**

Consequently, Figure 1.4 shows the average number of people living on less than \$1.25 a day in Latin America is declining. The lowest point was roughly 32 million people living in extreme poverty in 2010, and with a peak of 62 million in 2002. This downward trend can also be confirmed in Figure 1.5, below. Figure 1.5 depicts Latin America's extreme poverty head count ratio at the \$1.25 a day (PPP). It shows that the percentage of the population in the region living on less than \$1.25 a day has been declining.

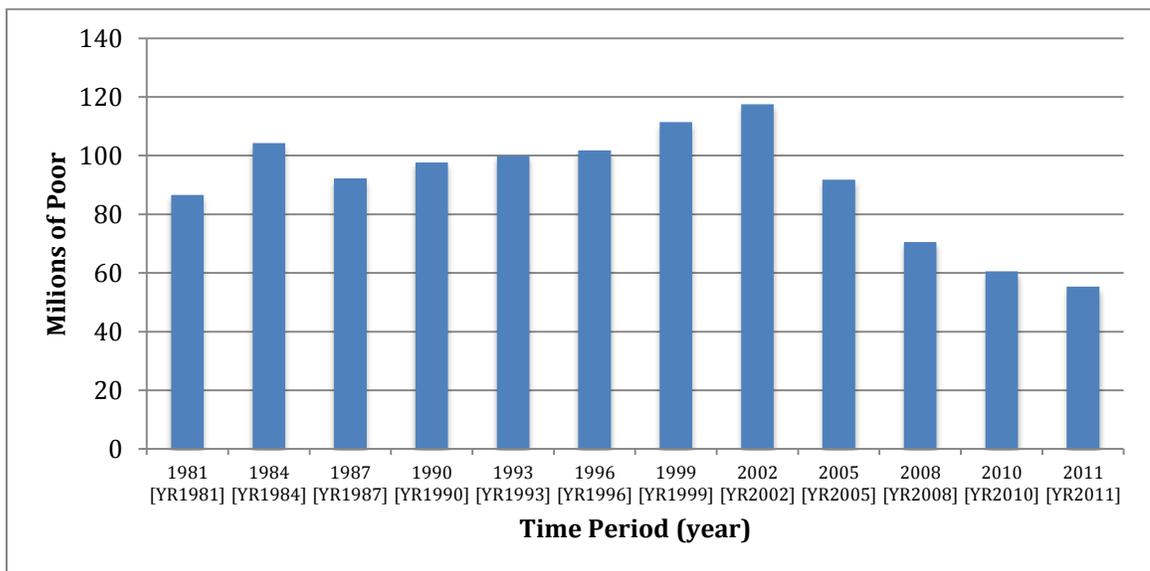


Note: This Figure shows Latin America's extreme poverty head-count ratio (less than \$1.25 a day in terms of PPP) from 1981-2011.

Source: Author with data from the World Bank Database, Poverty and Inequality 2015

**Figure 1.5 Latin America poverty percentages of people living on less than \$1.25/day**

Figure 1.6 depicts Latin America’s poverty line, or the number of people in millions living on less than \$2.00 a day (PPP). It also shows that regional poverty trends are declining from a high peak of 120 million in 2002, to its lowest point being roughly 60 million people living in poverty in 2010.

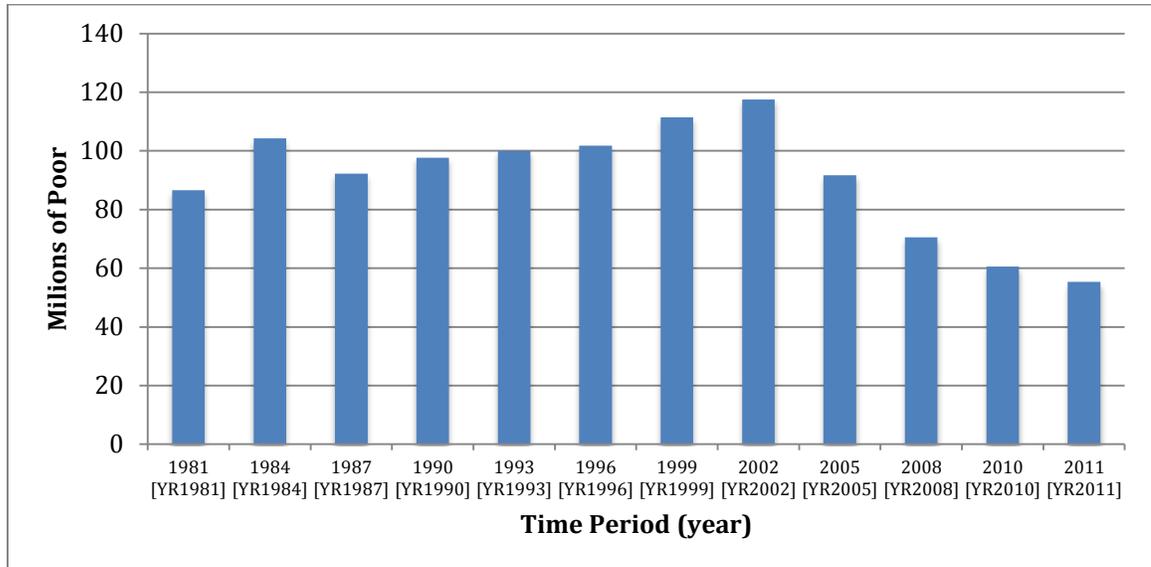


Note: This Figure shows Latin America’s number of poor in millions at the \$2 a day (ppp) from 1981-2011.

Source: Author with data from the World Bank Database, Poverty and Inequality 2015

**Figure 1.6 Latin America poverty millions of people living on \$2 a day**

The diminishing national poverty trend for Latin America can also be seen in Figure 1.7 which depicts Latin America’s poverty head count ratio at \$2.00 a day (PPP). Figure 1.7 shows that the percentage of the population in the region living on less than \$2.00 a day has been falling steadily during the past ten years.

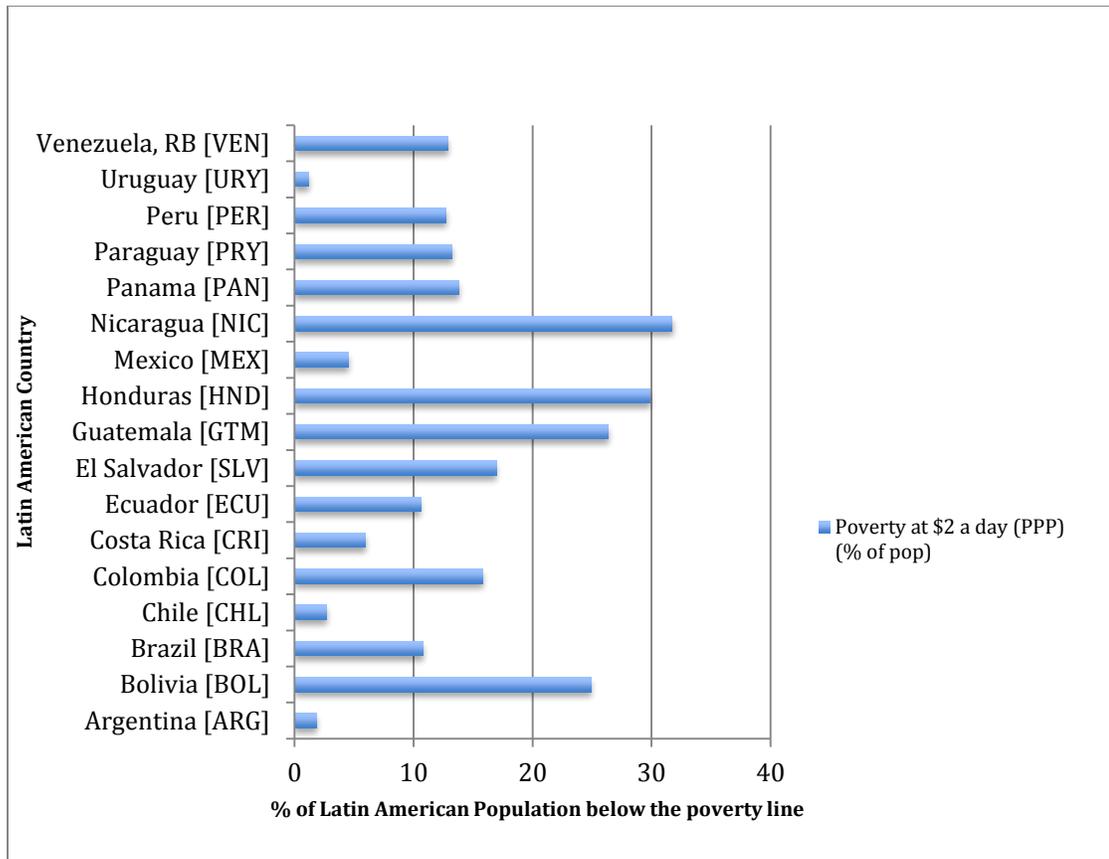


Note: This Figure shows Latin America’s poverty headcount ratio at the \$2 a day (ppp) mark, from 1981-2011.

Source: Author with data from the World Bank Database, Poverty and Inequality 2015

**Figure 1.7 Latin America poverty percentages of people living on \$2 a day (PPP)**

Figure 1.8 shows the geopolitical location of poverty in Latin America. It is concentrated in Bolivia, Venezuela, Colombia, El Salvador, Guatemala, Honduras, and Nicaragua. The percentage of people living in poverty in Latin America at the \$2.00 a day mark ranges from Nicaragua’s nearly 32 percent to Uruguay’s nearly 1 percent.

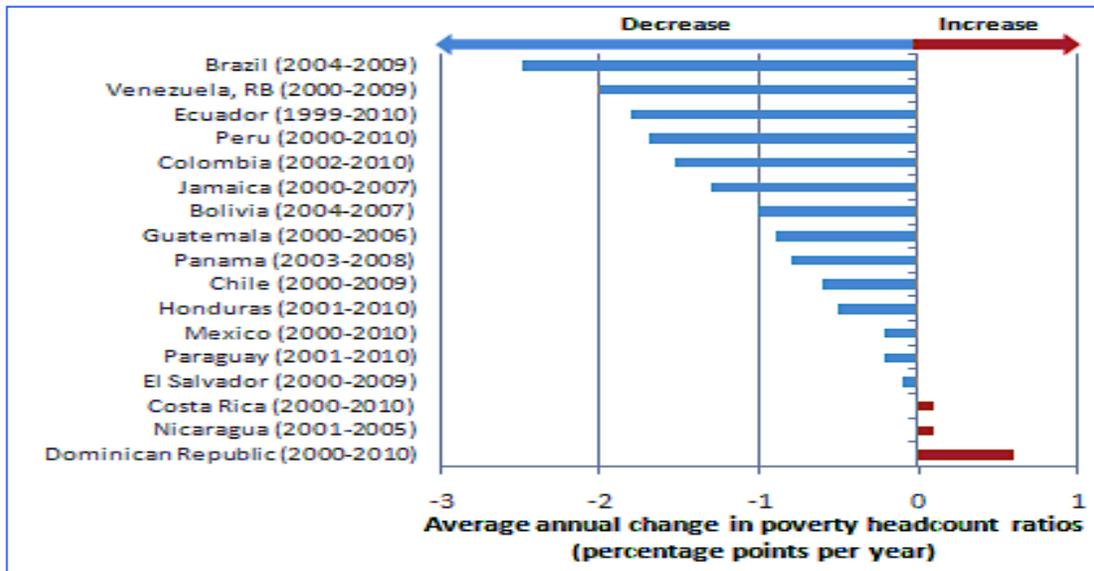


Note: This Figure shows Latin America's percentage of the population in each country per that lived on less than \$2 a day (PPP) in 2014.

Source: Author with data from the World Bank Database, Poverty and Inequality 2014

**Figure 1.8 2010 Latin America's poverty percentage of people living on \$2 a day by country**

Recent trends show Latin America has been able to reduce poverty at the \$1.25 and \$2.00 a day mark. Figure 1.9 below includes country data on poverty trends as observed on average for the decade 2000-2010. The chart shows poverty head count ratios decreased in most Latin American countries, with the exception of Costa Rica, Dominican Republic, and Nicaragua.



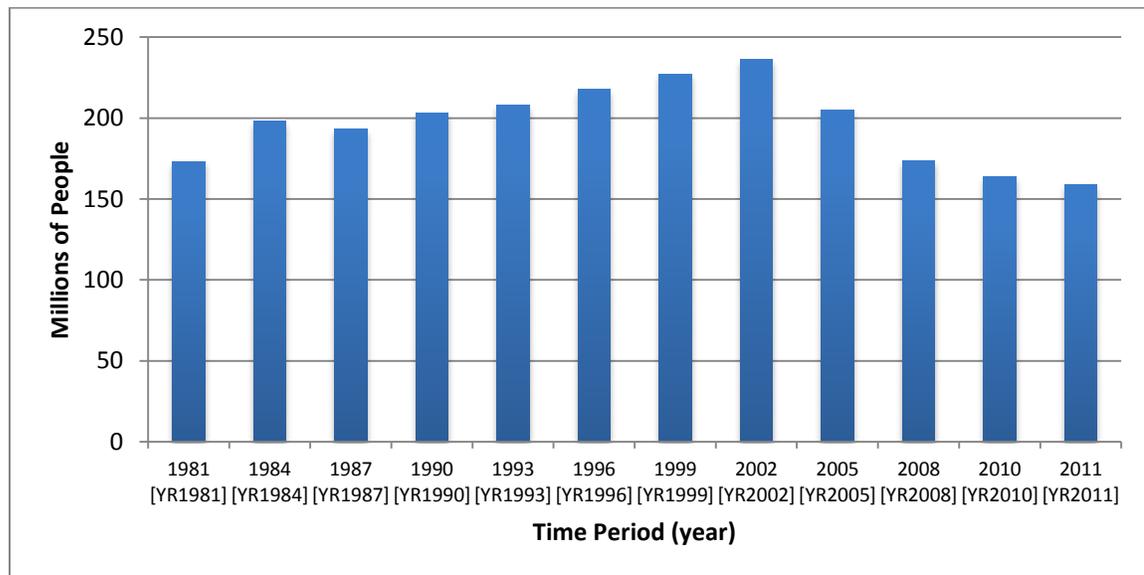
Note: This Figure shows Latin America's Country poverty rates overall decline from 1999-2010.

Source: World Bank Database, Poverty and Inequality 2014

**Figure 1.9 Latin America Country Average Annual Poverty Rates 1999-2010**

Roughly half of the Latin American population has lived in moderate poverty for the past 30 years at the below \$4.00 per day mark (SEDLAC 2013). The regional average of people living in moderate poverty during the past 30 years is roughly 43 percent of the total population. According to the World Bank, the \$4.00 per day mark delineates moderate poverty (Ravallion 2008). Figure 1.10 depicts Latin America's moderate poverty line, or the number of people (in millions) living on less than \$4.00 a day (PPP). Figure 1.10 shows that moderate poverty is declining with the lowest point

being roughly 161 million people living in moderate poverty in 2010, and with a peak of 244 million in 2002.



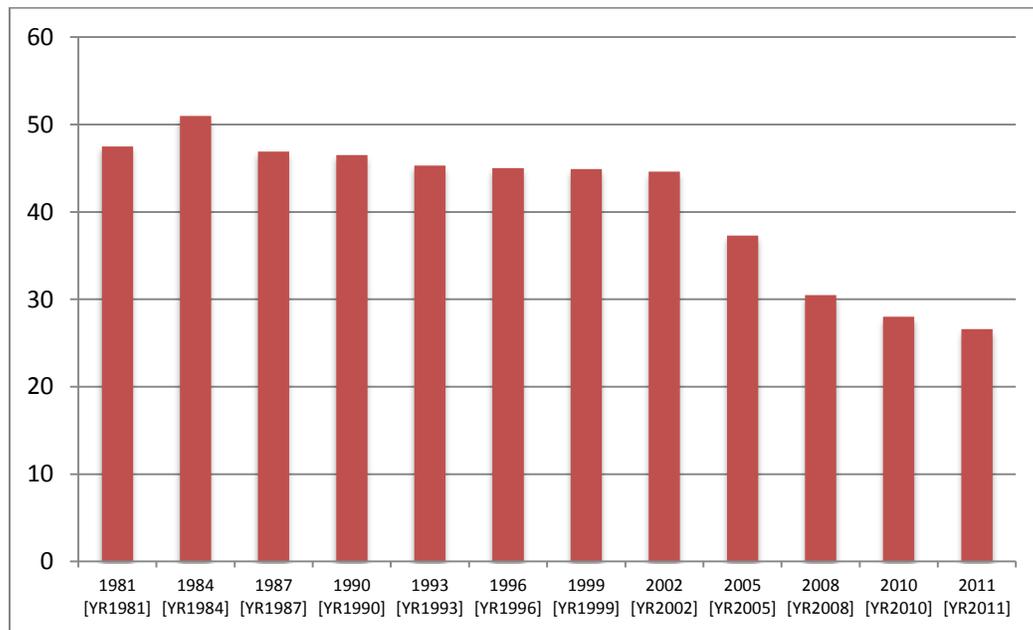
Note: This Figure shows Latin America's millions of people in moderate poverty from 1981-2011.

Source: Author with data from the World Bank Database, Poverty and Inequality 2015

**Figure 1.10 Latin America poverty millions of people living on \$4 a day (PPP)**

The declining national poverty trend for Latin America can be confirmed in Figure 1.11. Figure 1.11 depicts Latin America's moderate poverty head count ratio at the \$4.00 a day (PPP). Figure 1.11 shows that the percentage of the population in the region living on less than \$4.00 a day has been declining during the past ten years. Figure 1.11 also displays that the average moderate poverty in Latin America is declining

with the highest point being roughly 53 percent of the people living in moderate poverty in 1984, and moving to the lowest it has ever been (27 percent) in 2010.



Note: This Figure shows Latin America's percentage of people in moderate poverty from 1981-2011.

Source: Author with data from the World Bank Database, Poverty and Inequality 2015

### **Figure 1.11 Latin America poverty percentage of people living on \$4 a day (PPP)**

## **1.4.2 Latin American Health, Violence, Education, Vulnerability, and Migration**

Income insufficiencies in Latin America have resulted in health deprivations (Deaton 2004). Latin America has developed affluent diseases (diabetes, hypertension, heart disease), while experiencing an inability to prevent what are preventable diseases (polio, malaria) in many parts of the world (Franko 2007). The regions' lagging health

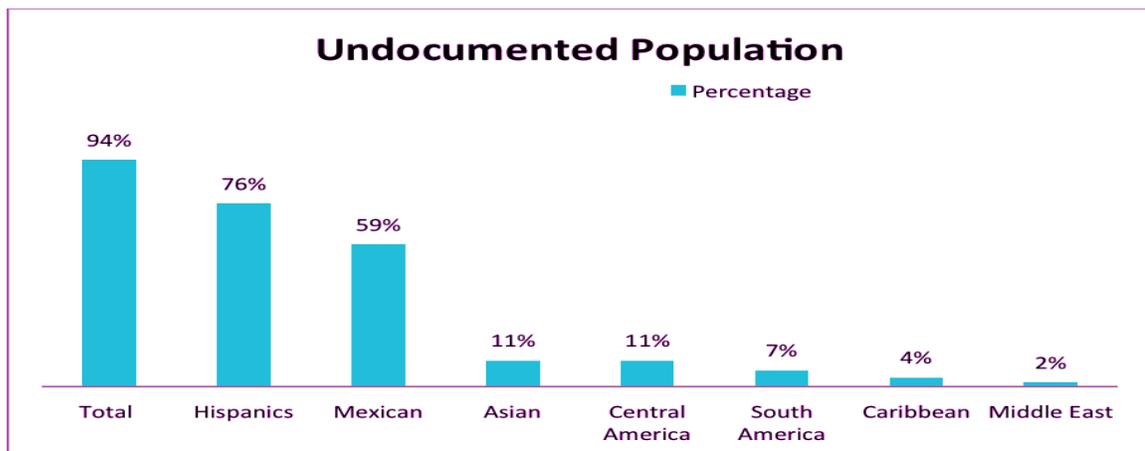
priorities thwart the capacity to develop human capital to meet the demands of society. Latin America's health priorities count urgent needs for education, potable water, sewage, food and nutrition, maternal and child health, disease prevention, worker health, substance abuse, HIV/AIDS, population control, mental health, and violence epidemics.

Violence in Latin America is a result of lagging economic development, the lack of effective governmental control over violence, political corruption, and inadequate governmental allocation and "delivery of impersonal public goods and services" (North, Wallis, Weingast 2012). In many Latin American countries, organized crime, and terrorist military factions, and other groups have effective control of violence in the state (Selee, Arnson, Olson 2013). Examples of countries where *maras* (gangs), and organized crime control violence include Mexico, Honduras, Guatemala, and El Salvador (Selee, Arnson, Olson 2013).

Latin America also has education deprivations. Generally speaking, the region does pretty well on primary education in terms of coverage. However, the region's secondary and tertiary education is lacking in coverage and quality. The region's education quality lags behind due to low public spending in education. Lack of education has resulted in lower citizen empowerment and a silent voice for the lower class. Lack of education and empowerment for women contributes to intergenerational transmission of income inequality and health poverty (Moran 2003).

The Pew Hispanic Center's reports show evidence supporting statements that Latin American insecurity and economic deprivation cause migrants to self-segregate from the homeland in search of well-being elsewhere. The Pew's evidence estimated

“there were 11.9 million unauthorized immigrants living in the United States in 2008. They make up four percent of the US population” (Passel 2009). This number does not account for the authorized Hispanic population that according to the US Census Bureau (2012) makes up about 1/4 of the US population (about 53 million). Other experts like Kay also reported “prior to the economic downturn the undocumented migrant number was growing every year” (Kay 2010).



Note: This Figure shows Latin America’s millions of people living in the United States.

Source: Author with data from the Pew’s Undocumented Statistics for the U.S. (2009)

**Figure 1.12 Hispanic Undocumented Population Statistics for the United States**

According to Figure 1.12 “three out of four unauthorized immigrants are Hispanics.” Passel (2009) categorizes Hispanics as totaling 76 percent of all unauthorized migrants to migrate into the US. Mexican migrants make up the bulk of the population with an overwhelming 60 percent and the remaining migrating Hispanics come from

South (7 percent) and Central America (11 percent not including Mexico), (Passel 2013). New Census data estimated that the U.S. Hispanic population exceeded 54 million in 2013. This represents an increase of 2.1 percent over 2012 (Brown 2015.) Thirty-five percent of the said Hispanic population is foreign born (Census 2015.)

The Pew Hispanic immigrant reports (Passel 2009, 2014) bring into serious question the high happiness rankings given to Latin America. The report affirms that the living conditions of the migrant Hispanic population are less than satisfactory. For example, an overwhelming majority of the undocumented migrants are poor. Also, over 50 percent of the foreign-born Hispanic population has not completed high school. The educational attainment is much lower than any other migrant foreign-born ethnicity, in the U.S. Hispanic children living in the U.S. make up the largest number of children living in poverty: “More Latino children are living in poverty—6.1 million in 2010—than children of any other racial or ethnic group (Lopez and Velazco 2010.)

Given the less than desirable living conditions experienced by the Hispanic children in the U.S. and on their journey begs the question—what is compelling families and children to set out on such risky journey to the U.S. when their future is so uncertain?

### **1.4.3 Inequality in Latin America**

Historically, Latin America counts one of the most unequal distributions of capital in the world (Morley 1995). Since colonial times and dependency development, Latin America elite have been allocating resources in a way to keep the status quo (Salvatore 2010). Consequently, this has kept the region from growing (Ghatak 2003). Santiso

(2007) points out “the gap between the high-income and low-income...increased in the 1990s.”

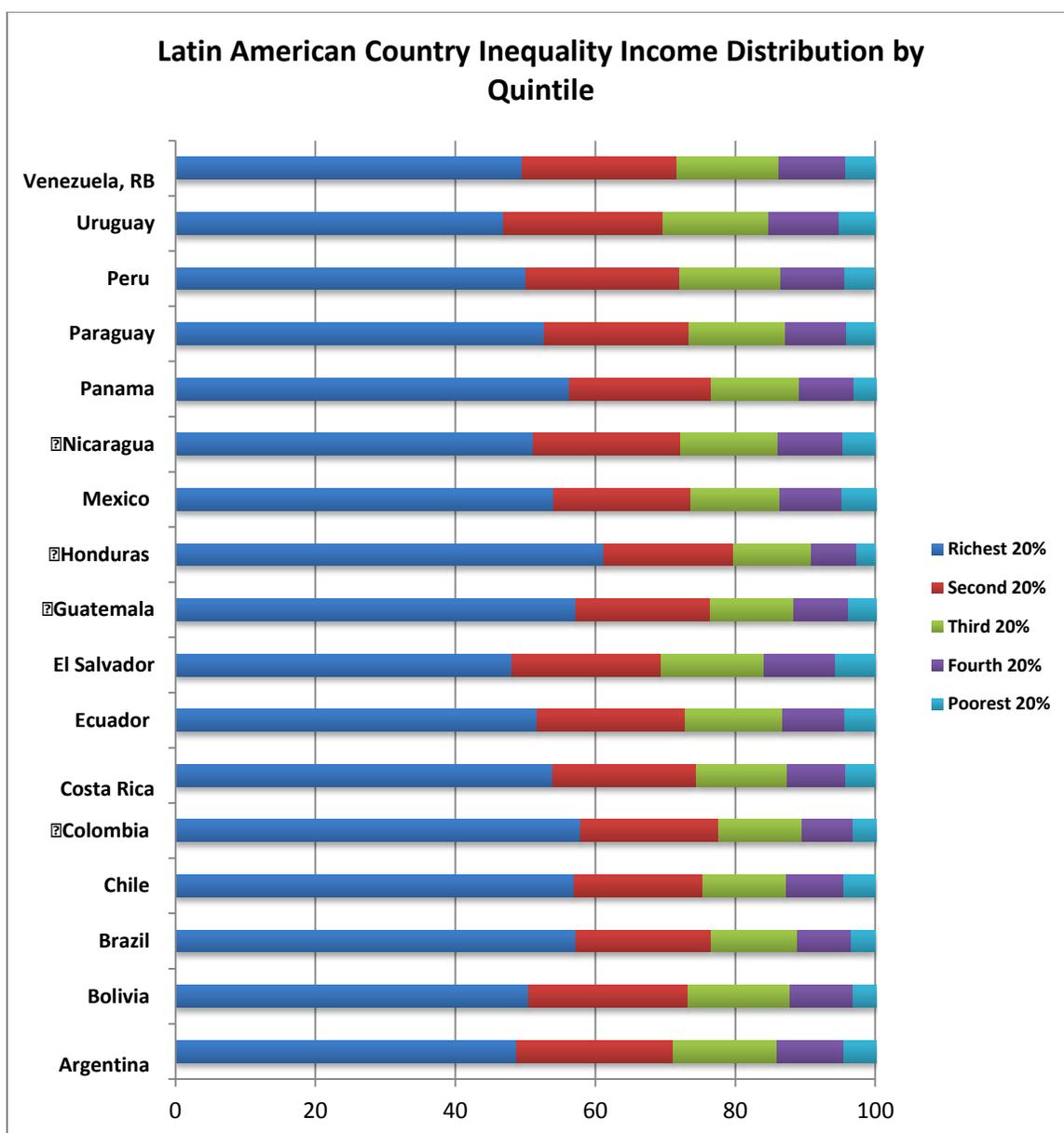
Inequality in Latin America is generally measured in terms of income, but it is important to keep in mind that it is multidimensional (Alkire 2013, Morley 1995).

Inequality involves poor distributions of income, health, education, and empowerment.

In Latin America, the poor are so because they have unequal access to assets (both human and physical). According to the World Bank (2012), Latin American women experience more deprivations on average than men. These deprivations result in child deprivations, and intergenerational cycles of poverty and inequality. Also, ethnic and racial inequalities exist in the region. For example, Afro-Caribbean populations, *mulatos*, *mestizos*, and indigenous people also experience lack of empowerment and underrepresentation in the region that result in greater deprivations (Arocha 2011, Lovejoy 2012, Giuffrida 2007, Franko 2007).

The rural poor also face inequalities in terms of lack of access to land (Hertford 2001). Consequently, they experience extreme deprivations both in rural and urban areas due to lacking institutional allocation for their human and physical capital development, necessary to adequately foster growth for the region. Finally, the poor classes experience unequal access to healthcare, education, and empowerment. The poor are relatively immobile in the social class structure due to low skills, health deprivations, age distribution, ethnic characteristics and language barriers (Veltemeyer 2012). Relevant examples of such inequality in the region’s countries are illustrated underneath in Figure 1.13. Figure 1.13 demonstrates the degree of inequality within each country. The chart

displays to what extent the poorest quintile (1/5<sup>th</sup>) of each country has a disproportionate smaller share, fewer than 10 percent of the total income (& consumption), than the other four quintiles. Another extreme in disproportionate income share is held by the richest quintile of each country. The wealthiest 20 percentile of the population, in each country, hold somewhere between 48 to 61 percent of the total income.

