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Review

Monetary Integration: Thirteen Years of Dollarization on Ecuadorian Economics, 2000-2013

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A considerable amount of research has been carried-out over the past decade regarding the effects of dollarization on an economy. While only time will tell if dollarization continues to sustain positive long-term impacts, the short-term has provided considerable evidence of a very successful monetary integration. This research paper has analyzed the sustained effects of dollarization on the Ecuadorian economy which began in the year 2000. As an additional variable, tourism and tourism rates were analyzed due to their reach into each of these sectors of the Ecuadorian economic system and as the fastest growing industry in Ecuador. The Central Bank of Ecuador and related data sets reveal that dollarization has not only had a profoundly positive effect on Ecuadorian economics, but has decreased the poverty rates across the board for almost every province within the country. Finally, this research also analyzes tourism rates measurable by visitors arriving over time based on a retroactive vacation package price in an attempt to determine whether dollarization and/or inflation played a role in the tourism industry. A correlational regression determined that neither dollarization nor inflation play a significant role in the Ecuadorian tourism industry. Because tourism is a growing industry in Ecuador, this determination could have policy implications regarding local legislation, the career choice of tourism among students, and fiscal projection which ultimately will enhance the overall economic condition. Based on the analysis of the variables presented in this research, thirteen years of dollarization has led to a stabilized economy, lower rates of inflation, and positive effects of GPD (trade) in this robust agriculture producing South American country.

Keywords: Tourism, Ecuador, Currency, US Dollar, Economy, Inflation, dollarization, economics.

INTRODUCTION

Over the past decade, many developing countries have looked to the concept of dollarization to help stabilize their financial systems. Dollarization, the process of officially changing or pegging a country's currency to the US dollar, began in the year 2000 when Ecuador became the first sovereign state to change its currency to a foreign unit (Lucas, 2009). Soon after Ecuador's adoption, other countries such as El Salvador, Panama and Liberia adopted the US dollar as their official currency. While dollarization has helped to curb or decrease inflation and stabilize economies in the short-run, significant long-term effects can serve to negate out the positive, short-termed effects.However, these long-

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term negative effects remain to be seen.

The change to dollarization has impacted many aspects of Ecuador's economy, specifically the annual $1.214 billion tourism industry (UNWTO, 2011).

The purpose of this paper is to determine the extent and significance that dollarization has had on the Ecuadorian economy between the years of 2000-2013. This research is guided by the question, *has dollarization, with the inclusion of inflation and other variables, positively affected the Ecuadorian economy over the past decade*? Further, it is hypothesized that dollarization is the predominant force and catalyst for increasing the gross domestic product (GDP) and decreasing extreme poverty among the poorest Ecuadorian citizens.

Additionally, this research seeks to determine if dollarization has concurrently served as a positive economic driver within the fastest growing industry in Ecuador, tourism.

Background

Due to Ecuador's location with a favorable climate and fertile soil, the economy has long been based on agriculture and other products that come naturally from the earth. In 1967, Texaco became the first major company to discover oil in the highly uninhabited Amazonian region of the country. This discovery led to an oil boom in the 1970s (Kollffel, 2001) and oil, as an export today makes up more than one-half of all government revenues and fiftypercent of all export earnings (Central Bank of Ecuador, 2013). Since the economy is vastly based on commoditized products that originate in agriculture, economic conditions are highly susceptible to natural disasters and global economic problems that ultimately affect commodity exports and prices.

According to work published by Penaloza (as cited in Berrios, 2006) and data from the International Monetary Fund (2002), and Census Ecuador (2010), Ecuador's economy began to falter in the late 1990s due to a combination of several factors including the lack of trust in emerging markets after Southeast Asian economic crisis and sharp drops in global oil prices combined with the emergence of the destructive El Nino weather pattern.