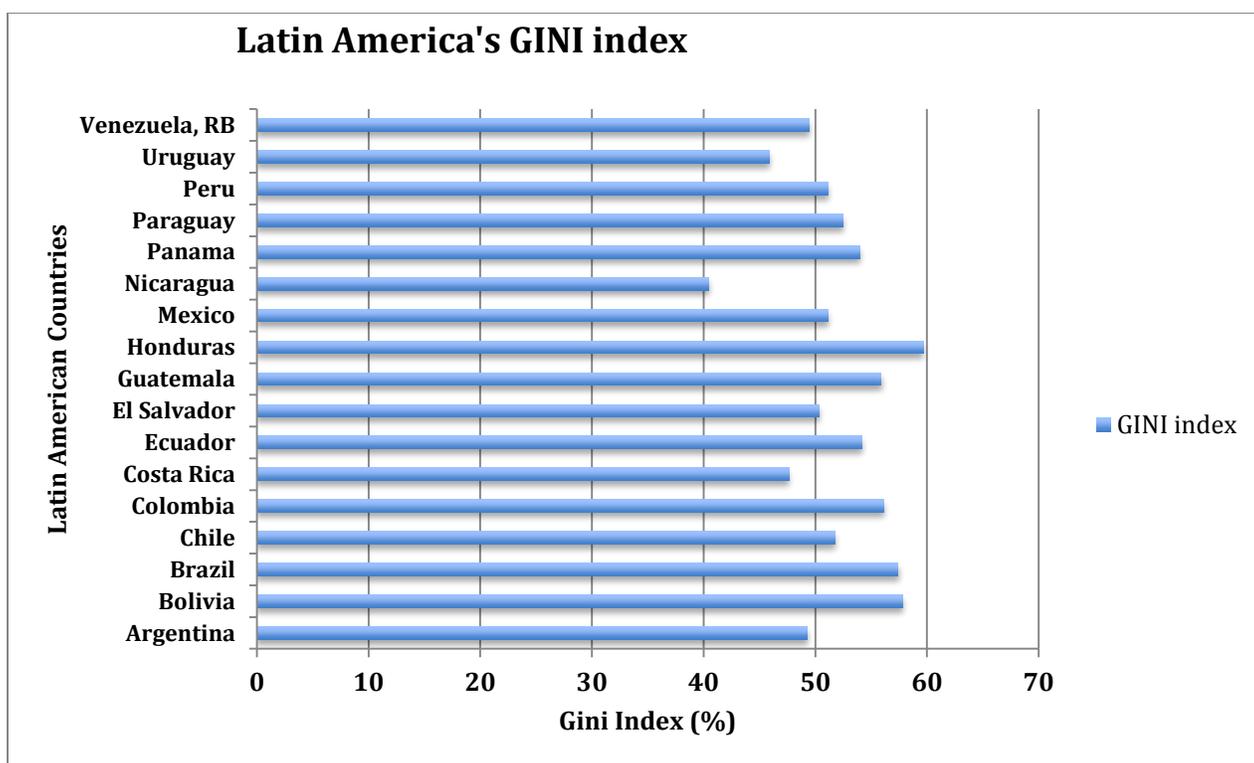


Note: This figure shows Latin America's country inequality distribution of income by quintiles.  
 Source: Author with data from the World Bank Database, Poverty and Inequality 2015, Bank data available for each country in most recent values.

**Figure 1.13 Latin America Country inequality data: distribution of income or consumption by quintile**

The inequality chart tracks changes in inequality as measured by the distribution of income or consumption across quintiles of the population for a given Latin American country. The data above shows that on average the richest quintile holds 55 percent of all the income in Latin America. Meanwhile, the lowest fifth and fourth quintiles hold under 10 percent of the income share. Latin America's inequality gap exacerbates the poverty gap cycle because there is a lack of redistribution of income in the society. Consequently, it is easy to understand how individuals and families with low income hold little purchasing power and have little access to goods and services (World Bank 2015).

Findings by Deaton (2008), Stocks (2012), Graham (2009), and Bruni and Porta (2005) establish that income distribution matters, and higher income does to a point relate to higher well-being. As can be seen in Figure 1.14, Latin American inequality is high. Figure 1.14 depicts the GINI index measures reported by Latin American countries to the World Bank. According to the World Bank (2014) GINI index measures the inequality of the distribution of income among individuals or households in the economy. The index measures how much the country's income distribution deviates from the perfectly equal distribution of 0 on the Lorenz Curve all the way to perfect inequality 100. The Lorenz Curve plots by quintiles, the cumulative percentages of total income. Historically, GINI coefficients in Latin America have been between 0.40 and 0.60, providing evidence that high levels of income inequality define development patterns in the region.



Note: This Figure displays Latin America's GINI inequality index per country for 2005.

Source: Author with data from the World Bank Database, Poverty and Inequality 2014.

**Figure 1.14 Latin America Country GINI Coefficients for year 2005**

In 2005, Latin America's average income deviation from perfect equality was 52 percent for the region as a whole. Countries with the highest index inequalities include Paraguay (53%), Panama (54%), Honduras (60%), Guatemala (56%), Ecuador (54%), Colombia (56%), Brazil (57%), and Bolivia (58%). Nicaragua had the lowest GINI index in the region (40%). Today, the region's inequality percentages are decreasing. However, Latin America still counts one of the highest levels of inequality in the world with a 50 percent GINI index average for the region as a whole.

Between 1870 and 1990, the gap in per capita income between developed and developing countries grew fivefold. The gap between the wealthiest and poorest 20 percent of the world population widened significantly since 1960. In almost all Latin America countries, the gaps between skilled and unskilled workers in wages and/or unemployment rates have widened, especially after the market liberalization. However, Latin America has been working steadily to shift the trend and recent evidence points to inequality decreases (World Bank 2014, Shifter 2013).

As a whole, the story of governments in Latin America is more positive today because of the political, economic, and social changes in the region. More freely elected governments replaced the authoritarian regimes of the 1970s (Shifter 2013). Though there is some variance in the region, overall, state institutions have strengthened and became more participatory. Military rule and impunity are less common, though accountability remains a challenge. The emergence of new partnerships, technological advances, and other economic changes has largely carried the region into middle-income status (Shifter 2013). The region's GDP grew, decreasing poverty and inequality. Economic growth, demographic transitions and more social mobility have produced an expanded middle class.

### **1.5 Causes for Latin American Inequality Patterns and Recent Decrease**

According to Gasparini and Lustig (2012), excessive socioeconomic inequality has been a key feature of the region since the colonial era. Gasparini and Lustig (2012) accounted for the inequality pattern's factors in the region in a number of ways.

The 1980s is referred to as the “lost decade.” Inequality in the region increased because of macroeconomic crises (like the hyperinflation that the poor could not protect themselves from) and growing fiscal deficits financed by foreign debts, a sharp increase in the U.S. interest rate, and the halt to external credit which resulted in a balance of payment crisis characterized by a sharp economic downturn for the region with negative GDP growth (Gasparini and Lustig 2012).

In the 1990s, the debt crisis forced governments to cut the fiscal deficit and devalue their currency. These reforms included trade and foreign direct investment liberalization, privatization, and financial liberalization. Structural adjustments and market reforms disproportionately hit the poor because the safety nets and social spending for the vulnerable were absent or inadequate. The impact of the adjustments caused poverty and inequality to increase beyond what was necessary to restore the macroeconomic equilibrium (Gasparini and Lustig 2012). Lower employment demand, and wages for unskilled labor, widened the gaps and characteristically had a drop in GDP. The macroeconomic crisis were unequalizing because the poor were unable to protect themselves from inflation. (Gasparini and Lustig 2012).

In the mid 2000s, political, economic, and social transformations have decreased inequality in Latin America (Shifter 2013). Major factors that account for the transformation include more frequent government transfers, demographic changes, and reforms in the labor markets that resulted in educational inequality reduction, skill premium decreases, and an increase in female labor force participation (World Bank 2011).

Labor income inequalities have been on a steady downward trend for the region since 2005. The decline is owed to several factors. First, there is a strong growth period for the region and a surge in employment. This reduced unequalizing effects of market-based reforms, resulting in more jobs with higher wages. The educational investment began to decrease wage premium (to skilled workers.) Additionally, progressive government spending in large cash transfer programs targeted to help the poor have grown. Finally, there is an expansion in basic education access and stronger labor institutions, market regulation, and more targeted social spending. Consequently, there have been fewer macroeconomic crises. Data evidence presented in Figures 1.4 through 1.14 suggests that, beginning in the 2000s, most of Latin America has been characterized by decreases in both inequality and poverty.

### **1.5.1 LAC GINI Coefficient Change**

According to the Socio-Economic Database for Latin America and the Caribbean (CEDLAS), the average GINI coefficient declined 1.1 percent per year across the region (Lopez-Calva & Lustig 2009, Gasparini 2011). Ecuador, Brazil, Bolivia, Chile, Dominican Republic, Mexico, Peru, and El Salvador's GINI coefficient decreased approximately 1 to 3 points in one year (De La Torre 2013). Still, there were a few countries like Uruguay, Costa Rica, Nicaragua, and Honduras where the GINI coefficient increased.

According to Lustig (2009), De La Torre (2013) and Gasparini (2011), two factors led to a reduction in inequality—a decrease in the earnings gap between high-skilled and low-skilled workers and an increase in governmental conditional cash

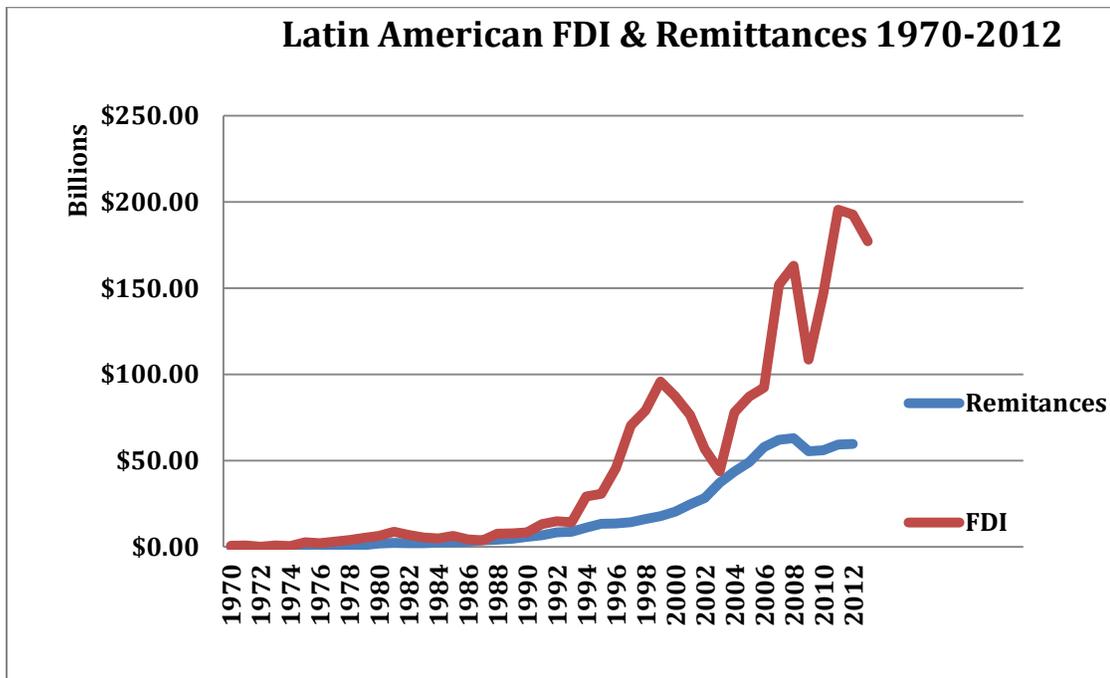
transfers (CCT) to the poor. The decrease in the earnings gap helped to expand access to basic education, which substantially increased the skill level of the labor force.

Additionally, demographic changes, such as falling fertility rates and a reduction in population growth, may further reduce poverty.

State intervention has also helped to reduce inequality. Some governments in Latin America have expanded the use of CCT programs, a poverty reduction strategy that also promotes human development. For example, Mexico's *Oportunidades* provides 6.5 million families with small amounts of money to improve health, nutrition, and education. The cash incentives help families have regular, preventive health visits (Fernald, Gertler, and Neufeld 2008), access to education (Glewwe and Kassouf), and secure better incomes to reduce inequality (Soares et al. 2009). Programs like *Oportunidades* are on the rise in Latin America. CCTs have contributed to the decrease in income inequality and the increase of health and education wealth. According to Fiszbein and Schady (2009), "CCTs have improved the lives of poor people. Transfers generally have been well targeted to poor households, have raised consumption levels, and have reduced poverty."

Finally, as Goldin and Reinert (2012) note, foreign direct investment (FDI) and remittance flows into Latin American have increased in the past two decades. FDI from multinational enterprises (MNEs) helps build export capacity. The increase in exports from Latin America is related to the recent decrease in poverty for the region. FDI, aid, and remittances have been the most important capital inflows for developing Latin America.

Remittance inflows to region from migrants have increased during the past 50 years, as shown in Figure 1.15. In some countries, remittance inflows nearly match FDI, signifying their importance in poverty reduction. Remittances have positive effects both for individuals and the region as whole. For instance, they are the most efficient way to transfer income directly into Latin America. Remittances account for a significant percentage of GDP and per capita income for many countries in the region. As can be seen in Figure 1.15, Latin American workers transferred more than \$57 billion in remittances in 2006 (Robinson, 2006) and nearly \$60 billion in 2012. For example, remittances make up more than 20 percent of the GDP for El Salvador and more \$800 in per capita income for Jamaica (Goldin and Reinert 2012).



Note: This Figure displays the amount in billions of U.S. dollars flowing into Latin American countries in the form of foreign direct investment and remittances for the time period of 1960-2012. Source: Author with data from the World Bank Database.

**Figure 1.15 Latin America FDI & Remittances 1970-2012**

According to Robinson (2006), remittances help to redistribute income geographically. The data presented in Figure 1.15 indicate that the money sent to Latin America by migrants is a significant source of income compared to domestic production. For example, the remittances sent into Latin America from the U.S. and other countries have generated value and social reproduction of labor by creating small enterprises. Remittances are the number one and two most important sources of foreign exchange in several Latin American countries. Remittances also contributed to the Latin America markets by promoting the consumption of more goods and services in the region. They built safety nets for the most vulnerable sectors of the region by diminishing inequalities of access for the poor.

### **1.5.2 Reduced Inequality and Human Well-being**

As a result of becoming a middle-income region, Latin America will experience a wide array of benefits in the key dimensions necessary to achieve greater well-being. The region is already on the path to experiencing greater levels of well-being in the dimensions of career, financial, social, physical, and community well-being. In the dimension of financial well-being, a larger inflow of FDI will build more export capacity that will generate growth in the form of GDP. Though, the literature does not directly link GDP to quality of life and well-being, GDP growth increases the possibilities of income per capita growth, which can alleviate poverty and reduce income inequality.

Rath (2010) and Deaton (2008) agree that increased income increases well-being, both in a country and between countries. According to Deaton (2008), “average life satisfaction is strongly related to per capita national income. High-income countries have greater life-satisfaction than low-income countries, and when income is measured in logarithmic terms, there is no evidence that cross-country effects of greater income fade out or vanish as countries increase their income.” Based on Deaton’s findings, a decrease in income inequalities may advance recent regional progress in financial well-being for Latin America. Additionally, a decrease in poverty and inequality will also result in a decrease of the regional intergenerational poverty transmission (Sen 2003).

More equitable GDP redistribution in Latin America economies and societies will result in a more equal population in terms of income. Income growth and redistribution will lower barriers to socio-economic mobility across sectors. The region may see a relative increase in the demand for labor and an increase in the employment rates due to export capacity expansion from additional FDI inflows. Therefore, a growing middle class with greater access to goods and services may be energized (Ferreira et al. 2012). The growing middle class will generate greater community and social well-being. They will create social and economic capital because they have more adequate access to social services (health and education) and social protection (human rights, personal safety, transparent accountable government, and institutions).

Additionally, the reduction of inequality has brought attention to the important role of the state in the advancement of sustainable well-being for the region. The governments’ CCT programs to promote better health, education, and financial well-

being have resulted in the development of human capital for the region. Today the region has a higher level of educational achievement and health care services than in the past, which has helped to increase income per capita across the region. Latin Americans have more income to buy goods and services, including in health and education, which also contributed to higher levels of well-being in the region. Higher levels of well-being have encouraged citizens to take a more active role in their community and their government.

Latin America continues to experience the positive effects of political, economic, and social transformation brought on by a reduction in the number of poor, and a sizeable increase in the middle class. The increase in well-being has contributed to the free election of several governments in the region, replacing authoritarian regimes. Many governments and institutions have strengthened and are more accessible for participation to move forward policies that will secure well-being for future Latin America generations. New trade partnerships with the U.S. and China are emerging and some countries have taken steps forward in incorporating new technology.

Better access to education have been a key factor in improving well-being. Highly educated workers will enjoy better job prospects, thus experiencing greater satisfaction and well-being in their jobs. Employment well-being will also result in more financial well-being for Latin America's families. If Latin America sustains these advancements in the fight to alleviate poverty and reduce inequality, then institutions may be called onto support the efforts. It is expected that the governments will need to continue to invest and intervene in to maintain continued growth, more equitable redistribution of the growth, and to sustain well-being advances. According to Lustig

(2009), De La Torre (2013) and Gasparini (2011), the government revenue for spending on helping advance these policies is expected to come from taxes. Still, some challenges for the region remain to be overcome on how to measure well-being achievements.

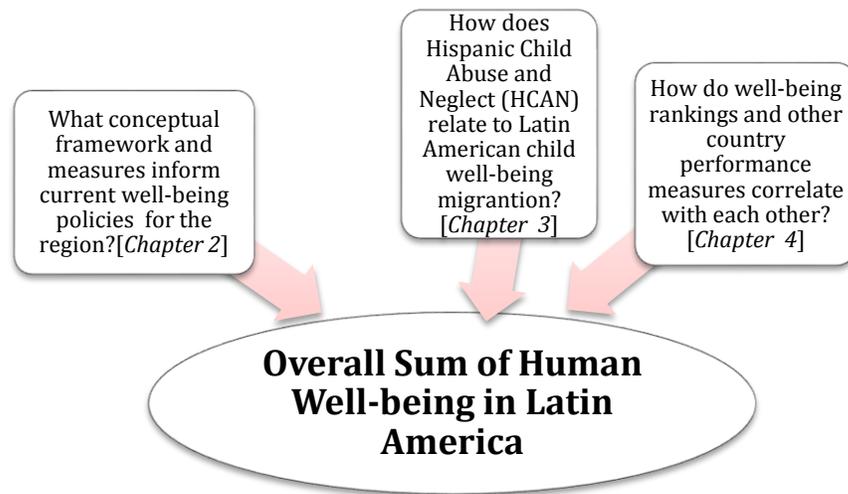
## **1.6 Summary and Conclusion**

International organizations, including the Organization for Economic Cooperation and Development, the World Bank, the United Nations (UN), and several national governments agree that well-being measures *an improved quality of life*. Many scholars and policymakers, however, disagree on how to define a “better” quality of life. Well-being is a multi-dimensional construct, which must be tailored to specific countries and policies. In order to properly understand the meaning of well-being, this dissertation surveys definitions and explications of the term.

For many psychologists, well-being is synonymous with happiness (Boniwell and Ayres 2013, Seligman 2002). Economists, like Sen (2009), Foster (2009) and Alkire (2013), differentiate happiness (utility) and well-being (combined functioning and capability to be and do). This dissertation combines these approaches and focuses on the latter to study well-being at the individual and collective level in Latin America. Alkire describes the multidimensional framework for understanding high levels of well-being as “when an economic system maximizes the capability each person has to ‘be’ and ‘do’ what they value and have reason to value, which may include some combination of material, environmental, social, community, cultural, spiritual, and political activities as well as times of silence and rest” (Alkire 2013).

From that perspective, current Latin American well-being rankings are missing important elements (Nery 2014). Many Latin American countries are ranked high in the traditional measures of well-being, but these evaluations fail to account for the region's security, infrastructure, and institutional deficiencies. For example, Latin American countries perceived as ranking high on happiness have a historical pattern of ranking high on violence and corruption. Latin American countries with high happiness rankings also have low educational attainment, limited access to healthcare, poor governance, and poor basic infrastructure products and services. In order to further understand current well-being rankings, this dissertation analyzes the relationships among government, well-being, violence, crime, and access to basic goods and services in Latin America.

The following chapters discuss the opportunities for developing a new well-being model and index. While the literature examining the various implications of human well-being continues to grow, it is worth underlining that governments play an important role in its achievement and sustainment (Nery 2014, Radcliff 2001-2015, Ledek and Pacek 2011, 2013, Jackubow 2014, Sen 2009, Alkire 2013). In this context, the need for Latin American governments to define and assess well-being factors is vital to inform policy decisions. In this light, the dissertation examines three related, yet unexplored dimensions of well-being that all have an important impact in shaping policy (Figure 1.16).



Source: Author

**Figure 1.16 Outline of Chapters**

Chapter 2 reviews the theories behind current well-being literature, models, and measures and explores the definitions and metrics for evaluating it. This chapter identifies three fundamental gaps that arise from the measurement literature: (1) securing basic human goods and services; (2) safety provided by law and order; (3) and governmental transparency. Consequently, the chapter brings insights into current dimensions, lacking areas, which are linked to human well-being and how the government can promote it for the region. The chapter concludes by providing a brief discussion of the research questions this dissertation addresses in chapters three and four, the contribution of this study to the literature on well-being, and previews the empirical findings.

Chapter 3 renders an exploratory analysis of well-being by using a case study of Hispanic Child Abuse and Neglect (HCAN) along the U.S.-Mexico border as a measure of child well-being. This chapter uses secondary data from a nationally representative sample provided by the child abuse and neglect archive from the year 2007, along with 2011 migrant child data. Chapter 3 examines the empirical relationship or association of the dependent variable HCAN with other socio-political and economic variables, such as ethnicity, political culture, linguistics, educational attainment, and others. The analysis found a statistically significant correlation and clusters among major spatial, and socio-economic, and political variables included in the analysis.

This chapter explores the impact of the socio-economic conditions on child well-being in relationship with government services. The statistical exploratory findings indicate that migration and income have a negative association on HCAN. Meaning that increases in income and migration may both affect child well-being because they are associated with a decrease in HCAN. In addition, low educational attainment, and language acquisition, urban growth, and political cultures also affect child well-being because they are positively associated with HCAN. Meaning that an increase in these socio-economic factors is associated with an increase in HCAN. Still, the research requires further study to better understand the role of the government on child well-being. It would be of particular importance to explore the government's role in providing sufficient infrastructure and security to protect child well-being. In addition, the association of race, and ethnicity on CAN calls for further exploration to better understand child well-being.

Chapter 4 of the dissertation provides an exploratory comparison of well-being rankings for Latin America with other regions in the world. Considering the shortage in the literature on the impact of governmental provision of peace-security, infrastructure, and accountability, this chapter will compare alternative well-being rankings to illustrate the impact of the missing variables in current indexes. Further, the chapter's analysis also empirically tests if there is any relationship between the different rankings and how these vary for Latin America and other regions. The chapter employs statistical analysis to understand the relationship of the well-being measurements in Latin America. In particular, chapter 4 of the dissertation focuses on how national security (Global Peace Index ranks –GPI-), governmental accountability (Corruption Perception Index –CPI- rankings), and infrastructure (World Bank Development indicators –WDI- rankings) issues affect (Gilpin 1993) basic well-being (Happy Planet Index –HPI- rankings) in Latin America and other countries. The study of the region's high well-being rankings gives a sense of how different well-being measures relate (or do not relate) to one another for the region in the global context. The analysis was conducted by using the rank-order correlation analysis of current measures of well-being in Latin America and other countries.

Chapter 4's empirical findings suggest that most Latin American countries hold high HPI rankings, while their other objective performance indices are very low. In other words, the HPI and other quality of life and performance measures are negatively correlated (if related at all). New findings also indicate that life satisfaction becomes insignificant for Latin America, while it remains significant for the world. . Still, peace-

security and corruption rankings remain significant for both Latin America and the world. Meaning that as GPI's violence and insecurity goes down, CPI's corruption perception goes down as well. On the other hand, Chapter 4 findings seem to suggest that HPI well-being rankings for the world and Latin America count no statistically significant correlations with the key variables of GPI peace-security and CPI corruption. Further, Peace-security and corruption-transparency are significantly correlated with other quality of life measures including GDP PPP per capita income, and life expectancy. Finally, counter intuitive results suggest that peace and corruption indicators seemingly have no direct positive impact in furthering well-being for a country. Instead, the findings indicate that an increase in per-capita-income, war, and corruption tends to have no correlation on the given HPI country ranking. Consequently, chapter 4 concludes that further studies need to be conducted on the quality of life and well-being implications of the statistical insignificance of life satisfaction correlations for Latin America. Moreover, the chapter concludes on the need to conduct further factor and path analysis to better understand, define, and measure well-being for Latin America and the world.

This dissertation hopes to contribute to the field by providing an exploratory framework toward building a more integrative well-being framework and index for measuring Latin American well-being. The exploratory contributions synthesize original findings that support a conception of well-being that combines basic goods, services, security, environmental, physical, and mental elements necessary to secure the advancement of well-being in Latin American and the world.

## **CHAPTER 2. WELL-BEING THEORETICAL FOUNDING: DEFINITIONS, MEASURES AND LITERATURE**

“What is the relationship between our economic wealth and our ability to live as we would like? Despite unprecedented increases in overall opulence, the contemporary world denies elementary freedoms to vast numbers –perhaps even the majority of people. There is a deep complementarity between individual agency and social arrangements. It is important to give simultaneous recognition to the centrality of individual freedom and to the influence of social forces on the extent and reach of it. To counter these problems that we face, we have to see individual freedom as a social commitment” –Amartya Sen (1999), Nobel Laureate.

### *Abstract*

This chapter examines broad well-being theoretical trends. The chapter reviews salient well-being definitions and measures. The chapter lays out an analytical framework to examine the importance of well-being definitions and measures and identifies three fundamental gaps that arise from the measurement literature, which will be the focus of the remainder of this dissertation. The three gaps include securing basic human goods and services, safety provided by law and order, and social equity. The chapter concludes by providing a brief discussion of the research questions this dissertation addresses in chapters three and four, the contributions henceforth to the literature on well-being, as well as a preview of the empirical findings.

### **2.1 Introduction**

Psychologists have traditionally argued that well-being is a subjective mental state resulting in a self-perceived life evaluation, independent of other life conditions. In

contrast, economists, physicians, and other social scientists argue that there are some basic goods, services, and life conditions that are necessary to achieve well-being, regardless of parochial, self-perceived life evaluations.

Over the past few decades, several international organizations and countries have adopted domestic and international well-being measures. However, the adopted well-being definitions and measures have been characterized by a heterogeneous nature, making it hard to understand what is being measured by individual country rankings in a comparative perspective. For example, rankings for the same countries are not constant across the multiplicity of the measures like the HPI and the GPI.

There are a plethora of well-being definitions, measures, and policies. Amartya Sen (1999) states that human well-being depends on a range of functions and capabilities that enable people to lead a good life, each of which needs to be directly and objectively measured and which cannot, in general be aggregated into a single summary measure. However, in a later attempt to measure well-being, Nic Marks (2007), founder of the HPI, measured well-being in terms of happiness, GDP, and the ecological foot print. Still, his efforts lacked basic goods consideration. In response, Michael Porter (2013) devised a Social Progress Index (SPI) that places more emphasis on basic human goods.

In light of the contributions above, this chapter offers insight into the benefit of a multidisciplinary approach to well-being definitions, measures and standards. Taken together, definitions, measures, and policies become a window of opportunity for governments and institutions (Parsons, 1995) to promote a standard of best individual and collective well-being practices that can be evaluated in terms of accountability,

transparency, and efficiency by the generally accepted government auditing standards. Focusing on human well-being accountability, transparency, and efficiency as the fundamental policy objective, rather than gross domestic product (GDP) per capita, has an abundant possibility for the achievement of a better quality of life. Consequently, this chapter of the dissertation examines how well-being is conceptualized, measured, institutionalized, and why it matters. Motivated by the burgeoning literature in the area, this dissertation contributes to the literature in two important dimensions of well-being. First, this chapter explores the importance of the relationship between access to basic goods and well-being. Said differently, do well-being evaluations vary based on access to basic goods? For instance, there is abundant literature on the relationship between income and well-being, but it is lacking in probing a relationship between the three factors including basic good access, income, and well-being. The systematic examination of these factors was missing until Porter (2013) started a new effort to measure them. Second, unlike previous studies we review various alternative well-being definitions and measures to set the stage for chapter 3 on how current measurements correlate, and for the need of a factor analysis in this dissertation. To preview some significant findings, this chapter finds strong literary and geospatial evidence in favor of including other important definition and measurement quality of life factors including governmental and institutional accountability, transparency, and efficiency in basic good provision. Furthermore, the chapter explores in depth the importance of factoring the impact of income on access to basic goods, and well-being outcomes, which is important from a policy perspective. Specifically, this chapter finds that the levels of well-being increase as

income and access to basic goods increase, up to a certain point. Thereafter, the literature points to other factors that need to be considered in a more comprehensive understanding of well-being outcomes. In addition, this chapter also points to other major missing well-being determining factors.

The remainder of this chapter will proceed as follows. Section 2.2 reviews the historical background of the definitional relationship between happiness and wellbeing. Section 2.3 examines the well-being determinants in terms of access to basic goods. Section 2.4 sheds some conceptual clarity on how well-being is defined today. It presents a schematic representation of the related literature that helps place the theme of well-being definitions and measures in proper context. A brief summary of the various theoretical and empirical well-being models is presented in Section 2.4. Section 2.5 will explain the subsequent themes this dissertation sets out to examine as well as highlights the contributions to the literature, in terms of the proposed sufficient conditions that can be satisfied only when there is sufficient institutional development (measurable governmental and institutional accountability, transparency, and efficiency in basic goods and service provision) to secure a basic threshold of domestic financial safety, political stability, and transparency to experience sustainable well-being.

## **2.2 The Relationship of Happiness and Well-being in Definitions**

The western preoccupation with the attainment of happiness can be traced back well over 2,300 years ago to classic Greek philosophers. In the 3<sup>rd</sup> century B.C. Aristotle, Socrates' pupil, defined happiness as the “The supreme good for humankind (Aristotle, Book I).”

John Locke wrote, “the highest perfection of an intellectual nature consists of a care and constant search for truth and stable happiness. In the same way that we must be careful of not confounding imaginary happiness with true happiness which is the foundation of our freedom (Locke 1690).” Emmanuel Kant wrote that “to assure one’s own happiness is a duty...or else one may easily be a victim of the temptation to infringe upon one’s own responsibilities (Kant 1785).”

The object of happiness was also dealt with in the Declaration of Independence, the founding fathers refer to the “pursuit of happiness<sup>3</sup>” in the preamble (1776).” During the French Revolution, in the preamble of the Declaration des Droits de home et du Citroen, abounds the same directive “that the citizen’s complaints may forever safeguard the constitution and the happiness of all<sup>4</sup> (1789).” The Political Constitution of Quito, Ecuador defines that “whomever member of the legislature has the right to propose the ruling, or law project deemed conducive to the happiness of the public (1812).” Finally, the political Constitution of the Gran Colombia from 1821 establishes that all of its territories can “concur with its representatives to perfect the building of its happiness (1821).”

The notion of happiness was referenced Adam’s Smith’s *Wealth of Nations*. Smith (1776) affirmed that the key to human well-being could be found in economic growth<sup>5</sup>, because wealth originates from the labor of a nation and its commerce. Consequently, “development” was used as synonym of progress, as it gained

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<sup>3</sup> “We hold these truths to be self-evident that all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness.

<sup>4</sup> “Afin que les réclamations des citoyens, fondées désormais sur des principes simples et incontestables, tournent toujours au maintien de la Constitution et au bonheur de tous.”

<sup>5</sup> In particular, capitalism is most efficient through labor division and free competition.

momentum, and still today continues to be the preferred term to refer to quality of life improvements and well-being.

In the economic realm, the origin of the term development was based on the notion of continuous linear industrial process. The focus was neither placed on human well-being, nor happiness. Economists began to measure happiness in terms of the utility derived from the process of development (Schumpeter 1934). Further, Hirschman (1945), Prebisch (1950), and Cardoso and Falleto (1979) delivered a theory about the development power asymmetries and dependency of underdeveloped economies in Latin America on the core-developed economies of the north. International organizations including the United Nations and the World Bank began to assign technical validity to the term. This chapter reviews some of the major determinants of well-being both from the economic and non-economic perspective.

### **2.3 Financial determinants of well-being definitions and measurements**

Beginning with the work of Easterlin (1974, 2009) several studies including Graham (2009), Kanheman (2010), and Layard (2005) have argued that a movement away from conventional achievement measures, like GDP, when evaluating quality of life, to subjective well-being measures, could bring positive benefits to the measurement of what is worthwhile in the life of a person. For example, the “Easterlin paradox” speaks on whether well-being is associated to income and poverty. According to Eastelin (1974) income changes are not associated with changes in well-being. Higher income individuals do not report greater well-being. Easterlin (1995) contends income disparity may not be as important in the measurement of subjective well-being.

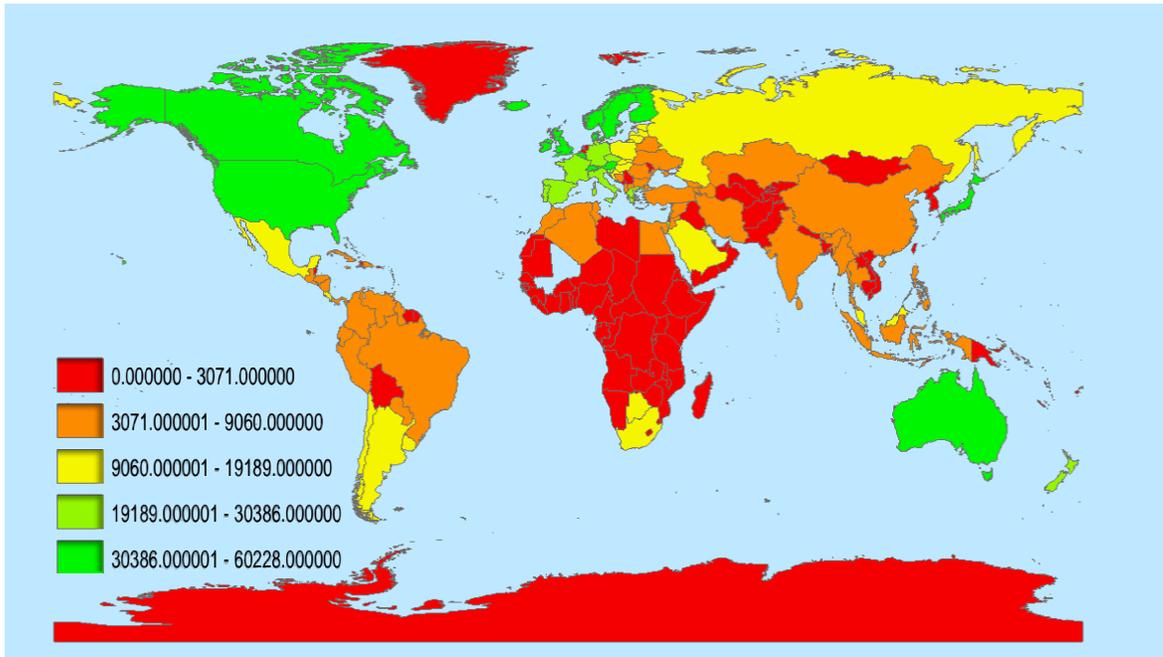
Conversely, the same Eastelin (1995) and later Veenhoven (2002) affirm that an income level that affords basic goods and services improves happiness. Meaning that enough income to stop hunger, prevent disease, and eliminate poverty improves subjective well-being (SWB). Basic goods-services are important, because cultural development begins only when they are met. Similarly, Layard's (2005) study, based on world values survey data, noted that higher-income and lower-income countries happiness are asymmetric. His study concluded that higher-income countries experienced greater levels of happiness overall.

Another set of studies, including Deaton (2009) proposed an alternative framework to examine the impact of income on well-being. Deaton (2008) found significant differences in the income effects estimates both within country and between countries estimates, on life evaluation (up to a given income level). According to Deaton, "average life satisfaction is strongly related to per capita national income. High-income countries have greater life-satisfaction than low-income countries. Each doubling of income is associated with almost a one-point increase in life satisfaction on a scale from 0 to 10. Conditional on the level of national per capita income, the effects of economic growth on life satisfaction are negative, not positive as would be predicted by previous discussion and previous micro-based empirical evidence (pp. 70)."

Deaton (2009) analyzed the 2006 World Gallup Poll covering many well-being aspects and surveying 132 countries, and found that high-income countries have greater life-satisfaction than low-income countries. When income is measured in logarithmic terms the cross-country effect of greater well-being does not fade or vanish as countries

increase their income. This literature also emphasizes the effect of health on well-being and that current indicators do not provide reliable indicators to measure their relationship. His conclusion is that “without health, there is very little people can do, and without income, health alone does not lead to a good life (Deaton 2009 pp.69.)”

Sacks, Wolfers, and Stevenson (2012) challenged the "Easterlin Paradox," on the lack of effects of income on well-being, contending it was a statistical illusion. Their approach used richer data sets to facilitate more precise estimates of the links between income and well-being. Their literature reveals the effect of income and well-being in a country. They contend that as average income rises, average well-being also rises over time. Further, their methodology confirmed that wealthier countries are happier than slightly poorer ones. They submit that the relation between income and well-being runs through absolute and relative income, and found that well-being rises with income (whether it is compared for a single country and year, or across countries, or even when looking at a country's growth). In addition, their work shows that wealthier people report higher well-being than poorer people, and people in wealthier countries experience greater well-being than poorer ones. They conclude that the data shows no evidence for a satiation point above which income and well-being are no longer related (Sacks et. al 2012). The analysis resulted in Figure 2.1.



Note: This world map shows the geospatial distribution analysis of secondary country data on GDP PPP for over 100 countries during the year 2013.

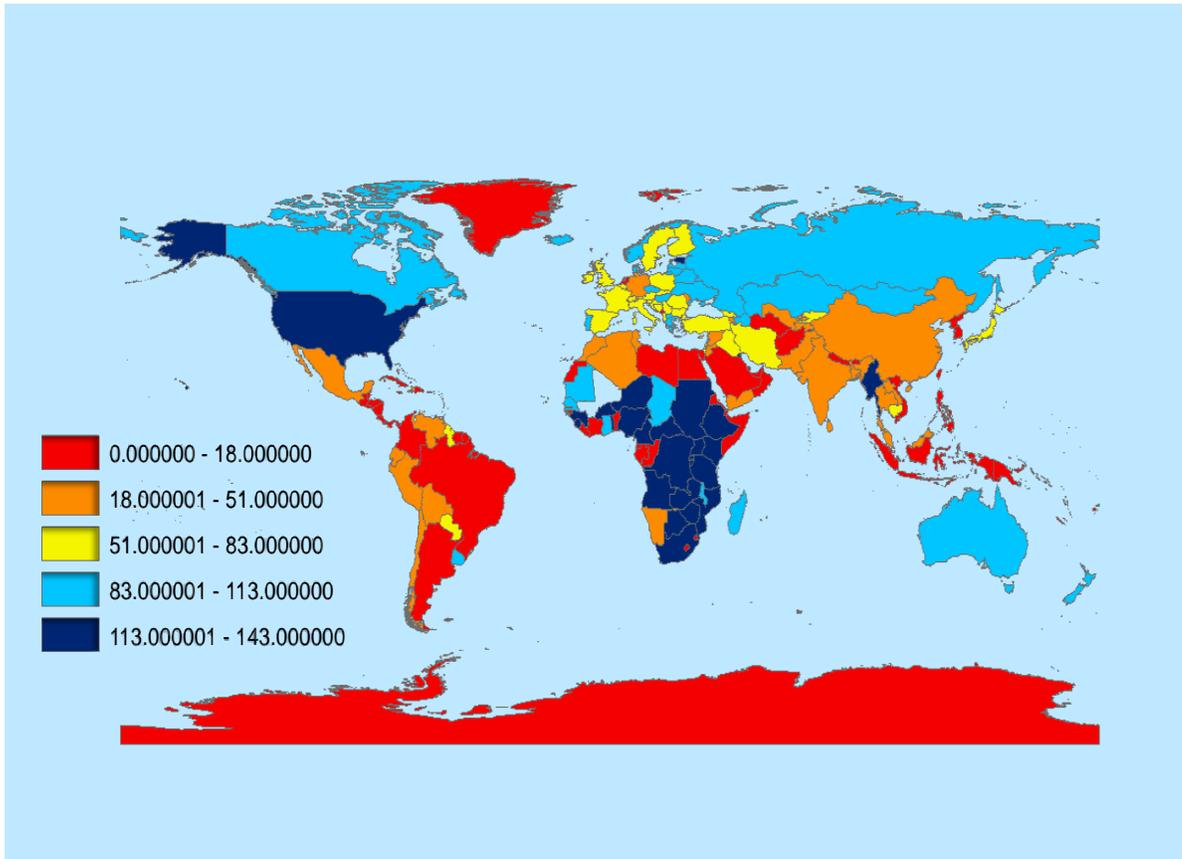
Source: Author with secondary GDP data from World Bank Development Indicators (WDI)

**Figure 2.1 2013 Geospatial World Map of GDP PPP distribution**

Figure 2.1, shows the geospatial distribution of GDP per capita PPP for over 100 countries in the world. The income levels are classified based the WDI’s specification and each threshold is color-coded. Red colored countries have been spatially identified because they reported income data ranging from \$ - \$3,071 per capita (PPP), like Bolivia. Figure 2.1 shows GDP per capita PPP measures per country based on the geospatial distribution of income. Income levels are color based on the income threshold. Red colored countries have been spatially identified because they reported income data ranging from \$ - \$3,071 per capita (PPP), like Bolivia. The brown colored countries reported income levels ranging from \$3,071-9060 per capita (PPP), including most of

Latin America and so on. Next, follow the middle-income countries in yellow. Finally, moving all the way to the light and dark green colors, high-income countries with levels ranging from \$19,189 to \$30,396 and all the way to \$60,22 per capita (PPP). According to the previous literature, Figure 2.1 may be expected to show higher well-being rankings for green colored OECD countries like the United States, or Australia. On the other hand, Latin American countries colored in red and brown would be expected to receive lower international well-being rankings due to financial insecurity with an average GDP per capita PPP ranging from \$0 - \$9,060.

However, the empirical literature seems to be disjointed from the theoretical literature. The measurement literature suggests that the well-being rankings may be broadly explained by a set of political and social factors independent from economic factors. Accordingly, well-being based on the current literature can also be illustrated through geospatial mapping of the statistics. This map exercise resulted in Figure 2.2. Figure 2.2 shows that well-being and GDP are negatively correlated. This relationship calls for further future exploration. As can be seen on Figure 2.2, the measurement literature ranks several OECD countries with high GDP per capita as having low well-being, and Latin American countries with low GDP as ranking high on well-being. Most current well-being measurement literature has does not link income to well-being as maybe expected.



Note: This world map shows the geospatial distribution analysis of secondary country data on well being for over 100 countries during the year 2013.

Source: Author with secondary well-being Happy Planet Index (HPI) data

**Figure 2.2 2013 Geospatial World Map of Well-being ranking distribution**

Figure 2.2 shows happiness rankings geospatial distribution per country.

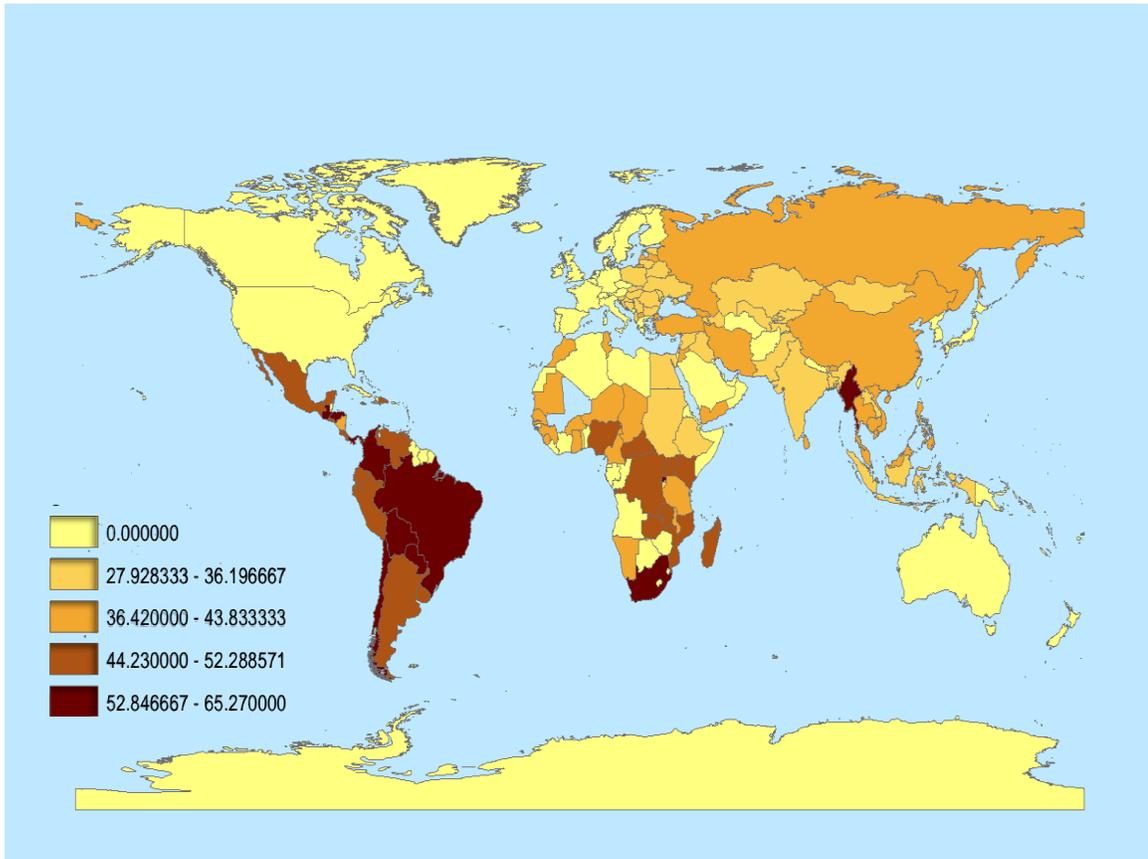
Happiness levels are colored based on the reported well-being and happiness thresholds per country. The top 18 countries have been spatially identified as red because they have the highest happiness and well-being rankings according to the HPI. Many of the highest-ranking countries are located in Latin America where the GDP levels are negatively correlated. Next, follow the orange and yellow colored countries, which make up the

second and third highest-ranking tear in terms of happiness and wellbeing. Lastly, moving all the way to the light and dark blue colored countries, including the U.S. and Australia, which the map identified them as having the lowest happiness and well-being ranking. Figures 2.1, and 2.2 show that well-being rankings may be influenced by financial factors other than GDP per capita income (PPP) alone, it is also important to understand the effects of income distribution in the society. To that end what has been the impact of income inequality in well-being?

The income inequality effects on well-being remain heavily contested. While the majority of studies have documented that income redistribution matters, a few disagree. For example, Birdsall (2003), Nery (2014), Latinobarometer (2015), Deaton (2008), Gasparini (2011, 2012), Graham (2009), Bruni and Porta (2005) establish that income redistribution matters, and that income inequalities affect access to basic goods and well-being self perceptions. However, this in direct contrast with findings by Lachler (2009) suggesting that better income distribution is not directly tied to income and GDP growth. Even if a country is experiencing growth; the growth does neither automatically translate into a better redistribution of income in the society, nor does it provide more access to basic goods and well-being.

Beyond lacking well-being linkages with GDP growth, the literature indicates that the aversion individuals hold toward pervasive income disparities found in the developed and developing nations is the most often cited rationale for negative self-perceptions. Latin American countries count some of the highest income inequalities and self-deprivations. Accordingly, the country' income redistribution can be illustrated through

mapping. The map resulted in Figure 2.3. The map reaffirms that Latin America has the highest income inequality coefficients as denoted by the dark brown polygons. Figure 2.3 shows GINI coefficient measures per country based on the geospatial distribution of it. In Figure 2.3 according to the country's data, GINI coefficients range from zero (closest to perfect redistribution) to sixty-five (closest to imperfect distribution.) The ranges are colored based on the GINI threshold. For example, light brown colored country polygons have been spatially identified because they reported the lowest GINI coefficient (0 to 36) meaning better income distribution like the Scandinavian countries. Next, follow the dark brown colored countries, which reported poor income redistribution in the form of high GINI coefficients ranging from 44 to 65 percent of inequality including most of Latin America (i.e. Costa Rica, Ecuador, Bolivia, Colombia, Brazil, Argentina, Mexico, and more). According to the previous literature, Figure 2.3 may be expected to show higher well-being rankings for the light colored countries. On the other hand, Latin American countries colored dark brown would be expected to receive lower international well-being rankings due to financial inequality.



Note: This world map shows the geospatial distribution analysis of secondary country data on GINI coefficients (income redistribution inequalities) for over 100 countries during the year 2013.

Source: Author with secondary GDP data from the World Bank Development Indicators (WDI)

**Figure 2.3 2013 Geospatial World Map of GINI income inequalities**

Figure 2.3 demonstrates that it is unclear whether there is a relationship between income inequality and well-being. Correspondingly, a comparison of Figures 2.2 and 2.3 shows that well-being rankings are not clearly associated with financial factors like GINI coefficients and GDP income distribution. Instead, these maps' comparisons seemly counter some of the findings of Deaton (2008), Graham (2009), Bruni and Porta (2005), regarding the effects that income inequalities have on well-being. Consequently, it is also

important to understand the effects of other deprivations of income on well-being including health, education, empowerment, and good working conditions in LAC.

As highlighted before, a growing body of evidence gathered by medical and social research points to the linkages between income deprivation and health. For example, Barker (2005) and Deaton (2008) affirm that better socio-economic conditions result in better health over time. In a related strand of work, Graham agrees that health and income growth matters to well-being and vice versa (Graham 2009). However, she cautions about the various empirical and normative issues associated with well-being that have yet to be resolved before integrating the measure into the policy agenda.

What can be said with certainty is that, if enough social distribution of the GDP per capita income, does not take place in a well spaced and timed manner, it could lead to episodes of severe cycles of poverty and underdevelopment (Goldin and Reinert 2012). To be sure, while there is no universal model as to what the suitable GDP or income per capita must be, there seems to be a consensus that a combination of domestic social investment, income distribution, and environmental circumstances are *necessary but insufficient* conditions (Gopalan 2014) for countries to experience well-being. Well-being sufficiency conditions however may be satisfied only when there are measurable governmental and institutional accountability, transparency, and efficiency (GAO yellow book 2011) in basic goods and service provision.

While well-being definitions and factors remain uncertain in the literature, many experts are asserting that, if basic goods and services are not secured, this can lead to episodes of severe financial well-being instability and distress (Stiglitz, Sen, and

Foutossi 2009). In addition, the literature has had elusive results in determining an exact income threshold sufficient to support the basic goods imperative along with human well-being (Sen 2009). However, they are clear on the need to achieve sufficient conditions, which can be satisfied only when there is sufficient institutional development to secure a basic threshold of domestic financial safety, political stability, and transparency to experience sustainable well-being. In relation to this, the Sitglitz-Sen-Foutossi (2009) commission's quality of life report on human well-being indexes reported that current well-being measures are lacking, and recommended the inclusion of additional important objective and subjective dimensions to well-being definitions.

## **2.4 Selected Empirical Well-being Literature**

Today, two major definitional approaches remain at the base line of the well-being discussion. There are those who define well being as happiness one-dimensionally and those who define it as multidimensional. The one-dimensional approach frames it as subjective psychological well-being. A large body of literature favors the one-dimensional approach to happiness, and holds well-being as self-reported happiness, life satisfaction, positive emotions/affect, mood, or life meaning. Another body of work defines well-being as "quality of life," a multidimensional construct that can be measured in political and economic spaces over time. In this view, policy actors including the Organization for Economic Cooperation and Development (OECD), the World Bank, the United Nations (UN), and governments of countries like France, England, and Bhutan agree that well-being measures *an improved quality of life*. However, the debate on what constitutes a better quality of life remains hard to settle.

Most recent studies relating to the well-being field have primarily focused on subjective perceptions. For example, positive psychologists define it as the introspective observation of the experiencer (mood, emotions, etc.). However, subjectivity alone is only one complementary well-being dimension. The subjectivists use it interchangeably as synonymous to happiness. The best-formed scientific works expounding upon the one-dimensional subjective perspective, include Diener (2009), Fredrickson (2002), Helliwell (2005), Layard (2004), Kahnemann (2011), Ricard (2007), and Seligman (2011) among others. However, the one-dimensional approach is not favored in this dissertation.

This dissertation contends that a preferred definitional approach is multi-dimensional in nature because it is the most comprehensive and promotes greater understanding on the well-being dimensions that include subjective states of mind combined with other pragmatic measures such as environmental access to food, water, health, which also influence the quality of life experience. Recent literature points out that current multidimensional measures remain incomplete (Bates 2009, Alkire 2013, Stiglitz, Sen, and Fitoussi 2009). The multidimensional approach is grounded on Sen's (1999) theory that differentiates between happiness (utility) and well-being (combined functioning and capability to be and do). The multidimensional approach includes several dimensions for the individual and the collective to thrive together. Sen (1999, 2003, 2009) and Alkire (2003, 2007, 2009, 2013) define well-being as a multiplicity of capabilities that need to be secured by the political economy. Thus, an "economic system maximizes the capability each person has to 'be' and 'do' what they value, which may

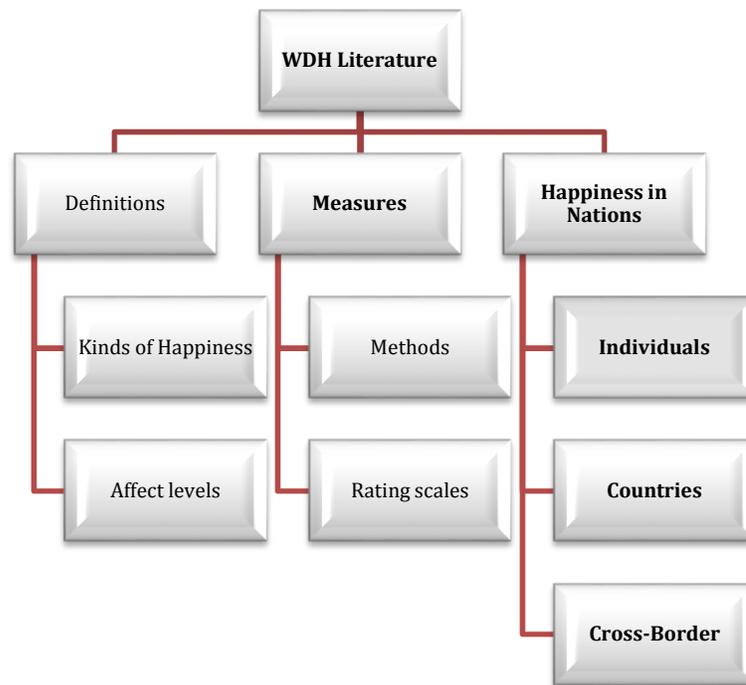
include some combination of material, environmental, social, community, cultural, spiritual, and political activities as well as times of silence and rest (Alkire 2013, pp. 4)."

On a relevant note, the studies above on multidimensional measurements of well-being are rather recent. They have been carried out for individual countries, and not for groups of countries. The countries included have covered different regions. However, there is neither one uniform measure nor methodology. Due to the lack in the area of well-being measurement efficacy, this dissertation further examines the field. Crucial political economic theories, combined with physiological theories on brain evolution, human body function, nutrition, and physical/mental conditions could facilitate a greater understanding of how to delineate well-being definitions and measures for growth in developing countries, to be then translated into best policy practices, management, and measurement. The remainder of this chapter will provide a brief review of selected papers discussing the most prominent well-being definitions, and measures before outlining the empirical model available today.

#### **2.4.1 International Well-being definitions & Measures**

A number of papers have attempted to define well-being. However, the concept is currently underpinned as an evasive multi-definitional concept. For example, the World Database of Happiness (WDH) documented at least 6,740 publications on well-being (Veenhoven 2012.) In the publications from different areas (including social sciences and natural sciences) well-being theories are multidimensional and complex. The WDH affirms the field is growing and there is neither a single model nor definition for the

construct that can measure the totality of well-being phenomena as can be observed in Figure 2.4.



**Figure 2.4 Well-being and Happiness – A Schematic Representation**

Figure 2.4 displays a range of possible combinations and opportunities for multidisciplinary definitional diversity since the object touches on issues related to happiness for individuals, countries, regions, cultures, and different economic development levels. Despite disagreements on a generalized theoretical frame for the term and its measurement, well-being has been an important concern for humanity overtime. It is a cultural value that prevails through time and space as seen in classics readings including Aristotle, Kant, Montesquieu, Marx, and others.

The social construct of well-being has been a collectively internalized value pursued by individuals and societies<sup>6</sup> (Bourdieu, 1992). For example, countries like Bhutan and the U.S. have framed their constitutional purpose on it. Still, the concept remains imprecise, and different disciplines formulate diverse discourses about what is a “well-lived life” (OCDE, 2012) in terms of institutionalized rhetoric and paradigms. Accordingly, a physician may define a state of well-being for an individual as being in a state of good health. Good health alone is not enough to have a good life. Additionally, an economist may formulate well-being as measured in terms of income per capita. Although income is a necessary condition to achieve well-being, it is insufficient to measure well-being in terms of income. Income is a form of access to basic goods and services. However, as Graham (2009) and others eloquently explain, income alone does not ensure that positive states of mind will be achieved. Nevertheless, income and health are basic goods and services that equip individuals to access well-being. It is hard to imagine well-being without health or income.

Furthermore, some of age-old literature defines well-being through the intangible lens of subjectivity that is challenged by measurement issues and fails to account for basic needs to achieve a subjective well-being SWB. For instance, the classic philosophers describe well-being as an end result; it is the *eudaimonia* or contentment that arises from living a life of virtue, wisdom, happiness, and pleasure (Epicurean philosophers, Socrates, and Aristotle, Woods 1992). For example, with *Eudaimonia* Aristotle attempts (Woods 1992) a political well-being definition with rhetorical logic.

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<sup>6</sup> Value is interpreted as an individual’s internalized system of durable and transposable subjective inclinations (conscious or unconscious) developed in socialization processes.

Aristotle asserts that humans must habituate (ethos) volition plus the three virtues (wisdom, virtue and pleasure) to attain well-being. Ethos is not innate but habituated by the polis (government). Consequently, he argues that governments are instituted among men to provide them with the means to attain well-being, because by virtue alone humans cannot achieve well-being. Accordingly, the virtuous with the help of the polis organize life around a life purpose. On an unrelated philosophic strand, hedonic philosophers claim it to be a transitory and selfish emotional fleeting state: seeking to feel pleasure in the present moment (Rousseau 1947). However, neither one of the approaches lends itself to measurability, nor does it offer a possibility for policy praxis.

A few recent studies, authors examined the impact of collective well-being on the individual and obtained mixed results (Diener 2009). The studies explicate that the concept ranges from the individual to the collective (people, countries, and regions). With this lack of definitional consensus, some authors define well-being as a self-reflexive subjective “cognitive and affective evaluation” of one’s life (Diener, 2009). Still, the accurate measurement of the subjective conception of well-being (self-reflexive cognitive and affective life valuation) has a weakness in informing what well-being is, how it can be measured, and attained. Diener’s well-being concept lacks what Amartya Sen (2009) refers to as “positional objectivity”— meaning looking at well-being as “person invariant but position relative.” In this sense, positional objectivity recognizes that world perspective (how everything looks) depends on where one is standing in it, rather than affirming well-being to be subjective to a single individual. Accordingly, he warns

researchers on the need to be careful not to confuse a parochial view of subjective well-being into a universal truth.

Other authors undertake a more complex view of well-being encompassing both what matters to individuals -what makes life worth living: life satisfaction, income, marital status, family, friends, as in “relational goods” (Becchetti, Pelloni 2010 pp. 110) while tying them to systemic analysis on the distance between economic development and human well-being.

According to the Stanford Encyclopedia (2013), well-being is used in philosophy to describe what is non-instrumentally and ultimately good *for* a person. However, the question remains as to *who* can say *what* is good for any person. Closely related terms to the concept of well-being include welfare, happiness, and life satisfaction, and often, the term happiness is used to imply well-being. In addition, entire societies like Bhutan and Ecuador dedicate institutions to their pursuit. This reaffirms the point that the study of well-being phenomena is a multi-disciplinary complex problem. Consequently, it is important to understand that research in the field includes at least the social and biological sciences (i.e. medicine, neuroscience, nutrition, physical and mental education, psychology, economics, philosophy, anthropology, sociology, and policy).

Today, well-being is often related to physical and mental health. In this trend, social scientists including Bates (2009) and Alkire (2013) define well-being more holistically. Alkire writes, “Happiness includes psychological well-being, widely defined to include domain satisfaction, positive and negative emotions, spirituality, and mind-training (pp. 7)” (Alkire 2013). Accordingly, happiness is also constituted by

achievements across a number of other domains, which are co-equal with psychological well-being, including good health, education, living standards, environmental diversity and resilience, good governance, time use, community vitality, and cultural diversity and resilience.

Kaverne (2004), Davidson (2004), Barker (2004), Biddle (2005), and Gesh (2005) are among the physicians representing this multi-dimensional approach to well-being definitions and measurements. For example, Kaverne discusses how the human brain's growth and development can facilitate or prevent human well-being. Moreover, Davidson finds that specific neurobiological constituents of well-being in the brain's physiology and process (diverse emotional reaction and regulation to triggers) shape human well-being and can be enhanced through mental education.

Concurrently, Barker (2004) complements the neural findings with physiological studies of how environmental conditions affect fetal life and early childhood. His studies find that low birth weight due to low socio-economic conditions and education are associated with the development (in utero and early childhood) of chronic disease including coronary heart disease, stroke, high blood pressure, and diabetes. Finally, Biddle and Gesh discuss the importance of healthy life styles including a compatible nutritional diet and physical activity to promote human well-being. These diverse approaches include biological and social sciences. Consequently, scientists call for a more inclusive well-being definition encompassing multidisciplinary collaborations that enable its accurate measurement.