"Exogenous shocks to the Ecuadorian economy in 1998 triggered a severe financial andcurrency crisis which fully developed during 1999. As a consequence, commodity pricesfell substantially below U.S. levels in dollar terms and, apparently, the fall would havecontinued had it not been for dollarization (p. 9-11)."

Jamil Mahuad, the president of Ecuador during the currency crisis, announced on January 9, 2000 that the country would become the first sovereign nation to adopt the United States Dollar (USD) as its own currency. While Mahuad was ousted from power within two weeks of making this announcement, the new president, Gustavo Noboa, signed dollarization into law (March, 2000) making the US dollar the official currency of Ecuador. Currently, Ecuador under President Rafael Correa continues to use the US dollar as its official currency.

Dollarization

A considerable amount of literature has been published regarding dollarization, fixed exchange rate regimens and regional monetary integration along with its primary positive effects on the traditionally defined capitalist market economy.

"The absence of monetary sustainability has caused many emerging and developing economies, such as Ecuador, to rely on the exchange rate as a nominal economic anchor. Consequently, successful (dollarized) fixed exchange rate regimes have been much more common among emerging and developing economies than among high-income countries" (Reinhart and Rogoff, 2002, p. 529).

Although much of the literature analyzes and defines dollarization as a stable and sustainable fiat currency, other research compares dollarization to colonialism (Cheng and Wang, 2011); while Jaconsen (2011) explores dollarization as a stable exchange rate, e.g., Poland's monetary policy in 1990; dollarization has been shown to increase foreign direct investment, increase exports, balance the trade deficit, and allow for the growth of the gross domestic product (OECD, 2010; Qusipe and Whisler, 2006).

The adaptation of the USD brings many benefits including the mitigation and minimization of inflationary risk in the long and short term, an increase in foreign direct investment (FDI), capital flow inward, a sustainable store of value, and helps to stabilize the exchange rate and increases confidence among consumers and easier financial integration into the global economy (Chang and Velasco, 2000; Guide, A., Hoelscher, Ize, A., Marstone, D., De Nicolo, G., 2004). Minda, as cited in the Economic Review (2006) also points out that dollarization signals a governmental commitment to stabilization. This commitment allows for fixed credit rates and lowers interest rates as the risk of doing business in a dollarized country becomes significantly less.

Theoretically, dollarization is based on Hayek's 1976 work titled, *Choice in Currency*. By requiring cheaper and a more versatile currency, governments have the obligation to choose their form of money.

"Dollarization is the concrete manifestation of Hayek's program of choice in currency,by legalizing currency substitution. This is an indirect acknowledgement ofthe role of money as private property. Hayek tackles the issue on an individual level; choice in currencyhas benefits for the entirety of the state; unless the ruling elite sees low levels of inflation, credible monetary policy, and

economic stability as negatives" (as cited in Noko, 2011, p. 340).

Bloch (2005) and others argue that dollarization is clearly a way to avoid monetary disruptions and cite evidence showing that while inflation declines significantly after dollarization, gross domestic product rises. They also claim that if a single currency such as the USD were to be used by each country in the Latin American region, a significant increase in GDP would continue to occur while keeping inflation at low rates.

Other research has suggested that financial integration (via dollarization) is more beneficial to an economy on a long-term basis. Frankel and Rose (1998) discovered through empirical evidence that monetary integration is a catalyst for highly correlated business cycles. Looking at 21 industrialized countries, they found a positive correlation between increased trade and business cycle synchronization.

As a sustainable industry, Enriquez (2010) discusses tourism as it relates to economic development and growth in Cuba. She identifies the primary tenets of industry growth including stability and foreign direct investment. Similar to the Ecuadorian paradigm, a key factor in the recovery of tourism in Cuba was the participation of foreign business and foreign direct investment inflow. This participation "impacted the tourism sector directly" (p.96) and accounted for some 400% growth in export earnings. In Ecuador, after the initial currency crisis ended in 2001 and dollarization commenced, foreign direct investment inflows accelerated from a negative 23 million in the year 2000 to over 271 million dollars in 2006 before decreasing to 167 million dollars in 2010 (World Bank Data, 2012).

Dollarization and the Tourism Industry

A successful and sustained tourism industry serves to stimulate growth in other country sectors such as employment, retail sales, restaurants, taxi fares, artesian crafts, and private housing rents (Colantonio and Potter, 2006) not to mention their associated tax revenues to governmental coffers. Local construction starts can also be considered a positive ripple of tourism. The World Tourism Organization (2012) defines sustainable tourism as, "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (p.1).

Vidal and Fundora infer that as the tourism industry grows the need for new hotels, bars and related infrastructure also grows in proportion (2008). Thus these hidden revenues are an added value benefit and contribute towards a sustainable industry growth rate, a higher standard of living for citizens, higher disposable incomes, more choice for consumers, lower retail prices due to competition, and a continuous upward tick in gross domestic product (Mesa-Lago and Vidal-Alejandro, 2010).

Global tourism today is one of the fastest and largest growing industries. This industry is a fundamental segment of an emerging economy's economic development and sustainability. A sizable amount of research has been conducted regarding tourism, its sustainability and its positive effects on developing economies. Tourism is primary concerned with growth mainly due to its labor intensity as well as bringing local and regional economic benefits (Swarbrooke, 1999). The increase in employment has directly "contributed to the upgrading, modernization, increased efficiency of domestic productive capacity and infrastructure development" (Carty, p.10) as well as developing global connections and related networks (Carty, 2009; Peters, 2002).

Tourism becomes sustainable when combined with a variety of other factors including a stable currency and an exchange rate which makes things less expensive for visitors (Colantonio and Potter, 2006). In the early part of 2000, tourism was the main source of revenue for over 50% of emerging economies (Benavides, 2001). The World Tourism Organization (2012) has identified key trends in the industry. Their research has discovered:

- Demand for international tourism grew by 4.6% in 2011;
- International tourism receipts for 2011 are estimated at US$ 1,030 billion worldwide, up from US$ 928 billion in 2010 (+3.9%), setting new records in almost all destinations despite current economic challenges in many global markets;
- In the first four months of 2012, international tourist arrivals grew at a rate of almost 5%;
- The number of international tourist arrivals worldwide is projected to increase by 3.3% a year on average from2010 to 2030. This represents 43 million more international tourist arrivals every year, reaching a total of 1.8 billion arrivals by 2030 (p.2).

According to the WTO's Tourism 2020 report, the top three tourist destinations in 2020 will be Europe with some 717 million visitors, East Asia and the Pacific with 397 million followed by the Americas with a projected 282 million tourists (p.1). This projection suggests that tourism will not only survive this negative current global economic climate, but will in fact thrive.

The future of tourism is dependent upon development and economic goals (Shikida, Yoda, Kino, Morishige, 2009). Given today's economic realities, the impetus for sustainable industry development must fall on local governments in close collaboration with community members who must be charged with creating and maintaining strategic goals. Integrating tourism to fit within the cultural and environmental structure is an on-going task, mainly due to the continuous growth that the industry has shown both in the past and its projected future growth.

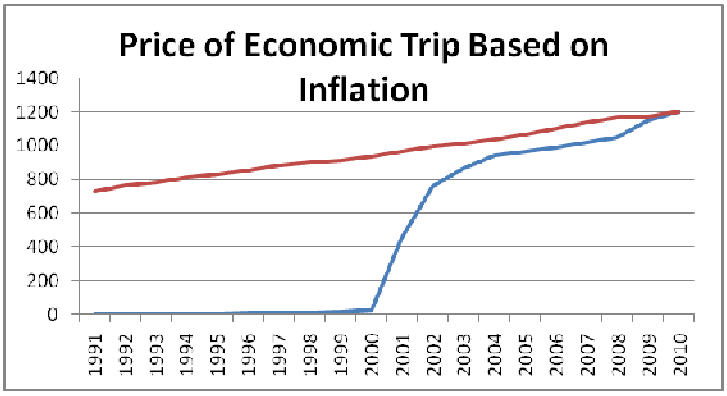


Figure 1. Source: Extrapolation of data by the authors (Appendix A).