## 2.5 Key Structuring International Well-being Measurement Models

Despite the lack of agreement on a well-being definition, many try to measure and compare it across countries. Different measurement approaches focus on a host of variables that may explain and predict well-being for countries. For instance, in the measurement of subjective indicators, the researcher determines how well-being is being defined, the questions to ask, and the criteria selected for study. Then the indices are captured on the basis of the self-reported data gathered by the researcher. Accordingly, the measures are frequently contaminated by numerous biases including the researcher's subjective selection of well-being definition and criteria, along with respondent mood and social perceptions at the time of reporting it (Diener 2009).

<b>Kind of happiness</b>	e.g. Affect level	coded 'A'
<b>Time of happiness</b>	e.g. Last year	coded 'cy'
<b>Assessment method</b>	e.g. single question	coded 'sq'
<b>Rating scale</b>	e.g. verbal scale	coded 'v'

Source: Author with WDH data

**Figure 2.5 Subjective Well-being measures**

Figure 2.5 lists the subjective well-being measurement categories. As pointed out by Figure 2.5, the WDH determines well-being findings based on the categories used to measure the “subjective enjoyment in one’s life as a whole.” The measures are single direct questions administered to a self-reporting respondent. Then the measures are alphabetically classified based on the criteria coded in Figure 2.5 (Veenhoven, 2012). As shown in Figure 2.5, it is possible with this literature to measure the hedonic individual’s contentment with his or her own life, while others may measure it as mental health. Other experts characterize it as the person’s internal experience or the different valuations people make on their lives, the events and circumstances happening to their bodies and minds (Diener 2009). Alternatively, experts like Huppert (2004) include good psychological functioning, engagement, flow, meaning, and purpose, in its measurement.

Consequently, the literature suggests that there is need to provide a clear conceptual framework for well-being measurement to effectively capture the statistical validity of any measurement or contribution. In an effort to provide such a measurement framework, the OCED opted for a definition of well-being that is larger than subjective measures. Its index measures subjective well-being that includes hedonic, eudemonic, and mental health perspectives. For example, the OCED includes life evaluation (as a whole), affect (how the respondent feels in a given moment), and eudaimonia as part of “good mental states, including all of the various evaluations, positive and negative, that people make of their life, and the affective reactions of people to their experiences (pp.29)” (OCED 2013). However, the OCED does not treat subjective well-being as the “single all-encompassing measure of people’s well-being (pp.29).” Instead, it deals with

it as one of many dimensions in an approach that conceives people's well-being as a collection of different aspects (objective and subjective), having inherent values that need to be measured alongside it including income, health, education, safety, community, environment, etc. Consequently, the OCED's measurement casts further scrutiny on how and to what degree well-being statistics capture the object of study.

On a similar trend, the Stiglitz, Sen, and Fitoussi (2009) commission made guideline reports recommendations regarding well-being measurements. The commission affirms, "to define well-being a multidimensional definition has to be used...material standards (income, consumption and wealth, health, education, personal activities, political voice and governance, social connections and relationships, environment, and insecurity (personal and economic) (pp.14-25)" (Stiglitz, Sen, and Fitoussi 2009). Consequently, the report calls for models that measure the multidimensional phenomenon, which includes social, economic, and environmental dimensions. The report also recommends that models should standardize data to enable cross-country comparisons. The report calls for a paradigm shift from measuring economic production to measuring human well-being and its sustainability.

Nery (2014) and the commission emphasize the size of the household perspective by measuring real inflows and outflows of household income, consumption, and government services. Their recommendation calls for attention to issues of distribution because income, consumption, and wealth are incomplete measures of living standards. Increases in average income in an economy could be unequally distributed across society. The commission also recommends broadening the measures to include non-market

activities, home-produced goods, and transfers from the family into the market. Finally, the report recommends the inclusion measures such as quality of life standards, capabilities, and dimensions of health, education, personal activities, social connections, political voice, personal safety, life satisfaction, domain inequality, environmental conditions, and sustainability.

Currently, the literature offers several well-being measurement models, but not all measurements take into account the report's recommendations. Today, there are several salient well-being models, but most fail to take into account the report's recommendations. However, this dissertation argues that the SPI, OECD well-being framework, and the Gross National Happiness (GNH) come close to fulfilling the recommendations of the Stiglitz, Sen, and Fitoussi report.

### **2.5.1 Key Models**

**MODEL 1 - Maslow's Hierarchy of Needs.** Abraham Maslow's hierarchy of needs is a key formative and structuring model in the definition and measurement of well-being (Noltemeyer 2012). Maslow proposed five basic needs for best human existence, arranged in a hierarchy from lower to higher order. According to Maslow, the lower order needs, or "deficiency needs," which include physiological, safety, and love/belonging. Higher order or "growth needs" include esteem, self-actualization, and "self-transcendence" (Maslow 1943, 1954, 1969, and Rivera 2006). Although one level may take precedence at a given point in time, it is possible for individuals to be motivated by multiple needs simultaneously (Noltemeyer, 2012). Rivera's (2006) interpretation of Maslow's model actually consists of six levels.

1. **Physiological needs:** The first level of needs reflect the basic necessities for human survival—air, shelter, water, food, clothing, sleep, and sex.
2. **Safety:** Once the first level needs are met, a person seeks to attain security in all aspects of an individual's life.
3. **Social needs:** The third level deals with the innate need to feel belonging in a chosen social group and in other relationships that are a part of human life.
4. **Esteem:** Once the first three levels are met, a person needs to feel good about oneself and getting recognition from others. Achieving this level gives individuals self-esteem and confidence.
5. **Self-actualization:** The fifth level of needs is the need to maximize one's potential. Its achievement includes creativity, problem solving, authenticity, and spontaneity.
6. **Self-transcendence:** The final level reflects an individuals desire to seek a cause beyond the self and to experience a communion beyond the boundaries of the self through peak experience.

Often, Maslow's levels are presented in the form of a triangle or a pyramid with the largest and most fundamental levels of needs at the bottom tier, and the need for self-transcendence at the top. Maslow's model has some limitations. His theory does not translate to different cultures, where individuals may have different hierarchies of needs. People may not attain each level in order and willing to sacrifice some necessities.

**MODEL 2 - The Gross National Happiness model.** The Gross National Happiness (GNH) model combines both subjective and objective well-being measures.

GNH, as described by Alkire, builds upon the rough measure of GDP to develop a multidimensional model of well-being. As depicted in Figure 2.6, GNH has nine dimensions—psychological well-being, health, education, living standards, culture, time use, ecology, community vitality, and good governance.



Source: Alkire (2012)

**Figure 2.6 Gross National Happiness**

The model is based on survey data from 560 respondents in 12 Dzongkhags (geographic regions of Bhutan). The GNH used the Alkire and Foster method (sufficiency, breadth, and depth) to measure GNH. In Bhutan, Alkire found that the country achieved sufficiency in 64 percent or six out of the nine dimensions. The breadth of well-being (sufficiency of achievement) in Bhutan is 0.76. In the three areas where there are deficiencies in well-being, the Bhutanese have achieved two-thirds sufficiency on average. In terms of inequality of achievement (the average deprivation of the most deprived by combining breadth and depth, and equality), Alkire calculated that Bhutan's score is 0.80. This score means that inequality is low in Bhutan because most people have lack access to sufficient resource, such as education (Alkire 2008).

**MODEL 3 - Gallup's Five well-being elements.** Figure 2.7 displays Gallup's five well-being elements: Career, Social, Financial, Physical, and Community. Rath and Harter (2010) define well-being as "measuring what makes life worthwhile." The model is based on subjective responses to household surveys. There are several drawbacks of this model. There is the potential for researcher or respondent bias, such as the lack of cultural understanding. However, the strength of the model is that individuals can define well-being for themselves.

<b>Gallup's Five Well-being Elements</b>	
1.	<b>Career</b> – How do you occupy your time -What you do every day
2.	<b>Social</b> – Strong relationships and love in your life
3.	<b>Financial</b> – Effectively managing your economic life
4.	<b>Physical</b> – Good health and energy to get things done daily
5.	<b>Community</b> -- Engagement with the place you live

Source: Author with data from Rath (2010)  
**Figure 2.7 Gallup's Well-being Elements**

**MODEL 4 - Seligman's PERMA.** Figure 2.8 display the Seligman model of Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment (PERMA), which combines several positive psychology theories in one model. According to Seligman (2011), a rich and fulfilling life involves more than positive emotions, but engagement, relationships, meaning, and accomplishment (Seligman, 2011).

<i><b>P- Positive emotions</b>- experience of joy and pleasure</i>
<i><b>E-Engagement (flow)</b> – being consciously involved in our activities</i>
<i><b>R-Relationships</b> - having enjoyable, supportive interactions with others</i>
<i><b>M-Meaning</b>- creating a purposeful narrative of our life</i>
<i><b>A- Accomplishment</b>- completing our goals in line with our values</i>

Source: Author with data from Seligman (2010)

**Figure 2.8 PERMA**

Still, PERMA has the weakness of other self-reported measures, which are phenomenological descriptions provided by the subject. These self-reports can be affected by the researcher's questions, the respondent's judgmental biases, and even the

weather. This model also does not account for objective well-being measurements including basic goods and services.

**MODEL 5 -The Happy Planet Index (HPI).** The HPI is the foundation for the new SPI. The HPI is the first index to combine environmental impact with human well-being. The HPI combines income, life expectancy, satisfaction (personal life perception), and ecological imprint to rank countries around the globe, as shown in Equation 2.1. The New Economic Foundation (NEF) used HPI data to show how successful countries generate or foster happiness (NEF 2014). The HPI measures well-being in terms of efficient resource use.

$$\text{Happy Planet Index} \approx \frac{\text{Experienced well-being} \times \text{Life expectancy}}{\text{Ecological footprint}}$$

Source: HPI website

**Equation 2.1 The HPI Equation**

The HPI’s definition and measure of well-being differs from other scientists. It lacks many measures for human survival and strategies on how to resolve problems, such as infant child mortality. This is in direct disaccord with Nussbaum’s idea that the state facilitating well-being must be concerned with all “material preconditions” of capabilities. Reinert argues that “it is difficult to be well/happy when engulfed in a

malarial fever, and government priorities to provide bed-nets can be appropriate (pp..)” (Reinert 2011).

### **2.5.2 Key Multidimensional Measures of Well-being**

Most key well-being models do not provide the full picture on human well-being. Many of the models are biased either by design or by the respondents. This dissertation proposes a more comprehensive approach to overcome this flaw.

The discussion in the previous section discussed in detail the key well-being models that have shaped its assessments. Despite the policy significance of the issue, the empirical literature has not arrived at a measurement consensus as can be observed in Table 2.1. Table 2.1 sums up an overview of measures that have taken after the key models including the HPI’s efficient resource use, the OECD, the World Bank, and others. In this way, this dissertation surveys the large body works assessing well-being measures like GDP, the GINI coefficient (a measure of income distribution inequality), ecological footprint, poverty, the GPI, and corruption (CPI) to name a few.

The well-being literature reviewed here provides evidence of lack of definitional and measurement unity and standardization, which has been an impediment until recently. As described previously, international discourses are shifting from an emphasis on GDP to “focus on people” (OECD 2014). This can be typically assessed using subjective and pragmatic measures like mental and bodily health, sustainability, social, economic, and governmental performance. We find that the inclusion of objective metrics including quality of life indicators and material preconditions like nutrition, physical

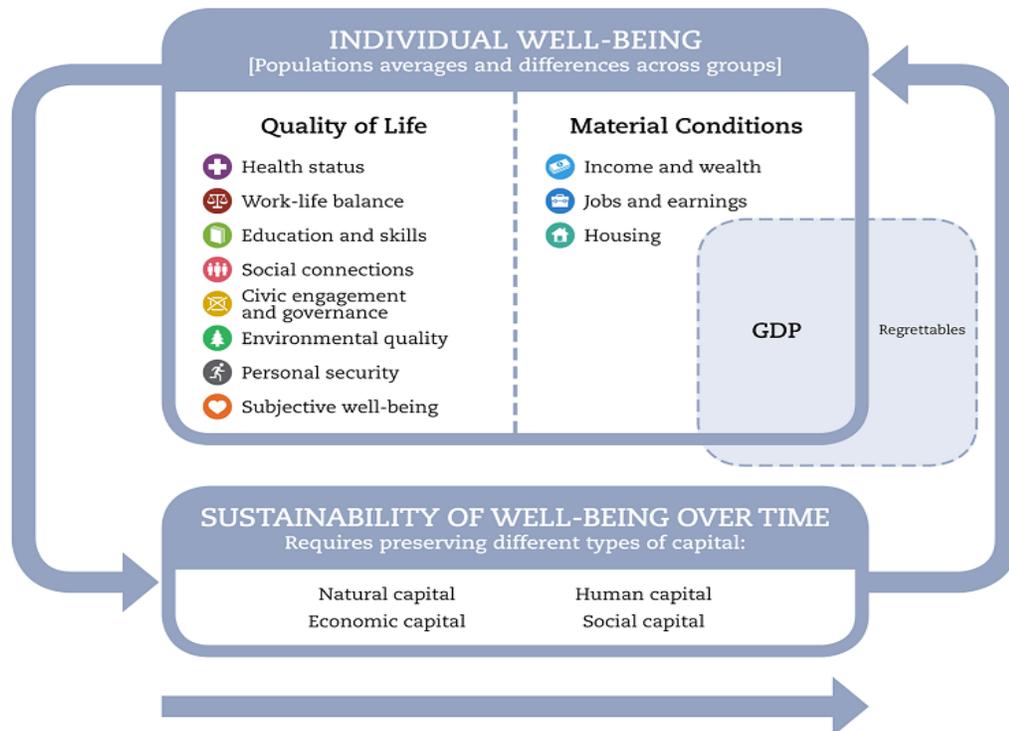
health, proper shelter, jobs, income, education, potable water, sanitation, and security is beneficial to promote an understanding of how well basic needs are being met.

Alone, either objective, or subjective measures are insufficient markers of the quality of life experience as a whole. For example, a country maybe ranked high on well-being, but the same citizens may lack access to food, water, or personal security. Consequently, it is difficult to measure one dimension without taking into account the other component.

Recently, enormous strides are being made to combine both objective and subjective indicators of well-being. For instance, the OECD's human well-being definitional diagram focuses on the cyclical relations between multiple dimensions. They link the individual's well-being dimensions and material preconditions to GDP and sustainability over time. With this methodology, the OECD assesses the effects of economic on natural, human, and social capital. Their measures are comprehensive and are able to assess what matters most to people's lives in eleven key dimensions including their income and wealth, jobs, housing conditions, health, skill, leisure time with families, friends, community, trust in institutions, citizenship empowerment, environment, personal safety, feelings, and life evaluations.

Still, the OECD's measurements may have some barrier of limitation in that they only assess member countries. In addition, important indicators of well-bing including corruption, personal safety and social security are some of the many missing pieces in the measure. Individuals, governments, and organizations need to continue to learn from

linear and cyclical experiences at the individual and collective levels so that new insights can be integrated into the conversation on the measurements of well-being (Baker 2003).



Source: OECD, 2013

**Figure 2.9 OECD’s 2013 Well-Being Measurement Framework**

The OECD’s measurement and analysis is in line with Sen (2009) and Alkire’s (2013) multi-dimensional analysis of the experiential well-being phenomena captured on the GNH that “when an economic system maximizes the capability each person has to ‘be’ and ‘do’ what they value and have reason to value, which may include some

combination of material, environmental, social, community, cultural, spiritual, and political activities as well as times of silence and rest” (Alkire 2013 pp.4). Measuring well-being can influence the public debate on what matters most to a country’s citizens. In the policy realm, well-being and its proper measurement may be looked on as a having positive externalities. Well-being has positive ripple effects. Achieving well-being results in the increased capacity for individuals to do and to be contributing members of a society, who can transform challenges into shared benefits, and in the enjoyment of life satisfaction, and positive effects which feed in to a cycle of higher productivity. Both public and private domains can benefit from realizing well-being, both at the individual (mind-body) and collective levels.

Still, many scales exist to measure different components of well-being (Boniwell 2013). As mentioned before, the well-being scales change according to what they measure. Some scales focus on measuring individuals (Peira 2013) or collective well-being (OECD 2013). Scales also measure different indices. For instance, the well-being scale table below analyzes some scales finding that many focus on multiple life dimensions (OECD 2013, Gallup 2010).

**Table 2.1 Content Analysis Assessing Key Well-being Measures**

<b>Multidimensional Measures of Well-being Combining objective and subjective indicators</b>		
<b>Scale</b>	<b>Definition of Measure</b>	<b>Intended Use/Sample</b>
Social Progress Index (SPI)	Measures national progress on 3 dimensions including <b>basic human needs</b> (nutrition, and medical care, water and sanitation, shelter, personal safety.), <b>well-being</b> (access to knowledge, information	Secondary data from various international organisms including the UN, FAO, WHO, Gallup, GPI, World Bank and more.

	and communication, health and wellness, sustainability), and <b>opportunity</b> (Personal rights, freedom and choice, tolerance and inclusion, access to advanced education). These dimensions contain the collection of data for over 52 indicators.	
OECD Better Life Index- Measuring well-Being	Measures 11 dimensions: income and wealth, jobs, housing conditions, health, skill, leisure time with families, friends, community, trust in institutions, citizenship empowerment, environment, personal safety, feelings and life evaluations.	Gallup World Poll & OECD Labor statistics
Gallup Well-being Finder: Heathways Well-Being Index, Gross National Well-Being, Gallup Poll	5 essential elements: Career Well-being, Social Well-being, Financial Well-being, physical well-being, and community well-Being.	Comprehensive study of over 150 countries to assess the dimensions where people in the world are thriving, struggling, suffering.
Global Peace Index (GPI)	Measures national peacefulness, it has 22 indicators ranging from a national level of Military spending to national violent death rates.	It ranks 62 nations according to their absence of violence.
GDP Gross Domestic Product (GDP)	It measures yearly changes in the nominal level of output of an economy (growth, inflation, exchange rates).	It rank 214 countries/ economies around the world annually based on their nominal GDP.
Gross National happiness (GNH)	Assesses the quality of life in 9 dimensions that include psychological Well-being, health, education, living standards, culture, time use, ecology, community vitality, and good governance.	Survey data from 560 respondents in 12 Dzongkhags
Human Development Index (HDI)	Composite statistic of Life expectancy, education, income Used to rank countries in 4 tiers of human development.	Compare experiences between 132 countries.

Inequality adjusted Human Development Index (IHDI)	Composite statistic of Life expectancy, education, income Used to rank countries and accounts for inequality.	Reflects the HDI dimensions and compare experiences between and within 132 countries combined with inequality measures. Discounts each dimension's value according to inequality.
<b>Subjective Well-being Measure for a more robust multidimensional approach</b>		
Self-Compassion	Describes the development and validation of a scale to measure self-compassion. Looks at the link between self-compassion, psychological health, and other constructs like self-esteem.	68 participants, 30 of those being males and 38 females. The average age of the individuals was 21.7 years; Identifies how people naturally spoke about their reaction to experiences of pain and/or failure.
Resiliency Inventory	Assesses well-being factors of problem solving, hope and optimism, empathy, interpersonal interaction, and cognitive maturity.	General adult population; to measure resilience factors.
Character Strengths	Discusses character strengths and seeks to measure them across lifespan.	Reintroduce studies of character and virtue as important topics of psychological inquiry and societal discourse.
General Health Questionnaire	Validity and reliability of General Health Questionnaire- 12 was compared with the General Health Questionnaire- 28.	General adult population; to measure the validity of the General Health Questionnaire.
Indicators of Child WB (categories/dimensions - not exact scales)	Details protocols and opportunities to propose international systems of subjective social indicators for child well-being.	Child and adolescent age sample; used to contextualize the argument for implementing international systems.
FMI Freiburg Mindfulness Inventory	Mindfulness, Attention to the present moments, Awareness Scale	General adult sample; characterizes present moment experience

Table Sources: Author with data from several International organisms and Mahayana (2012)

Table 2.1 shows some of the most notable and remarkable key well-being measures that exist today. The assessments vary according to the scale, the operational definition, and the sample size. The summarized assessment and definitional literature in

Table 2.1 suggests that definitions and assessments are at times redundant because they measure the same indicators as other measures. It also highlights the lack of agreement on an operation definition, a scale, and a common purpose.

## **2.6 Conclusions and Policy implications for the Scope of Well-Being Assessments**

This chapter investigated the relationship between the operational definitions, their measures, and outcomes, by using geospatial cross-country comparison of secondary data of three multidimensional measurements of quality of life including the GDP, HPI, and GINI Coefficients. The empirical results produced consistent and significant discrepancies that support the multidimensional approach including both objective and subjective well-being metrics.

The findings in this chapter highlight that the spatial distribution of well-being rankings are in dissonance with in GDP and GINI coefficient geography. However, the spatial dissonance between well-being and income may also be geographically explained. According to the United Nations World Happiness Report (UN 2013), over half of the countries with improved well-being scores were in Latin America. Overall, Latin America's population-weighted-happiness-average increased by 7 percent.

This highlights the significance of well-being definitional and measurement asymmetry. Key measures including Gallup and the HPI, claim Latin America's quality of life has increased as government and economic effectiveness has increased. In fact, many assessments pinpoint to many Latin American countries' quality of life as being higher than most other countries in the world. However, the results are perplexing

because many of the same Latin American countries with high well-being scores also count high poverty, inequality, violence, and lacking access to basic goods, services and political participation. Therefore, the dissertation's findings underline the importance of prudential use of well-being definitions, indicators and assessments in policy making, because they capture more than subjective life evaluations. The next chapter will provide an empirical analysis of well-being assessments by running cross-country ranking comparisons alongside on a Spearman correlational analysis. The analysis will produce new knowledge and understandings about the relationships between subjective and objective well-being assessments for policy makers to consider.

### **CHAPTER 3. THE IMPLICATIONS OF LATIN AMERICAN CHILD MIGRATION AND WELL-BEING: AN EXPLORATION OF THE MAJOR VARIABLES ASSOCIATED WITH HISPANIC CHILD ABUSE AND NEGLECT ALONG THE US-MEXICO BORDER**

#### *Abstract*

Chapter 3 examines Hispanic Child Abuse and Neglect (HCAN) victimization rates as an indicator of migrant Hispanic child well-being in the United States. This chapter uses secondary data from a nationally representative sample provided by the child abuse and neglect archive from the year 2007, along with 2011 immigrant minor data. Chapter 3 examines the empirical relationship or association of the dependent variable HCAN with other socio-political and economic variables. Some of the model's independent variables include ethnicity, political culture, language (percentage of children in households where no English is spoken), educational attainment, geographic location, civic engagement and state government service ranking. The chapter found a statistically significant correlation and clusters among major spatial and geopolitical variables included in the analysis. The empirical findings suggest that socio-economic variables, along with civic engagement and governmental services have an effect on child well-being. In other words, the impact of the social and economic conditions on child well-being tends to be higher when access to government services is tied in the analysis.

### **3.1 Introduction**

Over the past 20 years, Latin America has seen a spike in violence and corruption, impacting not only security but also infrastructure. Due to the fact that well-being measures do not take these realities into account, Latin American countries continue to rank highly. These same countries are low in educational attainment; access to healthcare, and government stability. Latin American countries have a growing number of emigrants. The U.S. Hispanic population has been on the rise with the population of Latino children under the age of 18 doubling from 1995 to 2010. According to the Pew reports (Passel 2014) Hispanic migrant children are one of the fastest growing segments of the national population (Pascal 2014). It is expected that by 2050, one third of all U.S. children will be Hispanic.

A couple of Pew (Passel 2009, 2014) and the National Council of La Raza's data reports (2016) affirm that the living conditions of the migrant Hispanic population are less than satisfactory abroad and at home. An overwhelming majority of the child migrants are poor. Over 58 percent of the Latino children in the U.S. are living with one or more foreign-born Hispanic parents who have not completed high school. The educational attainment is much lower than any other migrant foreign-born ethnicity in the U.S.

Hispanic children living in the U.S. make up the largest number of children living in poverty: "More Latino children are living in poverty—6.1 million in 2010—than children of any other racial or ethnic group" (Lopez and Velazco 2010). In addition, one in five Latino children do not have access to health insurance and access to benefits for

which they are eligible (PRB 2016). Latino children and youth are disproportionately present in the justice system with 1 in 6 Latino males who will be arrested at some point in their lives in the U.S.

According to Wilson and Olson (2014), there is a huge wave of undocumented families and unaccompanied children arriving to South Texas from Central America. The intensified border influx of the vulnerable unaccompanied minors from Latin America is evidence of the security and economic problems the region is facing (Penhaul 2010). Passel et al. (2014) state, “The debate over immigration policy has been complicated by the recent arrival of thousands of unaccompanied children. During the first 11 months of the 2014 fiscal year (Oct. 1, 2013 - Aug. 31, 2014), the number of unaccompanied children caught at the U.S.-Mexico border rose 88 percent compared with the same period in fiscal 2013.”

The dangers of the migration route display the vulnerabilities that the families and children are willing to endure to migrate. Families and children suffer the emotional stress of being separated from loved ones, traveling alone, robbery, sexual assault, kidnapping, and human slavery (Padinas 2008, Bridges 2013). Many are willing to take contraception because of the high possibility of being raped (Sorrentino 2013). They are also keenly aware of the great likelihood of death (Penhaul 2010). Some die crossing rivers along the way. Others die in the desert.

Ethnicity, attitudes, and behaviors along the border are closely associated with Hispanic child abuse and neglect (HCAN). The threats, cultural taboos, and ethnic realities tend to silence the voice of the abused in the Hispanic culture (Comas-Diaz

2012). On the one hand, for many HCAN victims, cultural values inhibit disclosure and recovery. On the other hand, for the victimizer silence means impunity, and the opportunity to attack endless times (Gerring 2001). Some U.S. border children's performance failure (school/education, language, income, health: obesity, drug abuse etc.) pose other HCAN vulnerability risks. Performance failure lures children into silent victimization because their own society has promoted their low self-esteem (Comas-Diaz 2012).

Consequently, this chapter aims to advance the literature on well-being by including the dimension of HCAN rates in border states. Additionally, the chapter tests the empirical relationship of basic social, economic, political variables as they relate to child well-being. Section 3.2 examines the definitions and the literature on child abuse. Section 3.3 describes the measurements used to analyze Hispanic child abuse. The goals for the analysis and the population are outlined in Section 3.4. The empirical method of analysis, the data, and model in this chapter are outlined in Section 3.5. The results are discussed in Section 3.6, and conclude with a brief discussion of the policy implications of the empirical findings.

### **3.2 Overview of Child Abuse and Neglect Literature**

High levels of child well-being translate into positive gains to the socio-economic and political systems as the child transitions into adulthood. Low levels of well-being among children, often caused by child abuse, leads to serious physiological and psychological consequences for the individual (Kaverne 2004, Barker 2004). The effects of child abuse on society can linger for generations (Moran 2003, Shelley 2010).

According to the literature, HCAN is a serious concern in Latin America and near the U.S. border with Mexico (Arizona, California, New Mexico, and Texas). Child abuse is defined as doing something or failing to do something that harms a child's well-being or puts a child at risk or harm. Neglect, or not providing for a child's well-being needs, is also a form of abuse (CM 2007). The *Federal Child Abuse Prevention and Treatment Act* (CAPTA), (42 U.S.C.A. § 5106g), as amended by the *Keeping Children and Families Safe Act of 2003*, outlined the original legal definition for child abuse. According to the US National Institutes of Health (NIH), child abuse can be physical, sexual, or emotional. CAN affects millions of children in the United States each day (Estes 2001). The Department of Health and Human Services (DHHS) established a voluntary national data collection and analysis program on child abuse and neglect - National Data Archive on Child Abuse and Neglect (NDACAN).

### **3.3 Child Abuse and Neglect Measurements and HCAN Definitions**

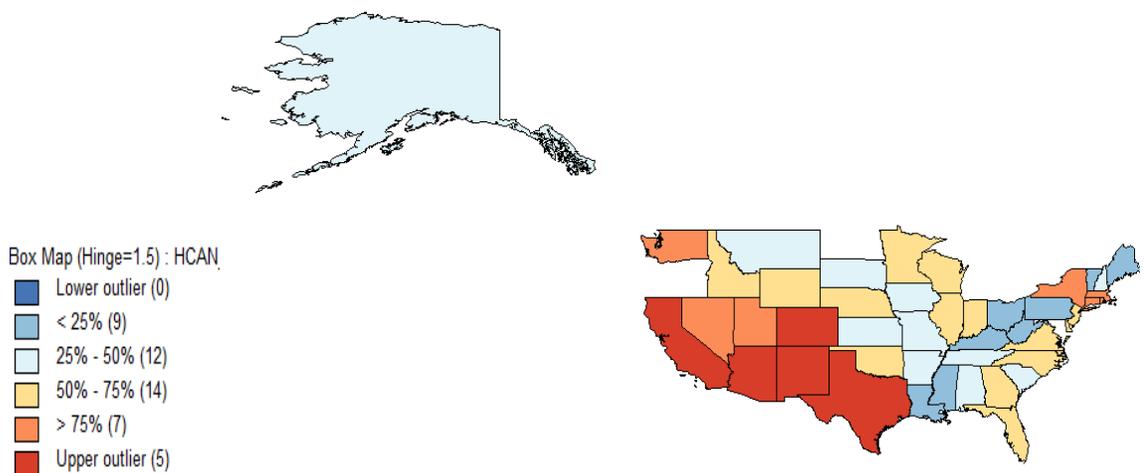
All 50 states have mandatory CAN reporting laws that require certain professionals and institutions, including health care and education providers and law enforcement officials, to report suspected maltreatment to a child protective services (CPS) agency. The initial report, also known as a referral, is evaluated by a CPS agency to determine if the agency should conduct an investigation. The agency conducts interviews with family members, the alleged victim, and friends to determine the likelihood that maltreatment has occurred. Each state has its own definitions of child abuse and neglect based on minimum standards set by federal law.

In 2007, the DHHS reported that more than 5.6 million children were referred for child abuse and maltreatment in the United States, but only 62 percent of these cases were screened by a CPS agency. CPS agencies determined that 794,000 children were victims of abuse and neglect, which is only a small fraction of the millions of referrals that entered the system (Bureau and Administration for Children & Families 2007).

In 2007, education, health, and law enforcement professionals initiated more than one-half (57.7%) of all reports. More than 74 percent of the investigations or assessments determined that the child was not a victim of maltreatment. More than half of the child victims were girls (51.5%), and 48 percent were boys. Also, one-half of all victims were white (46.1%), 22 percent were African-American, and 21 percent were Hispanic. CPS investigations determined that the most common type of maltreatment included neglect (60%) physical abuse (11%) sexual abuse (8%) and psychological maltreatment (4%). In 2007, there were 1,760 estimated child fatalities due to child abuse. The parents (80%), other relatives (6%) abused the children.

Many academic studies have argued that poverty contributes to CAN, including Estes (2001, 2002), Fontes (1995), Goldstein (1987), Savona & Stefanizzi (2007), Smith (1993), Smith & Fong (2004), Mam (2007), Alcaya (2007), Ennew (1996), and Moran (2003).. Poverty, as defined by the U.S. Census Bureau, is a household (with one child under 18) living on \$14,840 or less. Neglect and mistreatment of children is more common in families living in poverty and among parents who are teenagers and/or are drug or alcohol abusers (Estes 2001).

Migrants in particular are vulnerable to higher levels of poverty, which impacts the presence of CAN in these communities. This chapter will examine the presence of CAN in the Hispanic migrant community (in the United States), notated here as HCAN. HCAN is defined as child maltreatment cases involving Hispanic children under 18 and is often underreported and under punished for various reasons including fear of deportation (Lanning 2001). Figure 3.1 provides a snapshot geospatial view of Hispanic child abuse along the Border.



Source: Author with NIS-4 data. Note: Four states did not report HCAN data (they were excluded from the analysis: Pennsylvania, Maryland, Michigan, North Dakota, and Oregon).

**Figure 3.1 2007 United States HCAN Smooth Map (Hinge 1.5)**

Figure 3.1 depicts geospatial snapshot of HCAN data from 2007 to 2011. The percentile map emphasizes extreme values for HCAN on the high and low levels. Red colored states hold the highest percentiles of HCAN (high outliers), and sky-blue states

had the lowest percentage of HCAN (low outliers). The 1.5 hinge value classifies the high outliers as being 1.5 times higher than the inter-quartile range (IQR), and low outliers as 1.5 times lower than the 25<sup>th</sup> percentile. This means that the outliers on Figure 3.1 are more than 1.5 times higher or lower than the inter quartile range (IQR)(the difference between the 75<sup>th</sup> percentile and 25<sup>th</sup> percentile. The map shows high levels of HCAN in the states near the U.S.-Mexico border, including Arizona, California, New Mexico and Texas, Figure 3.1 depicts geospatial snapshot of HCAN data from 2007 to 2011. The percentile map emphasizes the importance of the very high values red colored states counted the highest percentiles of HCAN (high outliers), and sky-blue states (very small) had the lowest percentage of HCAN (low outliers). The 1.5 hinge value classifies the high outliers as being 1.5 times higher than the inter-quartile range (IQR), and low outliers as 1.5 times lower than the 25<sup>th</sup> percentile. This means that the outliers on figure 3.1 are more than 1.5 times higher or lower than the inter quartile range (IQR) (the difference between the 75<sup>th</sup> percentile and 25<sup>th</sup> percentile. The map shows high levels of HCAN in the states near the U.S.-Mexico border, including Arizona, California, New Mexico and Texas.

### **3.4 Goals for the Present Study and Population**

This study examines the geographic, economic, and political factors associated with HCAN and seeks to determine how HCAN varies across groups using a cross-sectional study of U.S. states over the period 2007 to 2011. The observed cases are calculated by the

CPS as a rate or the number of Hispanic “child victims out of the total child victims (CM 2007<sup>7</sup>)” in a single state, expressed mathematically as follows:

$$HCAN = \frac{HCAN\#}{CAN\#}$$

**Equation 3.1 HCAN Equation**  
(CM 2007)

Spatial statistical analysis conducted for this chapter found that U.S.-Mexico Border States are more vulnerable to high levels of HCAN. The study also found that Hispanic children are the most vulnerable population in this geographic area. Using Comas-Diaz’ analysis method of HCAN abuse, this study analyzes the conditions closely associated with border child abuse (Fontes et al. 1995). Ethnicity, attitudes, and behaviors along the border are closely associated with HCAN. The threats, cultural taboos, and ethnic realities tend to silence the voice of the abused in the Hispanic culture (Comas-Diaz 2012). On the one hand, for many HCAN victims, cultural values inhibit disclosure and recovery. On the other hand, for the victimizer silence means impunity, and the opportunity to attack endless times (Gerring 2001).

Additionally, Comas-Diaz (2012) analysis method elucidates that Hispanic children suffer silent victimization as a result of poor self-esteem much like in the U.S.-

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<sup>7</sup> Child Maltreatment report 2007

Mexico border region (Fontes 1994). Some U.S. border children's performance failure (school/education, language, income, health: obesity, drug abuse etc.) pose other HCAN vulnerability risks. Performance failure allures children into silent victimization because their own society has promoted their low self-esteem (Comas-Diaz 2012). This chapter suggests that despite significant multidisciplinary research on child abuse and neglect (CAN), ethnicity, as a factor remains under-researched. Moreover, this chapter identified Hispanic CAN as a major field gap. Thus, the following research model was crafted to respond to the growing need for Hispanic child abuse research in historically underserved populations along the U.S.-Mexico Border and the United States. This analysis aims to provide better understanding about the conditions that increases the risk of abuse and ill-being among Hispanic children.

#### **3.4.1 Research questions:**

1. What, if any, is the difference between HCAN on Border States closest to Latin America and Non-Border States?
2. Is HCAN geospatially associated, and if so, in what way?
3. What geospatial, political, socialization, and economic factors relate to HCAN?

#### **3.5 Data**

This chapter applies statistical analysis to understand the association of several variables from the data set from the 2007 Child Maltreatment Report (issued by the Administration of Children and Families under the Department of Health and Human

Services) and 2011 data from Kids Count Data Center. This chapter responds several questions relating to HCAN and its relation to Hispanic child well-being. This section describes the data employed for analysis, the questions to resolve, and explores the data variables studied in this chapter.

### **3.5.1 Data Sources**

National and state statistics on child maltreatment are derived from the data collected by CPS agencies through National Child Abuse and Neglect Data System (NCAND). The data are analyzed, disseminated, and published in an annual report: Child Maltreatment 2007 (CM 2007). The 2007 national statistics were based on aggregated case-level data from 50 U.S. states. The case-level data was voluntarily provided by the states to the Department of Health and Human Services (DHHS). This particular dataset provides 207 different variables for 50 states. The dataset was constructed from secondary data specifically used for the Child Maltreatment 2007 Report, the Anne E. Casey Foundation Data Center across the states, the U.S. Census Bureau, state data reports on CAN, NDACAN reports with the specific HCAN variable, child statistics, and NIH data.

### **3.5.2 Participants and procedures**

The DHHS collects and analyzes the child maltreatment data NCANDS archives. In the 2007NIS-4 report,<sup>8</sup> states provide voluntarily case-level data and/or aggregated

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<sup>8</sup> The data used included 2007 because "The National Incidence Studies have been conducted approximately once each decade, beginning in 1974, in response to requirements of the Child Abuse Prevention and Treatment Act." The last one was conducted on 2006 to issue the data available for my use, not from the report. Consequently, I used the most recent NIS-4 data. Data from previous decades were not as current. In addition, after conducting the EDA, the specific questions formulated for our study did not call for a time series analysis (Field 2009). The study is cross-sectional in

counts of key indicators of child maltreatment. Case-level data includes information on the characteristics of referrals of abuse or neglect received by CPS agencies, the children referred, the types of alleged maltreatment, the results of the investigations, the risk factors of the child and the caregivers, the services that are provided, and the perpetrators.

### **3.5.3 Data Measures**

As shown in in Table 3.1, the data units undergoing observation in this chapter include aggregated CPS data for the 50 U.S. states. Special focus is placed on US-Mexico Border States (Arizona, California, New Mexico, and Texas). The dependent variable undergoing analysis is HCAN (see Equation 3.1). Table 3.1 displays the data units, the dependent, and independent variables used in this study. It has been attached as an appendix, at the end of the chapter 4.

Some independent variables are continuous, and include social aspects of the population like children in households where no English is spoken, Hispanic child population, income per capita, poverty rate, educational achievement, immigrant children crime rates, ethnicity, and race. Independent variables that are categorical are the U.S. Mexico border and non-border states. The U.S.-Mexico Border States dummy variable is coded (1) and non-border states are coded (0). Political party affiliation (a categorical variable) is coded (1) Democratic and (0) Republican. In addition, According to Momayezi et al. (2004) “megastates” are U.S. states that have the largest urbanization, population, and gross state product (GDP) growth in the country. This variable is treated

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nature in that it includes data from people at different age points with different people representing each age point (Field 2009).

as dichotomous, meaning that if the state is ranked a megastate the variable is coded as a one and a zero if it is not. The research also focused on the independent variable of political culture, a categorical variable. Political culture is defined as the collective values, beliefs, attitudes and behaviors held by the public of a state (Elezar 1972).

#### **3.5.4. Exploratory Data Analysis (EDA)**

Relevant, organized, variable output is provided below for each question. EDA was conducted to determine if there are outliers prior to final statistical procedures. Some states do not provide data on HCAN. To correct for this gap, those observations were dropped. This data was not transformed, although there is some skewness, because there are some outliers that are identified in Figure 3.1<sup>9</sup>. The outliers were not transformed in this exploratory analysis because they are the primary observations undergoing study (i.e. Border States). The EDA listed below include the variables to be analyzed for each question in this study. The variables have annotated output and written description of the exploratory and preliminary analysis procedures, including data cleaning, transformations, and distributional graphs, missing data, data reduction, outlier analysis, and EDA recoding procedures.

##### **3.5.4.1. Child Maltreatment Dependent Variables (DVs) Group 1**

This first group includes the child abuse victimization rate and related variables, such as total number of children under 18, total CAN investigations, and total HCAN, black CAN, and white CAN. The variables in-group 1 also include the abused child

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<sup>9</sup> While outliers are present for some of the variables, including HCAN, transformations were not done as the analysis is exploratory in nature, and the outliers were the Border States, the main focus of the study.

gender and age (preschool, school, and adolescent), and ethnicity in addition to the abuse type (physical, neglect, sexual) and the fatalities.

The analysis below describes basic variable information including population size, central tendency measures (mean), and how the data are distributed. For these variables, there are four missing values for the states that did not do a report. Since HCAN rates are reported voluntarily, the states that did not report were taken out. The means in Table 3.2 show on average the total state scores for HCAN that differ according to race, percentage, and investigation type.

**Table 3.2. Exploratory Data Analysis Child Maltreatment Victimization Rates Dependent Variables Group 1**

EDA		Variable Names					
		Total Number Children Under 18	Total Child Abuse	Total HCAN	Total Child Abuse %	Total Black CAN	Total White
N	Valid	51	49	46	49	46	46
	Miss	0	2	5	2	5	5
Mean		1.38	27.002	9.99	11	15.87	8.30
Std. Deviation		1.54	9.6635	8.28	5.83	10.10	4.29
Variance		2.39	93.385	68.63	33.99	102.07	18.38
Skewness		3.12	.734	2.82	.48	1.35	.19
Std. Error Skewness		.33	.340	.35	.34	.35	.35

Kurtosis	13.67	.892	11.41	-.22	2.79	-.89
Std. Error Kurtosis	.65	.668	.688	.66	.68	.68
Range	9255056	48.30	48.39	24.80	49.22	16.47
Minimum	113073	8.40	1.56	1.50	2.13	.50
Maximum	9368129	56.70	49.95	26.30	51.35	16.97
Sum	70632267	1323.1	459.44	542.3	729.99	382.02

Source: Author with NIS-4 2007 data

The variables included on Table 3.2 belong to the category one variable group relating to CAN. The means here show on average the total state scores for CAN that differ according to race and ethnicity. For example, the victimization types are categorized by the membership of the children in the Black, Hispanic, and White race or ethnicity. The same variables have also been organized to include the child abuse variables grouped by age, gender, and abuse type. The output annotation for the frequency tables with descriptive statistics shows non-normality<sup>10</sup> and the presences of outliers.

### 3.5.4.2. Group 2: Socio-Economic Independent Variables

The second group of variables encompasses the independent variables that are included in the regression analyses to respond to the research question. This group on Table 3.3 includes three types of independent variables—continuous and categorical.

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<sup>10</sup> Normality assumes that the value observed only deviates moderately from the mean value. As mentioned on footnote 9 the outliers are the Border States who were not transformed for this exploratory study.

The independent variables capture socio-economic and political living conditions for the children by state. The continuous variables include percentage of households with children where no English is spoken, percentage of immigrant’s households with children, percentage of households with children where the head is a high school dropout, average family median income, violent crime proportion, and percentage of poor child state population. The categorical variable includes the three different political cultures: (1) individualistic, (2) traditionalistic, and (3) moralistic. The dichotomous independent variables include dummy variables coded (1) and (0) as follows: megastate (1) or non-megastate (0); metropolitan (1) or rural (0); border state (1) or non-border state (0); and Democratic (1) or Republican (0). Table 3.3 displays all of the EDA for the socio-economic and political continuous independent variables that will be used in the geospatial analysis.

**Table 3.3 Group 2 Exploratory Data Analysis of Political and Socio-Economic Continuous Independent Variables (IVs)**

		<b>Number of Immigrant Families/ State</b>	<b>Number of Households Where No English is Spoken</b>	<b>Number of Households Head is a High School Dropout</b>	<b>Children in Poverty</b>	<b>Violent Crime/ State</b>	<b>Famil y Media n Incom e/Stat e</b>
N	Valid	46	46	46	46	46	46
	Missing	0	0	0	0	0	0

Mean	324431.3	214078.4	224098.04	15.78	27614	57450
Std. Error of Mean	1.00	67400.58	54713.69	.92	5077.40	1485.89
Median	102000	72000	129000	16	16296	56700
Mode	7000	6000	123000.00	17	772	61400
Std. Deviation	7.16	4.81	3.91	6.58	36260	10611.3
Variance	5.13	2.32	1.53	43.25	1.32	1.13
Skewness	4.68	4.59	4.27	-.48	2.76	.61
Std. Error Skewness	.33	.33	.33	.33	.33	.33
Kurtosis	25.21	23.78	20.36	.37	8.93	-.02
Std. Error Kurtosis	.66	.66	.66	.66	.66	.66
Range	4546000	2993000	2358000	28	190253	40800
Minimum	6000	6000	7000	1	772	40200
Maximum	4552000	2999000	2365000	29	191025	81000
Sum	16546000	109180000	11429000	805	140833	29300

Source: Author with 2011 Kids Count Data Center

The means on Table 3.4 show on average the total state scores for the independent variables in group two that are dichotomous and related to Hispanic and non-Hispanic victimization rates. These variables belong to the variable group or category relating to socio-economic forecasting conditions of child abuse.

**Table 3.4 Group 2 Exploratory Data Analysis of Economic and Socio-Political Categorical Independent Variables**

	<b>State Political Culture Categorical Code</b> (1) Individualistic, (2) Traditionalistic, (3) Moralistic	<b>Dummy Dichotomy Megastates Code</b> (1) non-megastates (0) megastates	<b>Dummy Political Party Affiliation</b> Democratic (1) Republican (0)	<b>Dummy Code Rural (0) urban (1)</b>	<b>Dummy Code Border (1) non-border (0)</b>
Valid	46	46	46	46	46

Source: Author with data from (Lazar 1972), Momayezi et al. (2004) US Census Bureau data (2011)

These variables belong to the variable group or categories relating to political factors that may help understand child abuse. The categorical variables include political culture (individualistic, traditionalistic, and moralistic), political party strength and affiliation per state (democratic and republican), and megastate.

### **3.6. Empirical Model 1: Geo-Spatial Analysis Method and Results**

Despite the policy significance of the CAN, there is a lack of empirical studies on the impact of the socio-economic and political conditions of HCAN victims. The academic literature has not established a link between HCAN and social, economic, and political variables, including political culture, poverty, ethnicity, education, and language acquisition. While lack of sufficient child abuse reporting among Hispanics and in particular undocumented migrants has been a hurdle, the DHHS data permits a more careful examination of this issue. In the remaining sections, we will use geo-spatial and

econometric analysis to examine the impact of socio-economic and political factors on HCAN.

### **3.6.1. Brief Explanation of the Spatial Statistical and Econometric Methods**

For this exploratory of HCAN and other socio-economic variables study, the use of geo-spatial and econometric tools, was favored given that spatial autocorrelation was found on a preliminary review of the data. In the study of Hispanic child maltreatment in the United States, this geographical analysis becomes a useful tool to identify elevated victim proportion density locations in close proximity to Latin America. The software package Geoda is used for the spatial modeling.

OLS models use the general linear equation  $Y = \alpha + \beta x + \varepsilon$ . Spatial regression introduces spatial association explicitly through the use of a Weight Matrix,  $W$ . The Weight Matrix  $W$ , also referred to as an Adjacency Matrix  $W$ , indicates how the geographic units are located in space vis-à-vis one another. There are different ways of defining adjacency. For polygon or areal data, like states, first-order queen contiguity rule is often used. For any given geographic unit, another unit is adjacent if it is immediately above, below, off to the side or diagonal to the unit. For the spatial statistical and econometric analysis, first-order queen contiguity is assumed (Find queen contiguity definitions on footnotes 15-16).

#### **3.6.1.1 Baseline Empirical Geo-Spatial Regression Model**

This chapter starts with a baseline model to examine factors that contribute to HCAN and, in particular, HCAN. The basic estimating equation for the spatial lag model is as follows:

$$y = \alpha + \beta\chi + \lambda\omega y + \varepsilon$$

### Equation 3.2 Estimating Equation for Spatial OLS

Where,

- $y$  is the dependent variable
- $\alpha$  is the intercept  $\beta$  is the slope coefficient for variable  $\chi$  of the line (regression coefficient of the independent variable)
- $\varepsilon$  is the error term
- $\lambda$  is the spatial lag coefficient
- $\omega y$  is the spatially lagged dependent variable based on the weight matrix

Based on the literature and the objectives of the dissertation, a list of the selected set of variables undergoing study is provided on Tables 3.2 to 3.4. Our objective is to study the variables to find answers to the research questions presented in section 3.4.1.

#### **3.6.2. Results for Question 1: What, If Any, Is the Difference for HCAN on Border States Closest to Latin America and Non-Border States?**

Our first objective is to test if there is a statistically significant geographic difference for HCAN on Border States closest to Latin America and non-border states. The results of the T-test testing the two groups for different means can be found on table 3.6. This addresses the question of whether states along the U.S.-Mexico border have higher

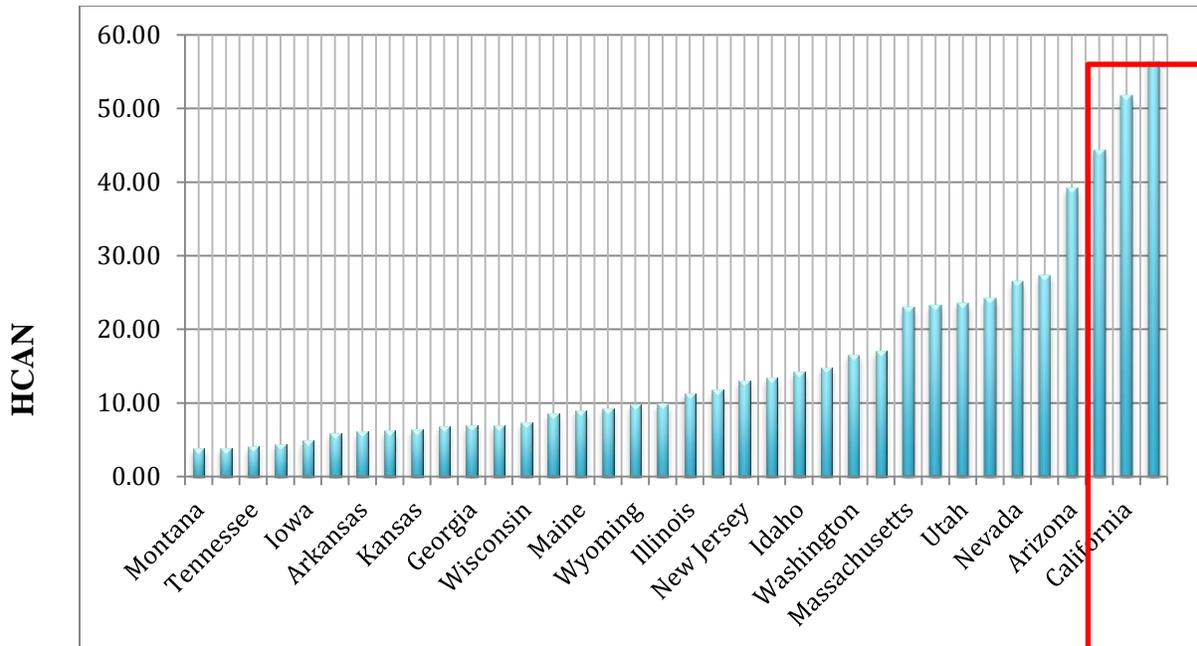
victimization rates when compared to non-border states and controlling for Hispanic child population. The results for the T-test are summarized in Table 3.6.

**Table 3.6 T-Test HCAN – Border vs. Non-Border**

Non-Border Group 1 = 42 obs.				Border Group 2 = 4 obs.					
Variable	Mean	SD	95% CI		Mean	SD	95% CI		P-Value
HCAN	9.82†	7.5	7.45	12.2	47.9†	7.6	35.7	60.1	0.000†

†p < .01 \* p < .05 \*\* p < .10

The t-test results produced two statistically significantly different groups. Table 3.6 shows that groups one and two have different means (the difference between the two sample means is greater than zero). Thus, we can conclude from this test that it is likely that the HCAN mean proportions for the border states (47.9) is statistically significantly (P~0.00) and different at the 1% level from the HCAN mean in the rest of the United States. This statistical observation is indicative that geographic proximity to the border, counting a greater number of child migrants, registers a significantly higher victimization rate. Further evidence of the difference between the populations can be seen in Figure 3.2 below, which displays a bar graph confirming the HCAN t-test results of victimization rate for each state.



Source: Author with CM 2007 data

**Figure 3.2 Bar Graph of HCAN per State**

As shown in Figure 3.2, highest victim proportions were Hispanics in states along the US-Mexico border. Thus, Hispanic children make up the largest population segment affected by CAN along the Border States. However, this does not mean that Hispanics are victimized at higher rate along Border States, but the high Hispanic population density results are commensurate with high HCAN. In other words, this exploratory study did not control for the Hispanic, Black, and White populations along the Border States. A future study is recommended to run further tests (i.e. dependence test ( $\chi^2$ ) on race and ethnicity). The dependence test will help determine if child abuse for Hispanic populations along the border are more likely. On a preliminary test run on the state of California (Vivas-Cuartas 2016 forthcoming), even when controlling for all of the races

and ethnicities, the results support the hypothesis that there exists a high relation between the Hispanic Child population and child abuse in that state. However, those results are exploratory in nature, and they do not predict causality. Further studies need to be conducted to better understand these relationships.

### **3.6.3. Results for Question 2: What if any, Geospatial Autocorrelations Exists for HCAN? And Question 3: What Geospatial, Political, Socialization, and Economic Factors Relate to HCAN?**

Based on the previous findings on Table 3.6, our objective is to test to what extent there is a statistically significant geospatial dependency relation between Hispanic child victimization rates themselves, as well as with the independent variables groups in Tables 3.2 and 3.3. To respond to the question, we start with our baseline model: the spatial lag model regression analysis, as outlined in section 3.6.1. -3.7. The empirical model tests if there is a statistically significant relationship between HCAN and the independent variables border, no-English (migrant language acquisition), educate (the head of the household is a high school drop out), migrant households with children, megastates, and urbanization. Thus, this model estimates the predicted change in the value of the dependent variable (HCAN) brought on by a unit change in the independent variables (Border, No English, Migrant, Low Education).<sup>11</sup>

To assess whether or not a spatial regression maybe an appropriate specification, it is first necessary to explore whether or not there is spatial association in any of the

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<sup>11</sup> "Regression Basics," University of South Florida, 2009, <http://luna.cas.usf.edu/~mbrannic/files/regression/regbas.html>.

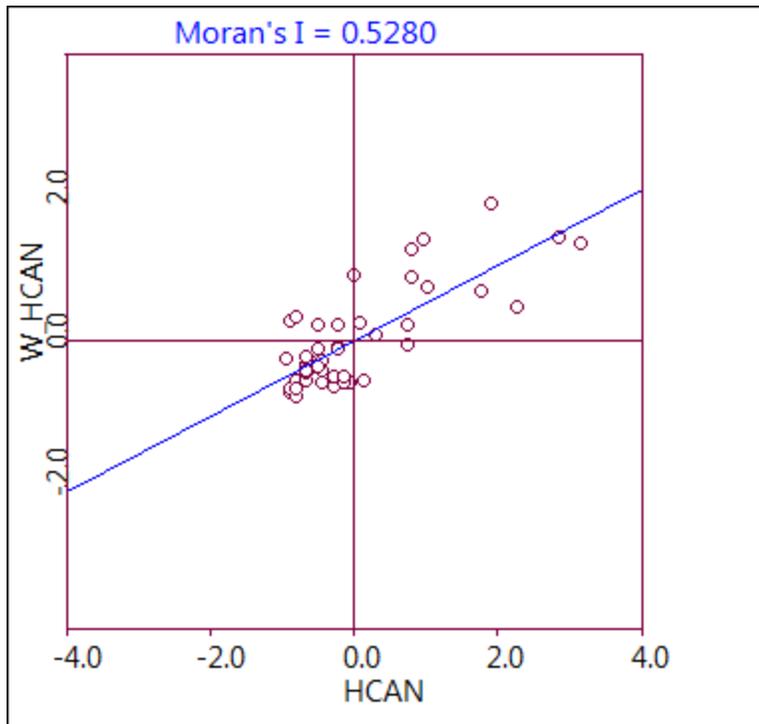
variables. If yes, then, a spatial regression model maybe needed to correct for spatial autocorrelation using the Moran's I statistic. The Moran's I statistic measures the spatial association of the variable. The HCAN's Moran's I statistic test is done using the first-order queen contiguity weights<sup>12</sup>. For example, one can measure the degree, significance, and nature of spatial association using a Moran's I statistic. This statistic has a range of -1 to 1, where a negative statistic reflects negative spatial association – i.e., high values surrounded by low values or vice versa, and a positive statistic indicates positive spatial association – i.e., high values surrounded by high values or low values surrounded by low values. A Moran's I scatterplot can be used to visualize the overall spatial association. Spatial autocorrelation results are displayed in cluster maps where for each unit the presence and nature of spatial autocorrelation is displayed. Other results include significance maps where a variable's quantity is color coded by significance level. There are also other types of functions to show on maps, including outliers.

In this case, the calculation of the HCAN dependent variable's Moran's I after running 99 permutations<sup>13</sup> resulted in a highly statistically significant (*pseudo significance*:  $\rho \leq 0.001$ ) Moran's I: 0.53 at the one percent level, as can be seen on Figure 3.3.

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<sup>12</sup> Contiguity based spatial weights can be created when the input file is specified as a polygon shape file. After both input and output files are specified, both weights options in the Creating Weights dialog become active. For the CONTUIGITY WEIGHT option, a choice is available between Rook Contiguity and Queen Contiguity (Anselin 2004.)

<sup>13</sup> Anselin, Luc, "geoda093 user's guide" (Spatial Analysis Laboratory & Center for Spatially integrated Science-University of Illinois, Urbana-Champaign, 2003). Permutations are randomizations of the statistics going through reiterations or recalculations of the statistics 99 times.



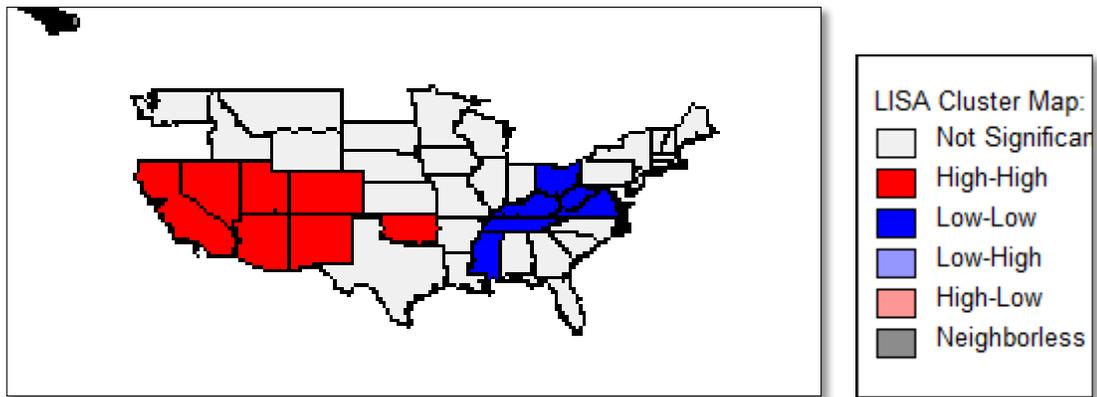
Source: Author

**Figure 3.3 HCAN Moran's I Statistic**

In this case, the spatial autocorrelation analysis was implemented in its traditional univariate form. In Figure 3.3, the variables are standardized so that the units in the graph correspond to standard deviations. The four quadrants in the graph provide a classification of four types of spatial autocorrelation ranging from *high-high* (upper right), to *low-low* (lower left<sup>14</sup>), and low-high and high-to low, as indicate in the other quadrants (Anselin 2004). Figure 3.3 results for the Moran's I statistic can be interpreted as showing a moderate positive spatial association for the variable. As the next step,

<sup>14</sup> "geoda095i.pdf," n.d., <http://geodacenter.org/downloads/pdfs/geoda095i.pdf>.

further cluster testing was conducted to examine if there are any specific high-to-high clusters as indicated by the Moran's I results. Figure 3.4 displays a spatial clustering of positive association.