Entrepreneurism is also a factor that should be taken into account when conceptualizing a long-term growth strategy. Accordingly, Koh (2000), suggests that "the greater the level of tourism entrepreneurism, the greater the likelihood that tourism attractions and support enterprises would be created, and consequently, the greater the socioeconomic benefits associated with tourism development" (p.209 as cited in Briedenhann and Wickens, 2004).

In sum, tourism sustainability involves careful planning centered on the opportunity that it allows. Unseen in other industries, e.g. manufacturing, .the continuous growth of tourism, especially in places like Ecuador and other Americas locations, provides stakeholders the opportunity to capitalize on the economic and other benefits that it provides.

In order to get a concise understanding of the costs of traveling to Ecuador, the methodology procedure includes analyzing the costs of an 8-11 day, all-inclusive tours to the country at the economic, 3-star and 4/5-star hospitality levels. The data and subsequent analysis will be calculated by averaging the costs of various tour companies that operate in Ecuador only. These tours will be of the whole country and not of a specific region and will exclude international air fare. This will ensure that the mean price is illustrative of the country and not a particular region.

After determining the average cost of the travel package, the numbers will be valued retroactive to 1991 based on the consumer price index (CPI) in order to compare the prices of these trips before and after dollarization to conclude how the tourist sector has been affected by dollarization. Appendix A shows how the cost of an economic tour may have been priced over the past two decades. The methodology and quantitative analysis uses the mean of an 8-11 day tour to Ecuador based on economic, 3-star and 4/5-star accommodations. The data will be extrapolated to show the average prices of tourism in Ecuador.

As illustrated in Appendix A, the average economic tour costs $1,201 while a 3-Star tour costs $2,205 and a 4/5-Star tour costs $4,435. In order to look at how these prices have changed over time, this study has retroactively predated the value of the costs to 1991 in order to better illustrate how much these trips might have been priced during different time periods of the crisis period of the mid-to-late 1990's through the early part of 2000.

The key time period and focus of this research is the mid to late 1990s during which Ecuador experienced the crisis of hyperinflation, to the early 2000s when dollarization of Ecuador was firmly implanted. The following graphic shows the regression of an economic trip with the red line representing costs based on inflation in the US while the blue line represents costs based on inflation in Ecuador.

Figure 1 indicates that dollarization has stabilized inflation as the two lines merge around the year 2009. It is believed that tourists no longer had to worry about the hyperinflation scare experienced throughout the 1990s, thus felt safe making reservations well ahead of their scheduled travel without fear of consequence.

As it turns out, inflation is not that strong of a determinant in the number of tourist arrivals in Ecuador. A calculation of the correlation coefficient, r, between the inflation rates of 1995-2010 and the number of tourism arrivals was 0.35. This means that only 12.5% of the variance in tourism arrivals can be explained by the variance in inflation rates. While these two variables tend to move together as shown Figure 2, there are probably more accurate ways to explain the variation of tourism in Ecuador.

In the hopes of isolating the effects dollarization had on the tourist sector in Ecuador, this research has also compared the number of tourist arrivals in Ecuador to the number of arrivals throughout the Americas region. These two variables are very closely related with a correlation coefficient of 0.89. The r-squared is also a