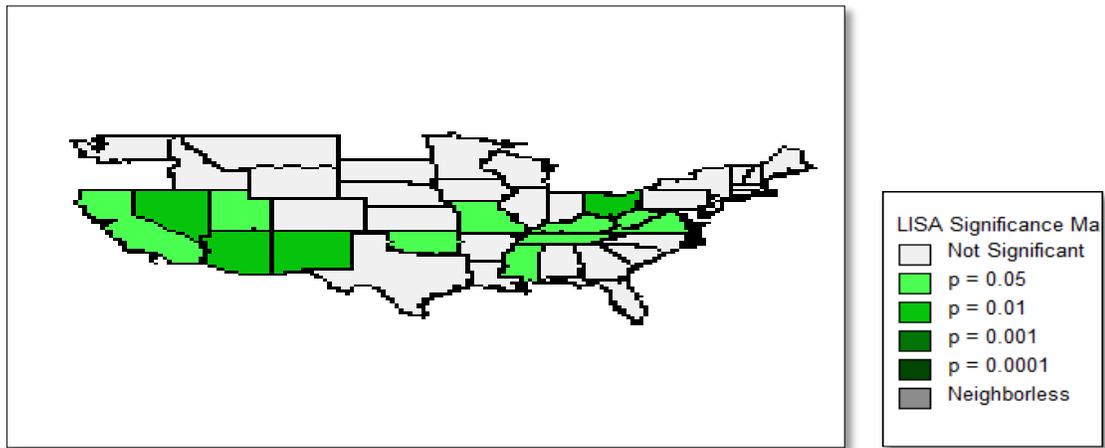
Source: Author

**Figure 3.4 HCAN Univariate Lisa Map – Queen Contiguity<sup>15</sup>**

The Moran's I statistics for the variable HCAN indicated the presence of a spatial association. Figure 3.4 displays the univariate LISA map shows further evidence of positive geospatial autocorrelation clusters. Figure 3.4 helps visualize and highlight the extreme values and the spatial outliers with color-coded polygons. In particular the LISA map identified two HCAN clusters. The red-colored clusters display positive spatial autocorrelation (high-to-high) and the blue clusters also display positive spatial autocorrelation (low-to-low). In other words, there are spatial clusters of high HCAN

<sup>15</sup> The only state (Alaska) that is neighbor less is not adjacent to any other because its borders are not touching any other state.

rates in the Southwest and clustering of low rates in the east. Figure 3.5 shows the significance levels associated with each states Local Moran's I statistic.



Source: Author

**Figure 3.5 HCAN Significance Lisa Map – Queen Contiguity**

As shown in the significance LISA map (Figure 3.5), there is significant spatial autocorrelation Green clusters at a statistically significant level of 1, 5, 10 percent (*pseudo significance*:  $\rho \geq 0.001$ ,  $\rho \geq 0.01$ ,  $\geq 0.05$ .) for many of the states, include those along the U.S.-Mexico border.

Since the Moran's I statistical analysis and LISA maps show that there is significant spatial association in the dependent variable, HCAN, a spatial regression specification is needed to correct for spatial autocorrelation. Also, the selection of spatial lag model over other spatial econometric specifications was based the Moran's I analysis

indicating significant spatial autocorrelation was found in the dependent variable<sup>16</sup>.

Finally, in order to probe the spatial relationship between the dependent variables and the independent variables, we run the basic spatial lag OLS geospatial regression analysis.

The output shown in Table 3.7 produced a good fit model relational model among the variables. The spatial regression results for the models yielded a high R-squared or the goodness of fit of the model, and the spatial lag coefficient is significant. Consequently,

Table 3.7 of output results confirmed findings from the literature that indicated that the best explanatory factors for HCAN were linguistics, migration, education, and income<sup>17</sup>.

As shown in the estimation techniques implemented, the spatial lag model predicts 86 percent of the entire geographic variation of HCAN when regressed with the proposed independent variables.

<b>Probability &gt; F†</b> <b>Spatial Lag Adjusted R2 = .86</b> <b>Observations: 46</b>			
<b>Variable</b>	<b>Coefficients<sup>18</sup></b>	<b>Probability</b>	<b>Z-Value</b>
<b>HCAN</b>	0.56	0.0000000†	6.28
<b>Constant</b>	-3.24	0.0004698†	-1.49
<b>No English</b>	0.99	0.0000000†	6.37
<b>Migrant</b>	-0.33	0.0089136†	-2.61
<b>Education</b>	0.42	0.0268367*	2.21
<b>Low income</b>	-1.03	0.0341890*	-2.12

<sup>16</sup> Other specifications maybe appropriate because maybe other variables are spatially auto correlated. However, none of that testing was conducted in this analysis. Still, it is recommended that this be done in future research.

<sup>17</sup> Whenever income is plugged into the regression, it drives the constant's significance down to 15%. Thus the geospatial econometric model is drawn without a link to this variable.

<sup>18</sup> The model gives a spatial lag coefficient for the dependent variable (HCAN value for the surrounding units). The other coefficients reported are the basic slope coefficients for the independent variables. All coefficients are reported.

†p < .01 \*p < .05 \*\* p < .10

### **Table 3.7 Spatial Lag Model Regression Results<sup>19</sup>**

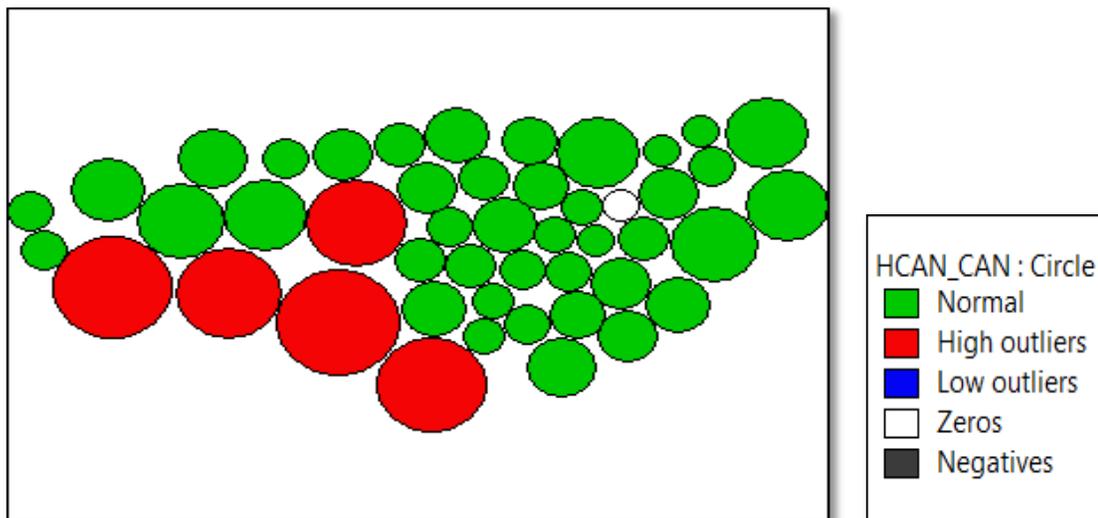
As shown on Table 3.7, the empirical model produced several statistically significant variables. All of the p-values are statistically significant at least the 5% level. Consequently, we can reject the null hypotheses that there is no statistically significant relationship among the dependent variable and each of the socio-economic independent variables. For instance, the negative relationship between income and HCAN can be interpreted as follows: every 1 unit increase in low-income, there is a 1.03 decrease in HCAN, controlling for the other independent variables (p <.01, *ceteris paribus*). Circling back to the research questions on what overall well-being factors may be included, this finding maybe indicative that income affects child well-being. Meaning that higher income levels may have a positive effect by decreasing HCAN victimization.

In addition, the coefficient interpretation may also be indicative that for every 1-unit increase in the number of migrant households, there is a .33 decrease in HCAN controlling for other variables (p <.01, *ceteris paribus*). In tying this finding back to the research questions, the original finding indicates that may indicate immigration is factor to be considered in the measurement of child well-being. It is associated with HCAN and the nature of their relationship is negative. Meaning that higher migration may have a negative effect by decreasing HCAN victimization.

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<sup>19</sup> Given HCAN statistically significant spatial autocorrelation, a spatial lag model was run.

Further interpretations indicate a positive relationship between language acquisition and HCAN. Meaning that 1-unit increase in the number households with children where no English is spoken, is associated with an increase in HCAN, controlling for other variables ( $p < .01$ , *ceteris paribus*). In addition, an increase on the number of homes with a head of household who did not complete high school is associated with an increase in HCAN. These socio-economic factor findings (income, migration, education, and language acquisition) are important consideration for the U.S., Latin America, migrants, and children. Tied back to the research questions, these original findings point to the possibility for finding other statistically significant factors that need to be included in a more complete well-being definition and measurement. Consequently, future studies are recommended to help better measure and understand child and Latin American well-being. Figure 3.8, the outlier cartogram below, expound on the relationship of HCAN extreme-cases and the Border States.



Source: Author

**Figure 3.8 Outlier Cartogram - Queen Contiguity**

Figure 3.8 displays a color-coding of the cartogram to present the most extreme cases in the red color choropleth. The closer a state is in proximity to the border the higher the likelihood that the densely Hispanic populated areas will have higher HCAN because a high number of the Hispanic people in those circles have elevated values with most of the independent conditions highlighted in this study. We then examine the set of socio-economic variables that were missing in the previous regression model on Table 3.7. A spatial lag model has not been selected for the following tests because they include both dummy and categorical variables. Given that spatial lags are not models that can deal with dummy or categorical variables, we had to run the dummy and categorical variables in two additional independent models. The new regression results can be seen on Table 3.8 including the dependent variable with new independent variables.

Significance .000a	F-value .750a	R Sq. .563	Adjusted R Sq. .508	Std. Error of the Estimate .09597			
<b>Model 2</b> <b>a. Dependent Variable:</b> <b>HCAN</b>			Unstandardized Coefficients		Standard Coefficients	t	Sig.
			B	Std. Error	Beta		
	(Constant)	.075	.029			2.58	.013
	Dummy dichotomous variable mega-states (1) non-mega-states (0)	-.077	.047	-.224		-1.6	.108

Dummy dichotomous variable rural (0) urban (1) metropolitan and non-metro	.099	.035	.322	2.87	.007 †
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Source: Author

†p ≤ .01 \*\*p ≤ .05 \*

### Table 3.8 HCAN Regression Results

The results for the regression on Table 3.8 show that 56% of the variation in HCAN is explained by the independent variables. The interpretations also indicate a positive relationship between the state’s urbanization level and HCAN. Meaning that an increase in urbanization, is associated with an increase in HCAN, ( $p < .01$ , *ceteris paribus*). However, the megastate variable results showed no statistically significant association between HCAN and megastates. Tied back to the research questions, this original finding may indicate that as urbanization grows, HCAN also increases. This finding calls for further studies on the relationship between urbanization and well-being.

### 3.7. Empirical Model 3

Our objective is to test to what extent there is a statistically significant difference in child victimization rates among diverse ethnicities when related to the state’s political culture (individualistic, traditionalistic, or moralistic). Given that our independent variable is categorical in nature, the relationship between HCAN and Political culture was tested with a multivariate analysis of variance (MANOVA) analysis. The results are summarized in Table 3.9.

#### 3.7.1. Research Question 4: What Is The Effect of Political Culture on HCAN, and Other Race or Ethnicity Victimization Rates?

The baseline model outlined in Section 3.7 begins with a multivariate analysis of variance MANOVA, which helps us to examine multiple dependent and independent variables simultaneously (Field 2009). MANOVA has the power to detect whether groups differ along a combination of dimensions. It can tell us how one single categorical variable like political culture or geographic border proximity has an effect on the dependent variable groups of CAN organized by race and ethnicity.

<b>Between-Subjects Factors</b>						
		N				
State political culture code (1) individualistic, (2) traditionalistic, (3) moralistic	1.00	15				
	2.00	17				
	3.00	13				
<b>Multivariate Tests</b>						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept <sup>20</sup>	Pillai's Trace	.822	61.67	3.00	40.000	.000 †
	Wilks' Lambda	.178	61.67	3.00	40.000	.000 †
	Hotelling's Trace	4.62	61.67	3.00	40.000	.000 †
	Roy's Largest Root	4.626	61.67	3.00	40.000	.000 †
Political culture	Pillai's Trace	.272	2.15	6.00	82.000	.054 **
	Wilks' Lambda	.738	2.14	6.000	80.000	.053 **
	Hotelling's Trace	.341	2.21	6.000	78.000	.050 **
	Roy's Largest Root	.293	4.00	3.000	41.000	.014 †

Significant at the 1% levels at the 1%, 5% 10% level: †p ≤ .01 \* p ≤ .05 \*\* Source: Author

**Table 3.9 MANOVA effects of political culture on HCAN**

<sup>20</sup> MANOVA analysis also reports on the intercept.

The MANOVA analysis of multivariate (multiple variables) was conducted as displayed on output Table 3.9. The MANOVA analysis produced significant independent variable effects at the one, and five percent level (*ceteris paribus*) on the dependent variable HCAN. The dependent variable differs based on the dimension of the political culture of the state (individualistic, traditionalistic, and moralistic). The table output shows that there is a statistically significant difference among the three. According to Table 3.9, there is a statistically significant multivariate main effect in the combination of political culture variables (traditionalistic, individualistic, and moralistic) for Hotelling's Trace  $v=.34$ ,  $F(2.21)$ , controlling for the variables ( $p < .05$ , *ceteris paribus*).

The results indicated there is a statistically significant interaction between diverse child abuse proportions per state (dependent variables) when there are three political cultures tested for the state. Consequently, the MANOVA test results indicate that the abuse rates of blacks, whites and Hispanics vary according to political cultures like the traditionalistic, individualistic, and moralistic political cultures. Future research is recommended in order to better understand the relationship between child well-being and political culture. For instance, continue to understand more clearly the relationship between the dependent variables, it is recommended to run other models with HCAN interaction, black CAN, white CAN, and multiple political, social, and economic variables to test once again the impact of other independent variables on the dependent variable, as demonstrated in Section 3.7.4.

### **3.8. Discussion and Conclusion**

HCAN migrants in the U.S. face ethno-cultural barriers to seeking and receiving assistance. HCAN predictors remain understudied. Chapter 3 underscored the relationship between HCAN, political culture, and members of migrant, low-income groups who do not speak English. They come predominantly from Mexico to California, Texas, New Mexico, and Arizona (and portions of other western states). Despite the dangers of migration, Latin American natives continue to move into the U.S. border region, and this migration has a negative effect on (an increase in migration decreases) HCAN. Income is also negatively associated with HCAN. Consequently, increases in income also have a tendency to lower HCAN. Other socio-economic factors are positively associated with HCAN include lacking education and language acquisition, and growing urbanization may increase HCAN. Consequently, future research is recommended in order to better understand the relationship between child well-being and the variables explored in this chapter. It is particularly remarkable to study the influence of migration on HCAN.

Although migration has been shown to have a negative effect on HCAN, the literature affirms that migrants undergo a process of trans-culturation through migration. Trans-culturation emerges from a conflict in opposing cultural values. Immigrants often experience victimization, depersonalization, and ambivalence (Comas-Diaz 2012). Further, Comas-Diaz explains that Hispanics live profound experiences of helplessness causing many to view themselves as inadequate and ineffective, resulting in their

alienation, frustration and poor self-esteem (Comas-Diaz 2012, Dutton & Hass, 2000, Erez 2000).

Discriminated and discriminator dynamics underline the life of the border. There is a racial collective mindset where the children are trapped in violent situations and are deterred from taking protective action due to deportation fear. In this reality, the victim tends to be blamed (Shetty & Kaguyatan 2002). This condition of systematic oppression of Hispanics is often released in the objectification and maltreatment of children. Shelley (2010) states that there are conditions that make a geographic region and a culture ripe for victimization. The border region has transient masses of population moving to and from the area. Legal and illegal immigrants come and go without any particular attachment to the region. Victimization becomes easier with fewer attachments and little to penalization.

In sum, given the literature and the findings suggesting that an increase in income and migration lowers HCAN, this chapter recommends the further study of the relationship between migration and child well-being. Supplementary border HCAN tests are also recommended to better understand the effects of race and ethnicity on child well-being. Finally, additional explorations of the effect of education, language acquisition, political culture, and urban sprawl on HCAN are recommended to draw more understanding about child well-being at home and abroad.

## CHAPTER 4. ANALYZING RELATIONSHIPS AMONG WELL-BEING MEASURES IN LATIN AMERICA

“Discover well-being, it is inside of you.”

Freddy Ehlers, Ecuador's State Secretary for the Presidential Initiative for the Construction of a Society of Good Life

### *Abstract*

This chapter examines the relationship between country well-being and other performance measures covering 134 countries—including the Latin American region—in 2011. Using several measures of well-being, this chapter uses a Spearman rank order correlation analysis to understand the relationship among the cross-country rankings, such as the Happy Planet Index (HPI), the World Development Indicators (WDI), the Global Peace Index (GPI), and the Corruption Perception Index. This analysis gives a sense of how current well-being measures relate. Using statistical analysis and qualitative policy document analysis on the case of Ecuador, the chapter also explores how a country's well-being varies based on their different geo-spatial location. The empirical findings suggest that most Latin American countries hold high HPI rankings, while their other objective performance indices are very low. New findings also suggest that life satisfaction becomes insignificant for Latin America, while it remains significant for the world. Still, peace-security and corruption remain significant for both Latin America and the world. Meaning that as GPI's violence and insecurity goes down, CPI's corruption perception goes down as well. On the other hand, Chapter 4 findings seem to indicate that HPI well-being rankings for the world and Latin America count no statistically significant correlations with the key variables of GPI peace-security and CPI corruption. Further, Peace-security and

corruption-transparency are significantly correlated with other quality of life measures including GDP PPP per capita income, and life expectancy. Finally, counter intuitive results suggest that peace and corruption indicators seemingly have no direct positive impact in furthering HPI rankings for a country. Instead, the findings indicate that an increase in per-capita-income, war, and corruption tend to have no correlation on the given HPI country ranking. Consequently, chapter 4 concludes that further studies need to be conducted on the quality of life and well-being implications of the statistical insignificance of life satisfaction correlations for Latin America. Moreover, the chapter recommends a future factor and path analysis to better understand, define, and measure well-being for Latin America and the world.

#### **4.1 Introduction**

The high well-being rankings in many developing Latin America economies during the last two decades have given rise to a body of work examining its causes and consequences. Scholars have differed in their explanations of the increase in well-being despite the deficient social, political, and economic institutions (Graham 2010). As explained in chapters 1 and 2, the focus of the literature on well-being measures for Latin America has largely been on subjective measures to determine the world ranking for a country.

Chapter 4 of the dissertation compares the well-being rankings for Latin America to other regions in the world. Given that academia has failed to evaluate the impact of governmental provision of peace-security, infrastructure, and accountability, this chapter

will evaluate alternative well-being rankings to illustrate the impact of the missing variables in current indexes. Further, the chapter also tests if there is any relationship between the different rankings and how these vary for Latin America and other regions. The study of the region's high well-being rankings give a sense of how different well-being measures relate (or do not relate) to one another for the region in the global context. The analysis is conducted by using the rank-order correlation analysis of current measures of well-being in Latin America and other countries.

This chapter employs the Spearman and Pearson coefficient correlations to examine how different country well-being rankings compare side by side. The correlations run two variables at a time to determine the extent to which the rankings are correlated to each other. For example, the statistical analysis in this chapter compares the Happy Planet Index (HPI) rankings with the Global Peace Index (GPI) rankings to evaluate the strength and direction of a correlation. In particular, the chapter focuses on how levels of national security (Global Peace Index ranks –GPI-), governmental accountability (Corruption Perception Index –CPI- rankings), and infrastructure (World Bank Development indicators –WDI- rankings) correlate with well-being (Happy Planet Index –HPI- rankings) in Latin America and other countries (Gilpin 1993). The questions the chapter is trying to answer include:

**Chapter 1.** How do well-being rankings and other country performance measures correlate with each other?

**Chapter 2.** What, if any, is the relationship of well-being and the effective governmental control of security and violence?

**Chapter 3.** What, if any, is the relationship between well-being and government accountability and corruption?

As Deaton (2008), the OECD (2013), Sen (2009), the World Bank (2012), Fukuyama (2010), Alkire (2013), and Reneirt (2011) note, measures of well-being include more than subjective perceptions because they encompass the objectively measurable realities of the world. The subjective perception refers to the self-perceived intangible position of individuals and countries on the well-being world scale. Objective measures of well-being, in contrast, quantify the strength of the tangible well-being of a country and its institutions. While the relevant literature focuses on estimating either one of these views or an incomplete version of the two combined, few papers (except Nery 2014, and Porter 2015-2016) explore the impact of governmental provision of basic goods and services in terms of security, and corruption clearly key components of well-being for individuals, countries, and the world.

Through combining both statistical and qualitative analysis of Latin America, the chapter addresses the government's role in promoting improvements in well-being, as measured by the populace's environment and access to goods and services. The chapter uses statistical and qualitative methods to evaluate well-being in Latin America, in terms of the government's effective control of security and violence, corruption and governance. The qualitative analysis was done through policy document analysis of the case of Ecuador.

The remainder of the chapter is organized as follows. Section 4.2 outlines the analytical framework to understand the contributions of government in well-being and

surveys the relevant empirical literature. An introduction to mixed methods is included in Section 4.3. The data sources and the empirical correlation model are specified in Section 4.4. Section 4.5 empirically investigates the significance of the relationship between well-being measurements rankings and other quality of life indicators. Section 4.6 details the empirical findings. The case study of Ecuador includes information from policy evaluation included in Section 4.7. The chapter concludes and provides policy insights for further study in Section 4.8.

## **4.2 Analytical Framework: Towards a Unified Well-being Framework**

This chapter of the dissertation argues that contradictory well-being rankings in Latin America are the product of omitted variables and methodological choices within the literature on how to measure well-being. Drawing from insights and contributions from the literature on well-being and government (Radcliff 2014 and Pacek 2013), the chapters suggests that government accountability and policy implementation in Latin America influence well-being, but are not captured by the current rankings. This chapter further suggests that the omission of certain variables in these rankings has a detrimental effect on the overall understanding and measurement of well-being. Conversely, the choice of variables included in some models influence both the public subjective and objective perceptions of well-being.

This chapter suggests that quality of life measures and human development indices omit important variables. These important variables include the provision of certain government services, in particular security as outlined above. The inclusion of a measure of security in quality of life rankings could resolve the paradox of well-being

definitions. This chapter also anticipates that there is a connection between well-being, resource allocation, and conflict. When the government provides services, (personal security and basic infrastructure, goods, and services) there is a decrease in conflict (North, Wallis, Weingast 2012). This connection promotes well-being and underlines the importance of the government in well-being attainment.

This chapter also affirms that it is not only the size of the state, in itself, that matters in well-being growth, as argued by Ledet, Radcliff, Paceck (2013) and Jakubow (2013). Rather, well-being depends on the strength of state institutions (World Bank 2000; ADB 2008, 2014) and the government's capacity to design and implement policies that promote transparency and accountability and secure the provision of basic goods and services. These include security, water, infrastructure, healthcare, and education. As a result, the capacity of a government to establish the rule of law and maintain order impacts the understanding and implementation of well-being growth policies. The argument is that on the theory that poorly functioning public sector institutions and weak governance are constraints to economic development (World Bank 2000) and well-being for Latin America. Government performance matters in capacity and capability building – “building effective and accountable institutions to address development issues and reduce poverty” (World Bank 2000).

Finally, the chapter forwards a new well-being framework for further study that includes the proposed 10 key dimensions and the essential indicators necessary to assess the state of well-being in Latin America. Table 4.1 below includes the often-omitted dimensions of well-being – governmental institutional accountability, security, and

infrastructure. The table also reviews other domains that inform a more complete measurement of communal and individual well-being experience over time.

Consequently, the theoretical and conceptual section below addresses a well-being framework that accounts for peace of mind and body in Latin America. The section also expands on the definitions of the proposed objective and subjective well-being indicators found in Table 4.1.

**Table 4.1 10 Key Well-Being Dimensions**

I. Governmental institutional accountability*	II. Infrastructure *
III. Economic security	IV. Health
V. Habitat (climat*) and environnement	VI. Education
VII. Security, law, and order*	VIII. Social: equality, inclusion, and migration*
IX. Subjective well-being (SWB)	X. Biometrics* (For future research)

Source: Author

\*Indicators inside the dimensions marked with an asterisk have often been excluded by various widely used models.

#### **4.2.1 Towards a new well-being framework for Latin America**

Most current measures of well-being in Latin America use primarily subjective measures. However, according to the literature (Hamilton 1932; North 1990; Ostrom 1999; Parsons 1999; OECD 2006; Engel et al. 2007; ADB 2014), and as displayed in Table 4.1, objective metrics for the individual and the collective provide a better well-

being performance measurement for the region. A robust well-being assessment must be comprehensive, if government policy is relevant, researchers must account for the ability of government to effectively deliver such policies and basic goods and services.

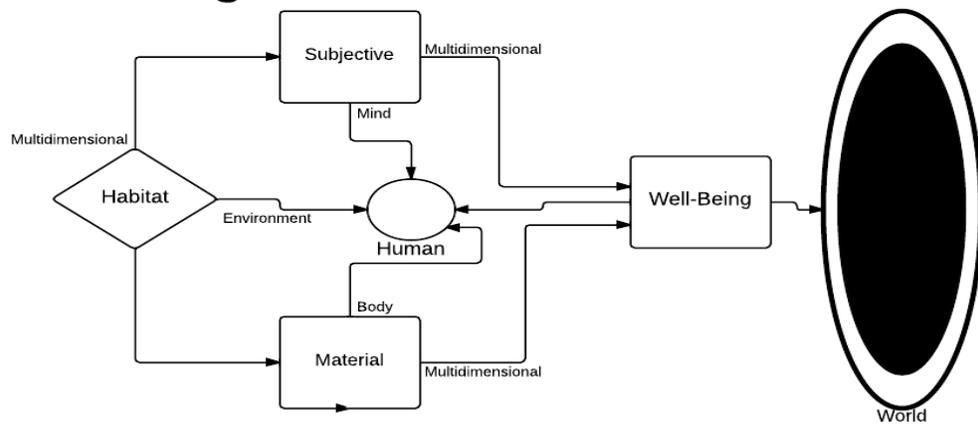
Consequently, a more robust measurement includes the dimensions proposed in Table 4.1: Governmental institutional accountability, security, infrastructure, political economy, health, environment, education, safety, social equity, and subjective well-being. These dimensions are key to assessing the role of governments in fostering the conditions conducive to human well-being.

As mentioned in Chapter 1, the dimensions involved in governmental provision of goods and services are especially important in understanding well-being in Latin America. Latin America has a colonial and dependency legacy that marked growth patterns in the region and affected its overall well-being. Lack of growth, inequality, and poverty has been present in the region for centuries. However, due to better government fiscal policies, in the form of conditional cash transfers (CCT) and wage labor inequality decreases, the region has benefited from a reduction in overall income inequality and poverty reduction. These events have fueled new growth in the region, fostering greater education, health, and economic well-being. They also point to the importance of the role of the state on achieving well-being. More comprehensive assessment of well-being in the region can help to adjust policies over time.

#### **4.2.2 Towards a Comprehensive Well-Being Conceptualization Based on Selected Empirical Literature**

As mentioned in Chapter 2, there is no uniform definition of well-being. Some use it to mean subjective happiness (e.g., Seligman 2002), while others define it in objective terms (e.g. Bates 2009, Alkire 2013, Stiglitz, Sen, Fitoussi 2009, Reinert 2012). However, this chapter forwards a conceptual model, where subjective and objective well-being concepts are unified to define how well individuals exist in their mind, body, and habitat. As can be seen in Figure 4.1 below, the well-being model includes a multiplicity of pragmatic measures like mental and bodily health, sustainability, and social, economic, and governmental performance. It also includes quality of life indicators and material preconditions like nutrition, physical health, proper shelter, jobs, income, education, potable water, sanitation, and security.

## Well-being Model



Source: Author

## **Figure 4.1 Depiction of a movement towards a new well-being concept**

### **4.2.2.1 The Subjective-objective mind-body response in time/space**

Figure 4.1 proposes a multidimensional well-being conceptualization model which depicts the human (mind, body) and the collective (habitat) as part of a greater whole (the world), where all the dimensions of human, natural, social, and economic capital can thrive together. Accordingly, well-being is experiential by nature, as it has to do with how well humans exist in their mind, body, and habitat can be defined as the quality of human experience in mind, body, space, and time. In other words, well-being is being defined by who, what, when, and how much of it is experienced by the individual in his or her habitat, and is both a means (capabilities to be and do) and an end in of itself (Sen 2009). It can be measured both in quantity and quality, objectively (i.e. nutrition, physical health, educational attainment, cognitive ability) and subjectively (how individuals describe life experience in terms of mood, feelings, emotions), and over time (temporal) and space (involving people, cities, countries, regions). The section below offers a more in-depth explanation of the proposed conceptual well-being model correlated with some of the material conditions (access to goods and services), habitat (governmental institutions), and subjective life evaluations (life satisfaction). This section integrates the multiplicity of well-being dimensions and its objective and subjective measures.

When an individual feels safe and healthy, her mind is more likely to be relaxed. Her body releases opioids into the blood stream, which is physically and mentally good

for the overall life experience of the individual (Davidson 2005). The positive effects of the subjective feeling of relaxation can be measured objectively with Functional Magnetic Resonance Imaging (fMRI) and other biometrics<sup>21</sup>. The inverse is also possible. When an individual's body is at risk (feeling hunger or danger), her mind is stressed (Davidson 2004). These subjective feelings in the brain trigger the fight-or-flight stress response (Siegel 2007, Hanson and Mendius 2009) for self-preservation. The mind's activity causes the release of "cortisol" (Davidson 2004) into the body, which adversely affects all other organs<sup>22</sup>. The individual's autonomic response to subjective feelings of stress can be measured objectively with biometric tools.

For instance, the individual's safety (or lack of it) is the 7<sup>th</sup> dimension in the framework. This dimension is often neglected in well-being models and includes both mental and physical aspects that overlap with other well-being dimensions. For example, safety overlaps with subjective well-being (Boniwell 2013 and Samman 2007), health, economic security, and the environment. Some of the mental aspects of feeling safe (or unsafe) include the positive and negative emotions of relaxation, stress, worry, and trauma (Frederickson 2009, Boniwell 2013, Diener 2009, Seligman 2009, Hansen and Mendius 2009) that influence the individual levels of happiness, satisfaction, and overall feelings of freedom (Sen 2009).

### **4.2.3 Collective Well-Being in Time and Space**

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<sup>21</sup> Biometrics is often omitted in well-being assessments. It is included here for future research because it provides objective evidence about the effects of the mind on the body and vice-versa.

<sup>22</sup>Stress/relaxation are valuable subjective measures that are combined here with other objective indices like nutrition, in the health dimension.

An individual who is safe would not always feel free inside the governed space. For example, an individual who is safe expects institutional law and order to regulate violent crime, terrorist activity, armed conflict, and unemployment. However, this expectation varies depending upon the space the individual occupies (Sen 2009). For example, any individual who “is” and “feels” safe needs adequate food and sanitation to be nourished (Reinert 2011, FAO 2013). The individual also requires adequate governance, infrastructure, education, and income to secure access to clean water for health reasons (World Bank 2012, Nussbaum 2011, Sen 2009, Alkire 2013). Accordingly, Barker (2004), Davidson (2004), and Gesh (2005) specify that well-being measurements include several health related indicators, such as the death rates, morbidity rates, life expectancy, malnutrition, and mental health (relaxation/stress).

Individual well-being also overlaps with other collective dimensions, including the environment and the society. An individual’s socio-economic and geographic location in Latin America (rural or urban) may influence their access to health care facilities or clean water (Evans 2004). Moreover, societal inequality perpetuated by the role of the state in terms of resource allocations has adverse effects on the achievement of gender equality (World Bank 2012) and minority inclusion (Estepan 1991) in the developing world. Consequently, the well-being model proposed in this chapter advances the field by accounting for some indicators seldom included in well-being measurements in the areas of safety (Ayres 1998), governmental role (Fukuyama 2010), and infrastructure (World Bank 2012).

#### **4.2.4 The Role of Government on Well-Being Policy Implementation**

Contemporary political conflict over the size and scope of government is abundant in the field of policy. This chapter attempts to appraise some of the roles of government on well-being achievements and the extent to which individuals find their lives to be satisfying. Considering individual rates of life satisfaction in developing countries in the region of Latin America, this dissertation argues that citizens have a better quality of life as the role of the government increases.

North, Wallis, and Weingast (2012) agree that the size of the government positively impacts the prosperity achieved in a country. For example, “open access orders control violence by creating powerful, consolidated military and police organizations that are subservient to the political system that satisfy Weber’s notion that the state possess a monopoly on the legitimate use of violence in its territory” (North, Wallis, Weingast 2012). They caution however against consolidating control of violence in the hands of the state, which it may use it for its own purposes. They claim that this type of “open access governmental structure is either missing” (North, Wallis, Weingast 2012) or lacking in countries that are corrupt like many in Latin America.

Still, recent poverty and inequality reduction in Latin America led by the government has also seen concurrent increases in the well-being of the population (United Nations 2013). Those statistics point to an obvious question: do governmental interventions to promote safety, growth, reduce inequality and alleviate poverty, ultimately contribute to greater levels of well-being? In particular, it is interesting to look

more closely into cross-national differences on well-being as affected by government intervention.

Few empirical works in the field address this question. Di Tella, MacCulloch, and Owsald (2003), Pacek and Radcliff (2008), and Veenhoveen (2000) all found a strong positive effect of generous unemployment benefits on well-being. Their findings, while very important, are lacking in other areas where the government holds important roles. Analysis of the government's role in providing security (protection from all harm) for citizens to flourish is needed to foster greater understanding in this area. Security includes social, economic, and personal protection. In other words, governmental security provision includes several protection dimensions, like resource, health, education, labor participation, financial, and personal (freedoms from) violence, corruption, and harm among other forms of safeguards to be delivered by the government. The defense of intellectual property is an example of a protection from financial harm that can only be secured by the government. In developing countries, the defense of this valuable asset is not always recognized as legitimate. Consequently, citizens often find that when the state does not regulate safety effectively, property can be taken away at any point. This is financially harmful to individuals and the collective. This is often the case in Latin America, where an individual can buy pirated reproductions of an individual's intellectual property in the billion-dollar film industry, for under the market price in the illicit market (Washington Post 2012).

Conversely, individuals in developed countries benefit from strong intellectual property laws, which protect and incentivize the invention of new technologies. In

return, the investment in governmental protection and regulation is very helpful to the well-being of the overall economy. The state also has the important role of securing the infrastructure of a country. Infrastructure is intimately related to public health. If the government provides proper access to fresh water, sewage, and waste management, the likelihood of individuals developing preventable (possibly fatal) diseases like cholera, dengue, and dysentery is reduced. In sum, the study of the role of the state in well-being provisions can prove to be a helpful exercise in the determination of a good assessment model. In the following sections, the chapter discusses the opportunities for developing a new well-being model by mixing a statistical rank order correlations and qualitative analysis. The study combines the Latin American correlations and the case of the government of Ecuador, a Latin American pioneer in well-being development and implementation. Ecuador presents a best practice model that provides opportunities for developing new well-being models tailored to fit the specific cultural realities of the countries in the Latin American region.

#### **4.3 Combining a Quantitative Correlation Analysis of Well-being Measures with the Case-Study of Ecuador: A Mixed Methods Design**

In the past, research was conditioned to a process using an instrument to reduce a large number of people to numeric data, or to the gathering of words by talking with a small number of people, and observing behavior. As Ritchie and Lewis (2003) eloquently point out in their book, *Qualitative Research Practice*, the combination of both qualitative and quantitative analyses advantageously renders the methodological triangulation of the study of the phenomena easier to corroborate. Corroboration of

triangulation is the confirmation of the accuracy, validity, and reliability of the study's findings. Hence, this chapter will combine methods both qualitative and quantitative to explore well-being from both perspectives.

Qualitative and quantitative researchers do similar work even if they go about it differently. They state an objective and a question, and they define a population for observation in a given space and time. Next, they develop a personalized research design and methodology to gather and analyze data. Finally, they present their findings in a coherent manner to increase knowledge and promote understanding.

Using mixed quantitative and qualitative methods helps to reduce the potential fallacies associated with each method. For example, quantitative studies are potentially more objective and save time because they utilize already gathered data (Hutchenson et al. 1999). However, the method can incur ecological inference fallacies or the study may erroneously assume that the average individual has the average characteristics of the group.

Qualitative methodology by nature seeks to understand deeply a smaller part of the aggregate (i.e. individuals and groups). Thus, qualitative observations enable comprehensive observations of real time events, spaces, and individuals as they occur naturally (Yauch and Harold 2003.) The researcher in the qualitative field can participate and interact with the objects of study. In that sense, qualitative methods differ from quantitative studies seeking to observe without any direct interaction a preselected, predefined, and predetermined population in an aggregated data set from a given time and space.

Still, while qualitative practices have strengths, they also include limitations in validity, subjectivity, transferability, and time/labor intensiveness. For example, problems with this approach include hasty generalizations or making a generalization about an entire group based on a prolonged small number of observations, a single case, or a few members of a group. However, this problem can be partly corrected with a rigorous qualitative research design that is complemented by the use of quantitative methods. Thus, provided that the quantitative study is valid, reliable, and objective, it can help correct transferability and validity issues associated with the qualitative approach.

The mixed methods approach research design is helpful in the study of well-being measurement for Latin America. Mixing quantitative comparisons of country rankings in the Spearman correlation provides a sense for how current well-being measures are interacting. Adding the qualitative case study for the country of Ecuador complements the understanding drawn from the statistical analysis. The case of Ecuador is particularly helpful for the understanding well-being measures, because it is the first Latin American country to introduce and implement well-being policy. The quantitative portion of the mixed methodology follows in the next section.

#### **4.4 Spearman Well-being and Quality of Life Correlations Research Design for Latin America**

In statistical research, the social sciences are often interested in examining correlation among two or more variables. In correlation research designs, the experiment divides the cases into different groups of one or more variables of interest. In this type of

research, participants are not usually assigned randomly to groups and the researcher does not typically manipulate anything. Rather, the researcher simply collects secondary data (i.e. Latin American well-being indicators) on several variables and then conducts some statistical analyses to determine how strongly different variables are related to each other.

For example, this chapter is interested in whether personal security is related to quality of life. Consequently, this chapter includes a sample of 134 countries, placing a special emphasis on Latin America. Then, the chapter uses a correlation analysis to determine how each country ranks on several pairs of indicators including governmental provision of security (GPI), and how each country ranks on quality of life. For example, it measures how each country ranks for peace and security and how each country ranks on life expectancy (World Bank 2014). It is possible that one may find that there is a strong relationship between personal security and life expectancy. In a preliminary examination of the results, the findings show that peace and security are negatively correlated to life expectancy. One may argue that this is logical because people with lower access to personal security and peace are more likely to die faster. However, this conclusion is too strong to reach based on correlation data alone.

Correlational studies can only tell us whether variables are related to one another but they cannot lead to conclusions of causality. One of the most basic measures of the association among variables, and a foundational statistic for several more complex statistics, is the correlation coefficient. Although, there are a number of different types of correlation coefficients, the most commonly used in social science research is the Pearson

product-moment correlation coefficient (Urdan 2005). Most of this section is devoted to the exploration of the correlation coefficient with a description of the Spearman rho coefficient (the Pearson variation that we will use in this chapter).

#### 4.4.1 Quantitative Correlational Research Design

This chapter focuses on non-parametric measurements of variable dependency (relationship) using Spearman rank order correlations. The dissertation will assess to what degree the repeated data values are a function of each other. Meaning, the analysis will be observing if the continuous sets of ranks are increasing (+1) or decreasing (-1) on a one-to-one relation of each other.

The Spearman Rho and Pearson coefficient analysis will explore if and how the variables undergoing study are correlated. For example, the dissertation will investigate if happiness is correlated with security in Latin America and other countries. The analysis will measure if there is a statistical dependence between the two variables and how the relationship between the two variables can be best described. This type of correlation analysis will help test the proposed hypotheses and answer the questions as listed below on Table 4.2 and 4.3.

**Table 4.2 Spearman Rho coefficient correlation method-Normative Strategy**

Comparing current conditions with expected outcomes			
<b>Testing Hypothesis 1:</b> Government accountability influences wellbeing outcomes			
<b>Testing Hypothesis 2:</b> Effectiveness of governmental control of violence and security has an effect on well-being.			
Population	Years	Dependent Variable	Independent Variables

Latin America OECD	2011	Happy Planet Rankings and its components	Corruption perception rank (accountability) Global Peace rank (security, violence) World Bank Governance Indicators (WGI) like GDP PPP income, GINI, poverty and others
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The Spearman rank correlation is used to measure variables like the ones described on Tables 4.2. and 4.3. The two variables are paired by a nominal variable (name of the country). The nominal value groups the measurement into pairs. In this case, the chapter analyzes if the two measurements, HPI and GPI, co-vary across a set of countries. The rationale for using this non-parametric assessment is that the data undergoing study in the dissertation is in the form of ranks. Since our data is already in ranks, the dissertation will run a correlation analysis for the calculated coefficients. The P-value from the correlation of ranks is the P-value of the Spearman rank correlation.

**Table 4.3 Spearman Rho coefficient correlation method-Normative Strategy**

Comparing current conditions with expected outcomes			
<b>Testing Hypothesis 3:</b> Governmental provision of access to basic goods and services <sup>a</sup> influences well-being outcomes.			
<b>RQ1.</b> How do well-being rankings and other country performance measures correlate with each other?			
Population	Years	Dependent Variable	Independent Variables
Latin America	2007 2009 2012	Happy Planet Ranking	World Bank Development indicators (Life expectancy, GDP PPP per capita, GPI, CPI)

- a. The goods and services included in this hypothesis relate to the additional factors that need to be accounted on a well-being measure including peace-security, corruption, GDP PPP per capita.

The questions for the chapter dictated the objectives of the study and suggested the best type of strategy to go about answering them. For instance, the chapter employs what the U.S. Government Accountability Office calls a combination of descriptive, impact, and normative, strategies to study well-being metrics (GAO-pe-1015.) Section 4.7 provides information about the reported well-being conditions in Ecuador, an extreme case of conceptual well-being innovation and advancement in Latin America. The normative portion of the dissertation research compared/correlated the current state of well-being in Latin America ascertained by the well-being rankings<sup>23</sup> Finally, the impact of the research determined whether observed conditions, and outcomes can be related to the role of the Latin American governments in securing well-being for their citizens.

#### **4.4.2 Goals for the Analysis**

The analysis of the region's high well-being rankings give a sense on how different well-being measures relate (or do not relate) to one another for the region in the global context. The analysis will be conducted using the rank-order correlation analysis of current measures of well-being in over 134 countries including Latin America. The rationale for focusing on Latin American countries is to provide a relevant comparison point (highest well-being world rankings) that has undergone in-depth study, and to better

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<sup>23</sup> Ecuador's current measurements do not match the rhetoric but it may be too soon to tell given the short time span the government has spent on its commitment to the advancement of well-being.

understand which indicators can be included in future research to build a more comprehensive well-being measure for the region. In sum, this chapter will develop and forward a conceptual contribution to the field by providing a proposed integrative framework lens for well-being, combining the complimentary models and adding region's lessons learned. In addition, the chapter also makes recommendations for future studies on factors to build a well-being best-fit model for the region.

#### **4.4.3 Research questions and hypothesis**

Currently, Latin American well-being rankings are controversial and require closer examination. Oftentimes, Latin American countries are ranked as having high well-being levels (see figure 4.2). However, these measurements fail to account for the region's security, infrastructure, and institutional problems. For example, Latin American countries that ranked high in happiness concurrently ranked high in insecurity-violence (figure 4.3) and corruption (figure 4.4). Latin American countries with high happiness rankings also present high violence-insecurity, and corruption, along with low educational attainment, limited access to healthcare, poor governance, and lack basic infrastructure products and services. In order to further understand these well-being rankings, this chapter analyzes the relationship between well-being, violence, security and other factors, to determine if and how issues of violence and corruption undermine the state of well-being in Latin America. Figures 4.2 - 4.4 explore the preliminary geospatial mapping of the statistics to observe if there is any relationship between the 3 primary variables undergoing study in this chapter: happiness (4.2), peace-security (4.3), and corruption (4.4).



Note: This world map shows the geospatial distribution analysis of secondary country data on Happiness ranking for 143 countries during the year 2013.

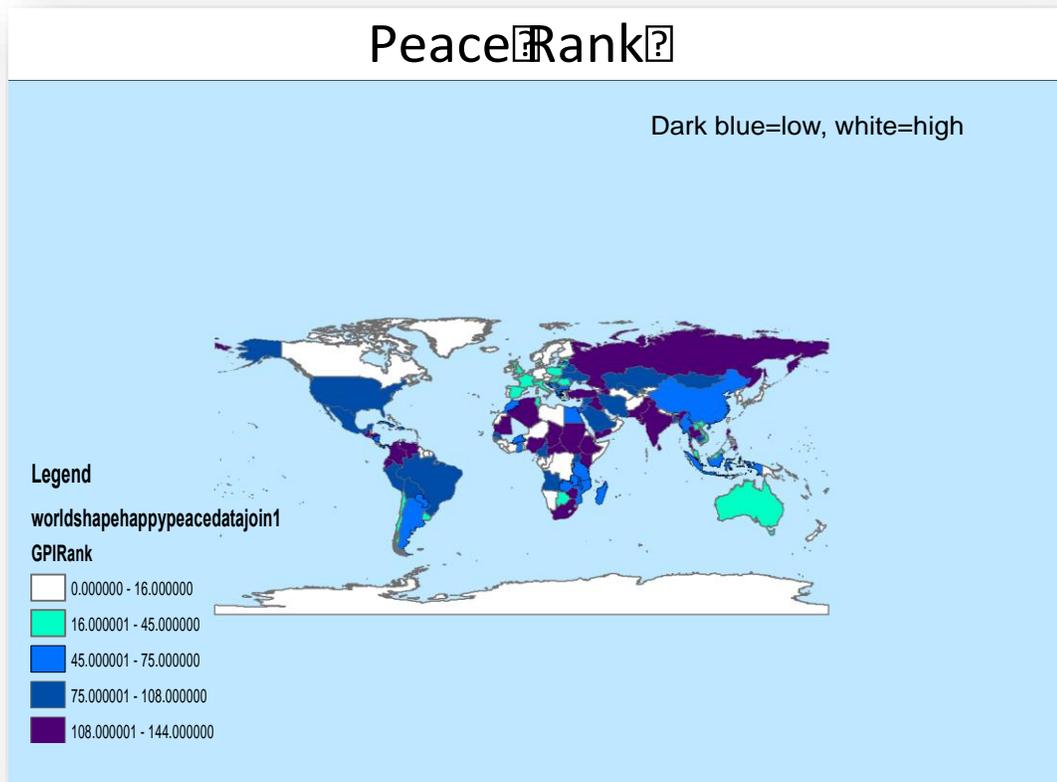
Source: Author with secondary HPI ranking data from the Happy Planet Index (HPI)

### **Figure 4.2 2013 Geospatial World Map of Happiness Ranking Distribution**

Figure 4.2 shows the happiness rankings geospatial distribution per country.

Happiness levels are colored based on the reported well-being and happiness thresholds per country. The top 18 countries (Colombia) have been colored in red because they have the highest happiness rankings according to the HPI. Many of the highest-ranking countries are located in Latin America where the GPI and CPI levels are inversely

spatially distributed. Next, follow the orange (Mexico and Venezuela) and yellow colored countries, which make up the second and third highest-ranking tier in terms of happiness. Lastly, the figure depicts the light and dark blue colored countries, including the U.S., which the map identified as having the lowest happiness ranking. Correspondingly, Figures 4.2 and 4.3 show that HPI rankings are disjointed from peace-security, and corruption rankings.

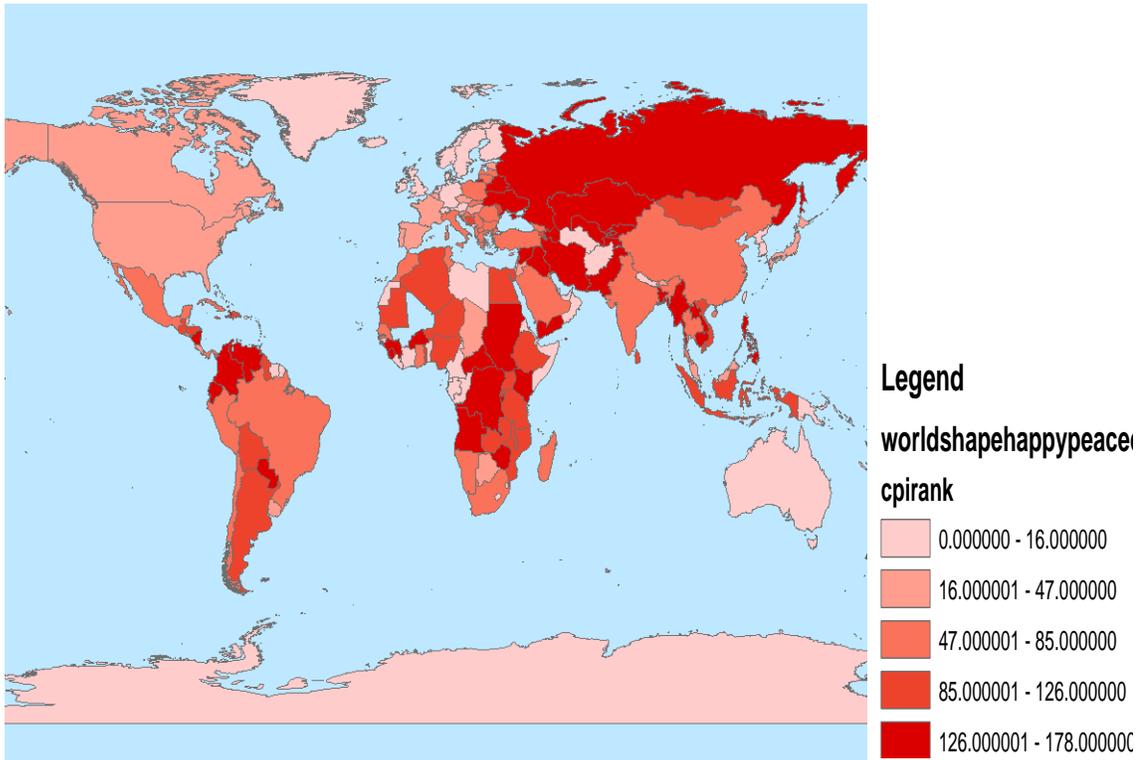


Note: This world map shows the geospatial distribution analysis of secondary country data on peace-security rankings for 144 countries during the year 2013.

Source: Author with secondary GPI data.

### **Figure 4.3 2013 Geospatial World Map of Global Peace and Security Ranking Distribution**

Figure 4.3 shows peace-security rankings geospatial distribution per country. Public safety levels are colored based on the reported peace and freedom from violence thresholds per country. The top 16 countries have been spatially colored turquoise because they have the highest peace and security levels (Australia, Spain). Next, follow the light blue countries, which make up the second and third highest-ranking tier in terms of peace-security (U.S). Lastly, the figure shows the dark blue and purple colored countries, including Colombia and Venezuela, which the map identified as having the lowest peace and security, given the high levels of violent crime and war. Recall that many of the same lowest-ranking (given their violence and insecurity) countries are located in Latin America, including Colombia, and Venezuela? These same countries also ranked highest on the HPI's happiness.



Note: This world map shows the geospatial distribution analysis of secondary country data on Corruption perception rankings for 178 countries during the year 2013. year 2013.

Source: Author with secondary GDP data from the Happy Planet Index (HPI)

**Figure 4.4 2013 Geospatial Map of Corruption Distribution in Latin America**

Figure 4.4 shows corruption rankings geospatial distribution per country.

Corruption levels are colored based on the reported corruption assessment thresholds per country. The top 16 countries have been spatially colored pink because they have the highest transparency levels (U.S. and Canada). At the end of the spectrum, moving all the way to the bright-recolored countries, the map shows Colombia and Venezuela, which the map identified them as having the highest levels of corruption. The same high corruption ranking countries, Colombia and Venezuela, have high violence and insecurity rankings, while simultaneously ranking the highest on the HPI's happiness. In sum,

Figures 4.2 to 4.4 support well the conclusion that HPI's rankings are excluded other important well-being factors like peace-security and transparency.

Given the findings above, this section of the chapter explores three questions.

The research questions are:

**RQ1.** How do well-being rankings and other country performance measures like peace and corruption correlate with each other?

**RQ2.** What association, if any, is there between effectiveness of governmental control of violence and security and well-being?

**RQ3.** What association, if any, is there between governmental accountability, transparency, corruption, and well-being rankings?

As we will see some of the well-being indicator rankings in the Spearman and Pearson coefficient scale are negatively correlated. Some of the well-being indicator rankings in the Spearman rho coefficient scale are positively correlated. Some indicator rankings are not related at all. Consequently, this chapter contributes to the understanding of how well-being is measured by correlating and comparing several indices.

#### **4.5.5 Data sources, previous studies, and participants**

Country statistics for the statistical analysis were taken from secondary data collected from the HPI, and the independent variables listed below. The Dependent Variable is the HPI ranking. The aggregated country data ranks 134 countries. The statistical analysis includes the following independent variables; the World Bank data base (World Bank 2014), the Institute of Economics and Peace (IEP 2014), the United

Nations, The World Governance Indicators (WGI 2014), Transparency (CPI 2014), and the World Health Organization (WHO 2014). From these indexes, the analysis correlates subjective and objective measures. Subjective measures of well-being include experienced happy life years from the HPI (not the HPI itself), and life satisfaction (from the world values survey and Latino barometer). Objective measures of well-being include life expectancy (UNDP human development data), peace-security, corruption and PPP GDP per capita. HPI rankings and specific human development, peace, and corruption rankings are also included in the correlation analysis. In order to assess the government quality and effect on well-being, the statistical analysis will include the following rankings: political stability, corruption control, governmental effectiveness, voice and accountability (all of these components can be found in the GPI and CPI (Strahan 1982)). The area of economic security will be assessed through the use of the GINI coefficient and gross domestic product (GDP) per capita (PPP), a World Bank development indicator statistic.

The quantitative data included in this chapter were collected by sources other than the author. The HPI, GPI, CPI, and WVS, World Bank, and UNDP have produced the core data for the statistical analysis. Development policy experts and other social scientists have vetted the data. The Happy Planet Index data was first available in 2007. Few analyses of the HPI have been published to date, and New Economic Foundation (NEF) is the lead on this front. The HPI measure combines income, life expectancy, well-being, and ecological imprint to rank countries around the globe. The NEF compiled some of the HPI data to show how successful countries are at generating or fostering

happiness for their citizens. They measure well-being in terms of efficient resource use or low carbon foot print. However, the HPI's definition and measure of well-being largely differs from other scientists. It lacks many measures for human survival and strategies on how to resolve problems like infant child mortality. This is in direct disaccord with Sen's (2009) idea that well-being must be concerned with all "material preconditions" or capabilities. These play an important role in determining collective well-being, because for example, "it is difficult to be well/happy when engulfed in a malarial fever, and government priorities to provide bed-nets can be appropriate" (Reinert 2011).

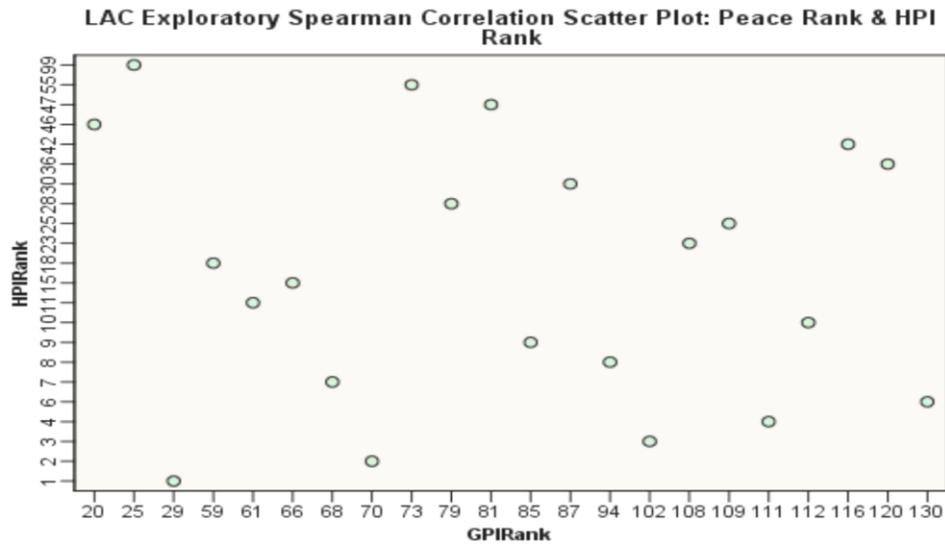
Consequently, this chapter proposes a more comprehensive approach to the measurement and analysis of well-being phenomena. The chapter measures the relationship of indices never combined before including HPI's efficient resource use (low carbon foot print), the World Bank (WDI), and others ranks listed below. In this way, the chapter focuses on how other measures, like GDP, the GINI coefficient, poverty, and peace (GPI), and corruption (CPI), affect well-being. The quantitative portion of the research was submitted and approved by the Mason's Institutional Review Board (IRB) given the existing nature of the data and the lack of identifying information in the datasets.

#### **4.5.6 Spearman Rho Correlations**

According to Field (2009) sometimes data are recorded as ranks. Ranks are a form of ordinal data and require a different type of statistic to calculate the correlation between two variables. In this case, the Pearson and Spearman rho, a specialized form of the Pearson  $r$ , are appropriate.

#### **4.5.6.1 When Can We Use Correlation and What Does It Tell Us?**

Social science research uses correlation coefficients to identify how two variables are related to each other (Field 2009). For a correlation, both of the variables must be measured on an interval or ratio scale and are known as continuous variables (country rankings are perfect for this, when done with the Spearman variation of the Pearson correlation (Field 2009)). For instance, suppose we want to test if there is a statistically significant relationship between the HPI and the GPI ranking for a given country. Logically, one would suspect that if a country ranks high on happiness, then it would also rank high on peace and security. However, the HPI country ranking for Latin America is not positively related with the GPI. In fact, the HPI and GPI are not related at all as can be seen on result tables 4.6.- 4.8., because the HPI does not take peace and security into account when measuring well-being. This is right on point with what we found on our exploratory examination of the two variables as can be seen below on the correlation scatter plot figure 4.5.



Source: Author

**Figure 4.5 Latin America Exploratory Scatterplot Visualizing HPI and GPI Correlation**

As shown in scatterplot Figure 4.5, the two variables do not seem to be related. The scatter plot and the analysis output confirms our previous finding that the relationship between the HPI and the GPI is not statistically significant. The counterintuitive findings indicate that, while many Latin American countries score poorly on peace and security ranking scores (because of political turmoil, civil unrest, and poor political and economic institutions), they can still rank high on happiness and well-being on the HPI. Indeed, many countries spend substantial resources to achieve happiness, but have fallen short of improving well-being in terms of civil security and peace.

#### 4.5.6.2 Calculating the Correlation Coefficient

In statistical analysis, correlation coefficients measure both the strength and direction of a relationship between two variables. According to Myles and Banyard (2007), there are several formulas that can be used to calculate the correlation coefficients. The formulas produce the same result and differ only in their ease of use. The formula here presented requires the standardization of the variables, or subtracting the mean from each score in the chapter's sample and dividing the same by the standard deviation. This operation provides a z-score for each case in the sample. Those members of the sample with scores above the mean will have positive z-scores and those below the mean will have negative z-scores. In this chapter, the Pearson and Spearman correlation method was used to analyze ranks correlation covariance<sup>24</sup> (Field 2009). The Spearman correlation coefficient is defined as the Pearson correlation coefficient between ranked variables. Below is the correlation formula used.

#### Spearman rho Correlation Formula

$$r = 1 - \frac{6 \sum d^2}{N(N^2 - 1)}$$

$$r = \frac{\sum(ZxZy)}{N}$$

**$r$  = Pearson Product for ranks-moment correlation coefficient**

<sup>24</sup> A statistical measure on how much two random variables change by analyzing them together.

$Zx$  = a rank z-score for variable x (Happiness)  
 $Zy$  = a paired rank z – score for variable y  
 $N$  = the number of pairs of x and y scores

#### **Equation 4.1 Formula for Correlation Coefficients**

Pearson and Spearman rank order correlation coefficients are a powerful statistic. They help determine whether on average the values of one variable are associated with the values on a second variable (Pearson 1935, Neyman 1935). However, correlation coefficients do not explain causation. Correlation explains association, but does not predict causation. Correlations imply that a variation in the scores in one variable corresponds with a variation on the scores of a second variable. Causation means that variation in the scores on one variable cause a change in the other variable. Still, it should be noted that association of variables need to be demonstrated for there to be a causal relation between two variables (Barnard 1963, Savage 1976).

According to Field (2009), there are several important features of correlations (Field 2009). First, simple correlations are designed to study linear relations between variables. For example, a positive correlation between two variables gives scholars a tool to predict how much the scores in one variable will increase with each corresponding increase in the second variable (Field 2009). However, not all relationships between variable are linear. For example, there is a curvilinear relation among some variables. We call a curvilinear relationship, one that began positive on the lower levels and become negative on higher levels of the correlation estimation. The correlation coefficient may be small suggesting a lesser correlation that may actually exist.

## 4.6 Quality of Life Correlation Empirical Results

We start with our baseline model as outlined in Equation 4.1 that estimates the Spearman rank covariance in the z-scores of our variables. The first step in understanding how coefficients are calculated here is to notice that this chapter is concerned with observing the sample's scores on two variables at the same time. Returning to our previous example on country's well-being and peace ranking, Table 4.5 at the end of the chapter in the appendix displays a sample of eight countries' data on the HPI and GPI ranks.

The scores must be paired for each variable to conduct correlation analysis. For each country in the sample, the X variable (HPI well-being ranking) is paired with its own country score on the Y variable (GPI peace-security ranking). To establish a correlation analysis on well-being and peace between Latin America, and other countries, we can use an example including a couple of countries to compare: Venezuela and Denmark. Venezuela ranks high on well-being, but also ranks very low in peace-security. Conversely, Denmark ranks very high on peace-security and very low on well-being. However, as previously seen in Figure 4.2 the HPI is not correlated to the GPI rankings.

As the results summarized by Tables 4.6 to 4.9 illustrate, there is a statistically significant relationship between several of the key quality of life variables, including GPI, CPI, life satisfaction, life expectancy and PPP GDP per capita. Consequently, we can conclude that there is an interaction between several of the variables. Based on the global scatter plot for 134 countries in the world, ranked by the CPI and the GPI, a positive relationship between the two ranks can be identified. Thus, a rise in corruption

is associated with a country's insecurity increase. However, the correlations are more clearly observable on Tables 4.6, through 4.9. Based on our discussion of correlations earlier in the chapter, our next step is to examine the relationship between our variables to determine significance. Correlation Tables 4.6 to 4.9 show which relationships are statistically significant. Several quality of life variables turn out to be significantly correlated with other rankings. Variables counting particularly highly correlations with most other rankings include peace-security, corruption-transparency, life satisfaction, life expectancy, happy life years, GDP per capita in terms of purchasing power parity. However, well-being rankings for the HPI count fewer statistically significant correlations. The strongest Spearman rho correlations (being closer to + or - 1) are presented by the ranking variables, including GPI, CPI. In addition Pearson correlations including life satisfaction, life expectancy, happy life years, PPP GDP per capita, are also high. However, the key interaction term of interest involving well-being, corruption, and peace-security -- which allows us to test the impact of peace-security and corruption-transparency on well-being -- is insignificant. With the exception of the negative interaction between well-being and life satisfaction, life expectancy, happy life years, and GDP none of the other political, environmental, and economic variables turn out to be significant determinants. Further, the variables that are statistically significantly correlated with the HPI's well-being rankings of a country appear to be negatively correlated. This finding proves counter intuitive and right on point with our previous observations on figures 4.2 to 4.5. The findings seem to indicate that there is no statistical significant correlation between the HPI and peace-security, and corruption.

**Table 4.6 2011 World Spearman Rho Quality of Life Correlations**

<b>Spearman's rho Correlations</b>	<b>Wellbeing</b>	<b>Peace-Security</b>	<b>Corruption</b>
<b>Well-being HPI rank</b>	1.000	-.079	.055
<b>Peace-Security (GPI) rank</b>	-.079	1.000	.441**
<b>Corruption (CPI) rank</b>	.055	.441**	1.000
**. Correlation Coefficient is significant at the 0.01 level (2-tailed) *. Correlation is significant at the 0.05 level (2-tailed). N=134			

**Table 4.7 2011 Latin American Spearman Rho Quality of Life Correlations**

<b>Spearman's rho Latin America Correlations</b>	<b>Wellbeing</b>	<b>Peace-Security</b>	<b>Corruption</b>
<b>Well-being HPI rank</b>	1.000	-.112	.162
<b>Peace-Security (GPI) rank</b>	-.112	1.000	.542**
<b>Corruption (CPI) rank</b>	.162	.542**	1.000
**. Correlation Coefficient is significant at the 0.01 level (2-tailed) *. Correlation is significant at the 0.05 level (2-tailed). N=22			

As is evident, in Table 4.6 and 4.7 the Spearman rho coefficient conclusion hold true for the world and the region of Latin America as well. Two quality of life rank order variables turn out to be highly statistically significantly correlated with other rankings. In particular, highly correlated rankings count: the GPI Peace-security rank, which is positively correlated with CPI corruption, (world  $r = .441$ , Latin America  $r = .542$ ). Meaning that as GPI's violence and insecurity goes down, (two-tailed,  $p < .01$ , *ceteris paribus*). CPI's corruption perception goes down as well. In other words, the closer to zero on the peace and security rank (the more peaceful-secure the country) the less corruption (more transparency) the country is perceived to have. However, well-being rankings for the HPI count no statistically significant correlations with the key variables of GPI peace-security and CPI corruption. The strongest Pearson correlations (being closer to + or - 1) are presented by the ranking variables including corruption-transparency, life satisfaction, life expectancy, and GDP with most of our other indicators as can be seen on tables 4.8 to 4.9. However, the key interaction term of interest involving well-being, corruption, and peace-security -- which allows us to test the impact of peace-security and corruption-transparency on well-being -- appears to be insignificant. However, there seems to be exception with the negative interaction between HPI, life satisfaction, life expectancy, happy life years, and GDP.

**Table 4.8 2011 World Quality of Life Pearson Correlations**

Pearson Correlations					
	LifeSat0-10	LifeExpY	GDPPPP	GPIRank	Cpirank
LifeSat0-10	1	.838**	.696**	-.238**	-.586**
LifeExpY	.838**	1	.657**	-.321**	-.602**
GDPPPP	.696**	.657**	1	-.461**	-.747**
GPI rank	-.238**	-.321**	-.461**	1	.463**
CPI rank	-.586**	-.602**	-.747**	.463**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed). N=134

**Table 4.9 2011 Latin America Pearson Correlations**

LAC Correlations	Lifesatisfaction	LifeExpct Y	GDPppp	GPIRank	CPIRank
Lifesatisfaction	1.000	.535*	.356	-.186	-.330
LifeExpctY	.535*	1.000	.543**	-.524*	-.520*
GDPppp	.356	.543**	1.000	-.446*	-.526*
GPI rank	-.186	-.524*	-.446*	1.000	.629**
CPI rank	-.330	-.520*	-.526*	.629**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed). N = 22

\* . Correlation is significant at the 0.05 level (2-tailed).

Given the high degree of correlations for both the world and the Latin American region for other variables of concern including peace-security and corruption, it is important to note a couple of correlations presented by the two statistically significant variables. First, the two variables have a positive statistically significant relationship for the world ( $r = +.463$ ) and Latin America ( $r = +.629$ ), (two-tailed,  $p < .01$ , *ceteris paribus*). This can be interpreted as meaning that as countries rank at the top of the most peaceful and secure (most peaceful-secure being ranked 1 and most violent being ranked 132),

their corruption perception is also better (most transparent and accountable being ranked 1 and most corrupt being ranked 132). The inverse relationship also holds—as violence increases, corruption increases. In addition, the two variables present significant relationships with other variables. For example, peace and security is significantly negatively correlated with other variables, including life satisfaction world (-.238, not significant for Latin America), life expectancy world (-.321) LA (-.524), and GDP world (-.461) LA (-.446), at the (two tailed,  $p < .01$ , *ceteris paribus*<sup>25</sup>). In addition, corruption is also negatively statistically significantly correlated with other variables, including life satisfaction world (-.586, not significant for LA), life expectancy world (-.602) LA (-.520), and GDP world (-.747) LA (-.526), at the (two tailed,  $p < .01$ , *ceteris paribus*).

As Table 4.8 shows, there are no fundamental differences from global to regional well-being variable interaction. The interaction of well-being, peace, corruption, and other variables is insignificant. In addition, well-being, peace-security, corruption, and transparency hold the same interaction with other variables globally and regionally. In fact, statistically significant interactions in terms of corruption and insecurity hold for both the world and Latin America. In addition, another interesting finding to note is the change in statistically significant interactions between peace-corruption and life satisfaction for the world and the statistical insignificance their relationship takes on in the Latin American region. How does Latin America's Life Satisfaction vary from the rest of the world when related to peace-security, and corruption? This is an interesting

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<sup>25</sup> Please note that these are bivariate correlations and it is possible that the degree and associations' directions could change, or be different if appropriate variables are controlled for in the correlations. Consequently, this recommended for further study.

question to explore in a future study. These results have significant policy and measurement implications both globally and for the region.

Additionally, the results shown in Tables 4.7 and 4.8 show three important points. First, the behavior of coefficients of interest pertaining to well-being is consistent and robust across the Latin American region and the world, meaning well-being appears to not be significantly statistically correlated with any other quality of life measure provided here. Accordingly, in our second case, where we had split the sample to only reflect Latin America (22 countries), we find that our results are consistent for the region as well. This suggests that the effects of other variables on well-being remain constant. Secondly, the relationship remains constant in the region for our two other variables of interest—peace-security and corruption-transparency, meaning our results appear to show that as peace goes up so does transparency for both the region and the world. Further, the relationships for all other variables remain constant in the same direction (positive or negative) for our entire sample both for the world and the region (excepting life satisfaction). Their coefficients continue to perform at the same level in terms of statistical significance. Overall, the key point that appears to surface from these exploratory results is that the relationships between several quality of life measures remain broadly the same for the Latin American region and the world. The third and final finding develops a new understanding about the potential differing subjective well-being perceptions on life satisfaction in the region when compared with the world. Apparently, whilst undergoing the same type of analysis, life satisfaction seems to become insignificant in Latin America, and remain significant for the world. This new finding suggests that there may

be some diversity in life satisfaction perceptions across the world. The next section, delivers the case study of Ecuador. Ecuador presents a best practice model that provides opportunities for developing new well-being models tailored to fit the specific cultural realities of the countries in the Latin American region.

#### **4.7 The Qualitative Case Study of Ecuador**

This section of the chapter attempts to answer some of the “how, and what well-being policy questions” as can be seen on below. The qualitative methods<sup>26</sup> used in this chapter include primary document analysis. The purpose of the qualitative analysis was to provide a description of the current conditions of well-being policy in Ecuador and to determine what if any are the factors that influence the conditions. This section of the chapter focused on answering the research question of what, if any, is the relationship between the government policy and well-being. The qualitative methodology is explained below.

##### **4.7.1 Qualitative Methods Background on Ecuadorian Policy Document Analysis**

The qualitative methodology used to complete this exploratory chapter includes document analysis (Wedel 2001). This chapter used primary policy documents to collect data about the well-being and security policies in Ecuador. The documents the researcher analyzed include national legislation, executive orders, government documents, and general literature.

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<sup>26</sup> (A complete research Protocol was submitted and approved by the Institutional Research Board –IRB- to conduct the research).

During a visit to Ecuador and later some informal interviews with Ecuadorian experts including the Minister of well-being Freddy Ehlers (and staff), Ambassador Francisco Borja (and staff), and Principal well-being statistician from the National Institute of Census and Statistics (Instituto Nacional de Censos y Estadística -INCE-), the researcher was introduced to the staff as an expert working on well-being. They pointed out the main documents that frame Ecuadorian well-being policy. No data was collected from the interviews, however, the experience, listening, observing, learning, interacting, and reflecting (Fuller 2004) informed the construction of the document analysis reported in this chapter. Later, the researcher was invited to the ministry (department of well-being), where she was able to meet one on one with the people who are implementing the well-being policies in the country of Ecuador, and to see the ministry, and their organizing documents. Further, the minister and staff encouraged the researcher to collaborate and share her knowledge on well-being. All qualitative research was conducted following the Human Subjects procedures as required by the Institutional Research Board (IRB).

Several main patterns or themes were identified throughout the documents narrative. The first theme included the issue of how to define well-being, and the diversity of definitions. A second theme identified was the problem on how to measure well-being in a standardized way. A third theme that surfaced was the citizen's well-being awareness. Finally, the role of the government in advancing well-being emerged as a major theme. This chapter reports a first level analysis of the document analysis by

concentrating on describing the data discovered (Ryan and Bertrand 2014), given this is a pilot exploratory analysis.

The researcher followed a systematic procedure to analyze the well-being documents. The researcher crafted a written document analysis worksheet. The worksheet consisted of three classification categories. The first category identified the type of document, the author, and date of the document. The second category identified the document's intended audience. The third category identified the purpose, and any other relevant information about the document. After identifying all relevant document information, the researcher proceeded to report on the findings. The next section in this chapter discusses the documents as they relate to the research questions.

#### **4.7.2 An introduction to Ecuador's Well-being Views: A Latin American Pioneer**

In the book of Buen-Vivir 'good living' (2015) the Ecuadorian Ministry of Buen-Vivir, defines well-being from a multi-cultural perspective encompassing all the indigenous peoples of the Americas. Accordingly, along the Andean mountain range, the term used among the Kichwa (Ecuador and Colombia) is "Sumak Kawsay." In its original meaning, Sumak refers to the ideal of the beautiful realization of the planet (Pachamama). Kawsay defines a full life with dignity (Buen Vivir 2015). Under this premise, life is crucial, while the relation of harmony among humanity and nature must be maintained.

Accordingly, the local literature supports the indigenous wisdom based definition. For example, the neighboring Guaranies (Paraguay, Brazil, Argentina, and Bolivia) know

it as the Teko Porâ or Teko Kavi. The Aymara peoples (in Bolivia and Peru), call it “Suma Qamaña.” The Suma Qamaña is synthesized in the phrase “may we all go together as one, may no-one stay behind, may everything be enough for everyone, and may no-one be found wanting for anything.” Aymara thinkers like Huanacuni (2013) and Choquehuanca (2010) signal to the difference between well-being and development. They assert that the occidental notion of development values capitalism and wealth creation, money, and not life. As such, it implies to destroy nature and people, and to compete in a game where there are winners and losers. Development also implies that a lot of people (losers) will be in poverty, while few winners will be rich. Consequently, the minister Ehlers and the President, warn on their TV forums that this global crisis calls indigenous people to advance ancestral wisdom on well-being that values human life, culture, and nature. In response to this growing movement to advance well-being in the region, the Bolivian government’s constitution instituted article number 8 that promotes the following well-being ethical principles of “ama quilla, ama llulla, amasuwa” (no seas ocioso, no seas mentiroso, ni seas ladron), is the Spanish translation of the paraphrased sentece meaning: do not be lazy, do not lie, and do not steal.

Evidence of the concept of *buen-vivir* is not only found among the Andean peoples of the Americas, it also found in Meso-America. For example, among the Tzeltales, an indigenous pueblo of Mayan origins located in Los Altos (Chiapas, Mexico) and among the Miskito in Nicaragua (Martinez 2004), exists a notion of well-being denominated as “*Lekil Kuxleajal*” and “Laman Laka” for the later, or armonía de vida or good life (Mariscal 2014). Similarly, in Panama the Kuna people refer to “Balu Wala” or

the good life represented by the balanced relationship between the cosmos, mother earth, and humanity (Guidi 2014).

#### **4.7.3 Selected Ecuadorian Well-being Literature**

Several Ecuadorian thinkers including Viteri, Macas, Vargas, Juncosa, and Acosta (1990) began a debate over what constitutes well-being and allowed for the concept of the Sumak Kawsay to be rescued. According to the Sumak Kawsay thinkers, the development ideology failed globally (Viteri 1993). Consequently, they appealed to a paradigm shift to reach well-being under the definitional tenants of the Sumak Kawsay (a state of harmony among peoples, cultures, and nature). Further, Larrea (2011) affirms that well-being (*buen vivir*) is a concept that was born within the human being, and is still under construction. She affirms that the inclusion of the Sumak Kawsay the Ecuadorian constitution surpasses the reductionist vision of development as economic growth and establishes a new perspective where governments place humans at the center of the development and its end is to achieve well-being.

In addition, Ecuadorian economist Ramirez (2013) defines well-being as the achievement of the flourishing of humanity, in peace and in harmony with nature for the indefinite prolongation of human cultures. In his sense, well-being implies that real liberties, opportunities, capacities, and capabilities of the individuals are amplified in a way that allows them to simultaneously achieve the end that society and collective identities value as an objective for life. In his words, this means that each individual has access to achieve both the material and subjective ends valued without dominating

another. In his view, well-being calls for a collective consciousness that invites us to recognize, understand, and value, one another.

Moreover, Ecuadorian President Correa confirms the importance of well-being in his own governmental agenda, and the role the government has in its advancement. For example, in 2015 during his visit to the Vatican on climate change, he stated that the Sumak Kawsay of the Andean people means to live in dignity, with access to all basic necessities, in harmony with one's self, one's community, diverse cultures, and with nature.

In sum, Ecuadorian Sumak Kawsay or well-being thinking is marked by the principles that a relationship of harmony between human and nature is at the center, and life has a purpose inspired on serving the greater good. In this sense, the Sumak Kawsay comments support this dissertation's thesis that sufficient material and subjective conditions are necessary to achieve well-being. Accordingly, the sufficient and necessary material conditions for a life with dignity and the subjective conditions that promote individual and collective are both necessary in the achievement of sustainable well-being.

#### **4.7.4 The State of Ecuador's Well-being policy**

According to Ehlers (2016), in Ecuador the Sumak Kawsay (well-being) has become the alternative development model that the indigenous populations and social movements forwarded to the Ecuadorian government. In response, the government has taken several measures to deliver Sumak Kawsay in the country through legitimate legislation, the creation of a ministry (governmental department), and the systematic qualitative and quantitative measurement of well-being.

### **a. Ecuadorian Well-being, a Governmental Prerogative by Constitutional Mandate**

In Ecuador, the notion of well-being was first underpinned in the *Plan Nacional de Desarrollo 2007-2010* (National Development Plan –PND-). Later, in 2008, for the first time in Latin American history, an entire constitutional article is dedicated to the human rights of well-being of Ecuador. Article II of the Ecuadorian constitution known as the *Rights Of the Good Way of Living* sets forth the rights for women and men to the following (Ecuador 2008):

Section 1: Access to Water and Food Security

Section 2: Healthy Environment with the Protection and Conservation of Nature

Section 3: Free Access to all Information and Communication

Section 4: Culture and Science: free expression, leisure, association, access, creation, and enjoyment.

Section 5: Access to Education

Section 6: Access to a Healthy Habitat and Housing

Section 7: Health Security Guaranteed by the State

Section 8: Labor and Social Security

As a result of the Constitutional mandate, the well-being law was adopted and translated into the PND from 2009-2013. Currently, well-being continues to be a central axis for the Ecuadorian government now included and in the third iteration of the PND del buen vivir 2013-2017. According to minister Ehlers, the government to respond to citizen's requests is advancing well-being in Ecuador. The executive and constitutional well-being mandates are based on the concept of the Sumak Kawsay that considers

humanity as part of the natural and social environment. Accordingly, he affirms that the Ecuadorian constitution emphasizes the enjoyment of well-being rights and responsibilities while holding a harmonious relationship with the environment. In this sense, the Ecuadorian constitution is the first in the world to recognize the rights of nature, and a pioneer in understanding the policy implications of our relationship with nature in harmony and unity (Article 71). According to the Ecuadorian Constitution, the government defining well-being as the enjoyment of the rights of the people, communities, and nations; in a frame of harmonious coexistence among communities and nature, where the common good is the priority. As a result of the constitutional mandate to promote well-being in Ecuador other policies have been crafted.

**b. National Well-being Plan 2013-2017**

According to the Plan, Good living for Ecuador is defined as Sumak Kawsay. In other words, it is a mobilizing social paradigm that goes beyond the concept of development. It is a liberating alternative that proposes priorities other than solely economic growth, including distributive and redistributive patterns. In consequence, the Ecuadorian government states that from the start of the citizen's revolution (a silent revolution (Ingleheart 1977)) where the new government's role is to defend the people's right to live in a healthy environment and to protect the rights of nature. As a result, the government has been progressively transforming the governmental institutions. For example, they have created a new ministry department of Well-being, which did not exist prior to the current administration.

In addition, governmental policy guidelines reflect a more appropriate distribution of power because they have been crafted to reflect equality inclusion of women, children, and people with disabilities, indigenous peoples, and the elderly. The Ecuadorian government is doing so, by keeping track of the disadvantaged populations. They are conducting individual citizen qualitative interviews delivered by the institute of national statistics and census (INEC). In addition, the government has engineered an atlas of inequalities that tracks the population by dimensions including poverty, education, health and nutrition, employment, housing, social security, assets, and gender violence.

In addition, the government has allocated budget resources into more social investment to counter the policies from the past that disadvantages the said populations, and to reduce inequality and structural vulnerability by making the government more efficient through the favoring of labor over capital accumulation.

In the National Plan of Buen Vivir (PNBV), the government provides systematic means for the measurement of well-being indicators for the population in terms of quality, quantity, and time of goal accomplishment. The planning and evaluation of the progress made towards achieving well-being in Ecuador will be measured in terms of six basic dimensions:

1. Diversifying production and economic security
2. Universal access to goods and services
3. Social equity
4. Social participation
5. Cultural diversity

## 6. Sustainability

The Government's aims to sustain the well-being plan resulted in the establishment of 5 main structural pillars, including the establishment of constitutional justice and the rule of law, the configuration of social and solidary economic system, the closing of inequality gaps, the active citizen participation, and the national recovery of economic, territorial, food and energy sovereignty. In addition, the government claims that in order to bring about national good living, it is its duty to "eradicate poverty, promote sustainable development, and equitable redistribution of resources and wealth (PNBV 2013). In sum, the government has oriented the budget appropriations to start supporting the PNBV. As a result, the first four years of public investment have been oriented mainly toward building infrastructure and social development.

### **c. The Secretary and the Department of Well-being**

The Secretary of Well-being (Secretario del Buen Vivir –SBV), Ministro Ehlers, is the head of the department that was instituted in 2013 under the leadership of Ecuador's President Correa, as a result of executive order (EO) number 30. The EO assigns well-being as fundamental for the transformation of the Ecuadorian government and its relation with the people. The SBV is charged with promoting and coordinating the practices of well-being in the governmental institutions, for the country, and internationally. The SBV can be defined as a think-tank, an organism of promotion, diffusion, and an incubator of well-being methodologies. According to the Judicial statute of administrative ruling of the executive function in Ecuador's (LOSEP) Secretaries and departments are executive instances ascribed to an entity to deliver

assessments in a given area (EO Number 67 2013). In this instance, the SBV fulfills three main objectives:

1. It generates and delivers policy ideas and actions for best well-being practices in the government institutions and among citizens.
2. It promotes well-being in the national and international community through the delivery of a mutual international cooperation agreement.
3. It promotes a transformation process for the individual through the practice of values and virtues to achieve a life of greater awareness and happiness.

Since its inception, the Secretary of well-being identified three main well-being challenges:

Nature: The SBV focuses on humanity's relation to nature and "ecocide" or the self-inflicted damage cause by the human onto nature. The SBV departs from Stern's ideas on climate change that highlight that any damage done to nature also destroys the human race because it results in an economic depression. In addition, SBV espouses Lovelock's notion that climate change is irreversible (2014), advocating for new pragmatism of living condition changes in a new world order.

Population: According to the SBV, the world's population is growing constantly in the midst of diminishing natural resources, and in 2014 it reached 7 billion inhabitants, and 9 billion more are expected by 2050 (SWOP 2011). Further, they affirm that everyday people die due to preventable environmental conditions (social, economic, and natural).

Poverty and consumption: The SBV affirms that despite our current access to the best technology in human history, poverty is pervasive and consumerism is on the rise. Paradoxically, while 2.2 billion people live on less than \$2 per day, the promotion of predatory consumerism of non-essentials is on the rise. Consequently, they call for the eradication of poverty, unlimited capital accumulation and unsustainable consumerism.

The SBV has worked in 3 major directions including the communication, diffusion, and formulation of national and international well-being initiatives and projects. Accordingly, the secretary asserts, “today more people know about well-being” (Ehlers 2016). In addition, they also count with more well-being governmental initiative implementation. Finally, the SVB has proposed the search of allies to develop collaborations in the areas of:

1. The construction and delivery of a well-being metric (i.e. well-bee app)
2. The creation of an international center of well-being in Galapagos.
3. The creation of an international network to promote well-being.

Overall, the literature seems to be largely silent on the impact of corruption and governmental effective provision of security on well-being measures. The case study of Ecuador shows an attempt to move in the right direction of measuring governmental security provision and its influence on well-being. However, there is little indication on how well-being will be measured, if it will also include corruption indices, and the degree of well-being concept stickiness among the people of Ecuador. Still, the case study is a best practice model in the sense that there is will from the government to advance well-being for the entire country. This can be seen in their financial and intellectual

investment on advancing well-being in the constitution and the institutions (Well-being Ministry). However, it remains to be seen how effectively the government will be able to keep alive the well-being prerogative under the current economic and natural crisis. Oftentimes, innovations like the Ecuadorian Well-Being Ministry have to overcome challenges in order to grow. Most recently, the Ecuadorian people have rallied against the well-being ministry. The opposition to the current administration demands it's closing so that the money spent on well-being can be put towards better more urgent needs. The Minister remains optimistic that the Well-being Ministry will remain open in the future, but only time will tell.

The case study supports the hypothesis that the government has had a role on advancing well-being policy and institutional implementation. For example, in the case of Ecuador, the role of the executive leadership in ordering the drafting of policy, the constitutional inclusion of a governmental commitment to the advancement of well-being, and the delivery of the policy by the institutional formation of a department and secretary of well-being to carry out the policy have significant weight. However, it is too soon to tell what the real effects of Ecuador's well-being government policy and action will deliver in the future of the nation. Following, we explore further the conclusions and policy implications that can be drawn from our previous results.

#### **4.8 Conclusions and Policy Implications**

A major aim of this study is to provide research that will help policymakers move towards greater understanding of what will be the most efficient and effective course of action to improve the quality of lives of millions of Latin Americans. In so doing,

chapter 4 found that HPI well-being rankings are not associated with strength of state institutional strength and the government's capacity effectively offer security, transparency, and accountability, provide access to basic goods and services. Chapter 4 also found that the capacity of a government to establish the rule of law and maintain order as reflected by the peace and security rankings is highly correlated with corruption. In addition, the two variables are also related to Life satisfaction, life expectancy, happy life years, GDP (ppp), and ecological footprint.

Consequently, this concludes that government performance in the areas of peace-security, and transparency-accountability matters in capacity and capability building – “building effective and accountable institutions to address development issues and reduce poverty and foster the increase of life satisfaction, happy life years, life expectancy, and human development. There is a connection between well-being, resource allocation, and conflict. While answering its original research questions and tying them up to the hypotheses, this chapter found that some of the well-being indicator rankings in the Spearman and Pearson coefficient scale are correlated. Some of the well-being indicator rankings in the Spearman rho coefficient scale are positively, negatively or not correlated. Accordingly, this chapter concludes that there is a relationship among several of the correlations as noted on section 4.5-4.8. In addition, the chapter found that governmental control of violence and security ranking is not correlated with the HPI well-being ranking. The chapter also found that governmental control of violence and security rankings is correlated with life satisfaction, life expectancy, human development, inequality, governmental accountability-corruption and other well-being indicators.

Therefore, the research suggest that while the empirical findings do not favor the subjective measurements of well-being; the process of measuring well-being is still an important one, to promote awareness on what make life worth while a for people an Latin America.

In addition, chapter 4 also makes a significant contribution by recording the policy document analysis of the unique case of Ecuador in terms of well-being legislation. The case exemplifies what can be done in terms of government policy to advance well-being agenda in a country through the building of constitutional articles, and laws. Then, the implementation instruments such as the ministry of well-being, the secretary and staff to help carry out well-being policy. Finally, the case illustrates that for these type of initiatives to really stick and be sustainable they must overcome oppositional hurdles.

Finally, the chapter forwards a new well-being framework and a model for further study that includes 10 proposed key dimensions and that are essential indicators necessary to assess the state of well-being in Latin America. The proposed dimension of well-being found on table 4.1 support the findings of the chapter in favor of the inclusion of – governmental institutional accountability, security, infrastructure, and basic goods and services provision. The table also reviews other domains that complete a more holistic measurement of an individual and collective well-being experience over time.

## APPENDIX OF STATES

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### States

Alabama	Pennsylvania	Iowa
Alaska	Rhode Island	Kansas
Arizona	South Carolina	Kentucky
Arkansas	South Dakota	Louisiana
California	Tennessee	Maine
Colorado	Texas	Maryland
Connecticut	Utah	Massachusetts
Delaware	Vermont	Michigan
District of Columbia	Virginia	Minnesota
Florida	Washington	Mississippi
Georgia	West Virginia	Missouri
Hawaii	Wisconsin	Montana
Idaho	Wyoming	Nebraska
Illinois		Nevada
Indiana	Ohio	New Hampshire
North Carolina	Oklahoma	New Jersey
North Dakota	Oregon	New Mexico
		New York

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## APPENDIX OF COUNTRIES

<b>Correlation</b>				
<b>Country</b>				
Costa Rica	Sweden	Guinea	Burkina Faso	Myanmar
Cuba	Cyprus	Mali	Cameroon	South Africa
Dominican Republic	Greece	Mauritania	Latvia	Zambia
El Salvador	Italy	Niger	Lithuania	Zimbabwe
Guatemala	Malta	Nigeria	Macedonia	Burundi
Guyana	Portugal	Senegal	Moldova	Chad
Haiti	Spain	Sierra Leone	Poland	Ethiopia
Honduras	Algeria	Togo	Romania	Kenya
Jamaica	Egypt	Bangladesh	Serbia	Rwanda
Mexico	Morocco	Bhutan	Slovakia	Sudan
Nicaragua	Tunisia	India	Slovenia	Tanzania
Panama	Iran	Namibia	Belarus	Belgium
Trinidad & Tobago	Iraq	Pakistan	Russia	France
Argentina	Israel	Sri Lanka	Ukraine	Germany
Bolivia	Jordan	China	Norway	Ireland
Brazil	Kuwait	Japan	Uganda	Luxembourg
Chile	Lebanon	Singapore	Ghana	Netherlands
Colombia	Saudi Arabia	Cambodia	Hungary	Switzerland
Ecuador	Syria	Indonesia	Kyrgyzstan	United Kingdom
Paraguay	Turkey	Laos	Mongolia	Denmark
Peru	Yemen	Malaysia	Tajikistan	Finland
Venezuela	Angola	Philippines	Uzbekistan	Iceland
Uruguay	Botswana	Thailand	Albania	
Australia	Central African	Vietnam	Bosnia &	
New Zealand	Congo, DRC	Armenia	Bulgaria	
Canada	Madagascar	Azerbaijan	Croatia	
United States	Malawi	Georgia	Czech Republic	
Austria	Mozambique	Kazakhstan	Estonia	

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Previously, Cuartas served as the Wellbeing Doctoral Fellow and Graduate Lecturer at George Mason University. She also was a college professor and Administrator at El Paso Community College for seven years. Prior to joining academia, she worked at the as an auditor at U.S. Government Accountability Office and interned at the Inter-American Development Bank and the Organization of American States.

Cuartas received her master's degree in Comparative Political Science from Sciences-Po-Aix in France in 2002 and completed her undergraduate studies in International Relations at the University of Maine in 1999.