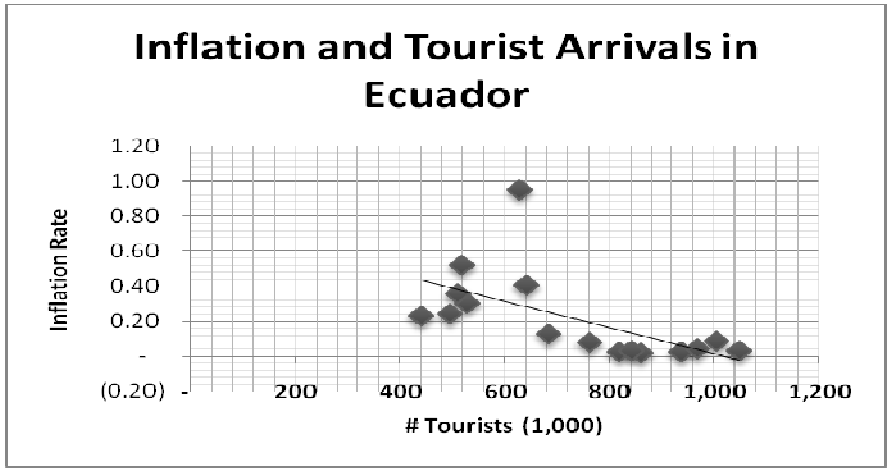


Figure 2. Extrapolation of data by the authors, WTO Tourism Data; WTTC 2010.

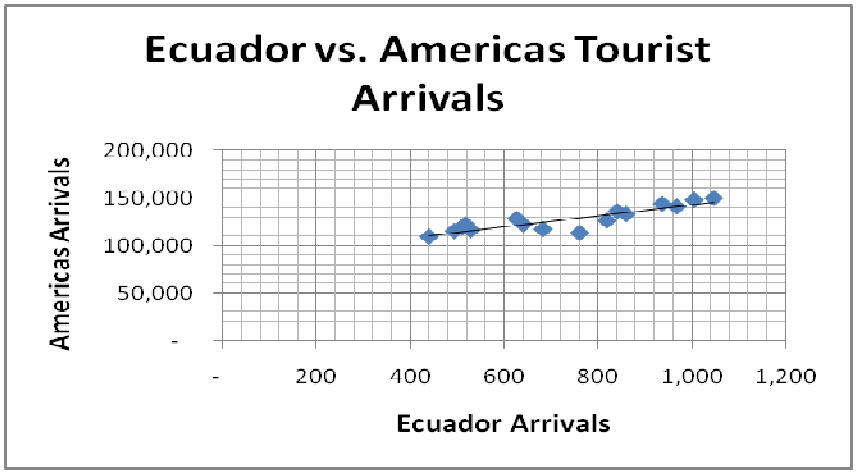


Figure 3. Source: extrapolation of the data by the authors; WTO Tourism Data, 2010; WTTC

high 78.7% which shows that these two sets of data are highly correlated. Figure 3 shows this correlation (Appendix B).

When examining the factors that consumers consider when choosing a foreign tourist location, exchange rates matter more than inflation except perhaps in a few extreme examples. Since tourists normally spend a limited amount of time in a foreign country, it is unlikely they will be significantly impacted by inflation unless the host country is experiencing hyper-inflation (Dwyer and Forsyth, 2009) or some other local economic crisis. However, during times of rapid inflation or deflation, the tourism industry has been shown to be one of the first casualties of economic growth.

When tourists seek to reserve hotel rooms or package tour, they are often required to pay in advance. With inflation levels stable, exchange rates do not fluctuate significantly and the price offered at the time of the reservation is similar to the actual expenses during the trip. Due to hyper-inflation, the value of the Sucre fell by 50% between 1998 and 1999 (Beckerman, N.D). If a tourist had paid for a tour a year in advance, then they would have, theoretically, paid half-price for the package and the tour company would have lost 50% of their revenues due to the inflation.

Because the dollar was and currently serves as the global reserve currency and considerably more stable than the Sucre (the Ecuadorian currency), tourist companies using the USD safely took reservations and collected revenues without having to factor in the real or projected inflationary costs.

The currency a country chooses to use often has a large impact on tourism (World Travel Economic Report, 2011). For example, the adoption of the Euro among 17 European nations has made it easier for people to travel to member States since each uses the same currency.

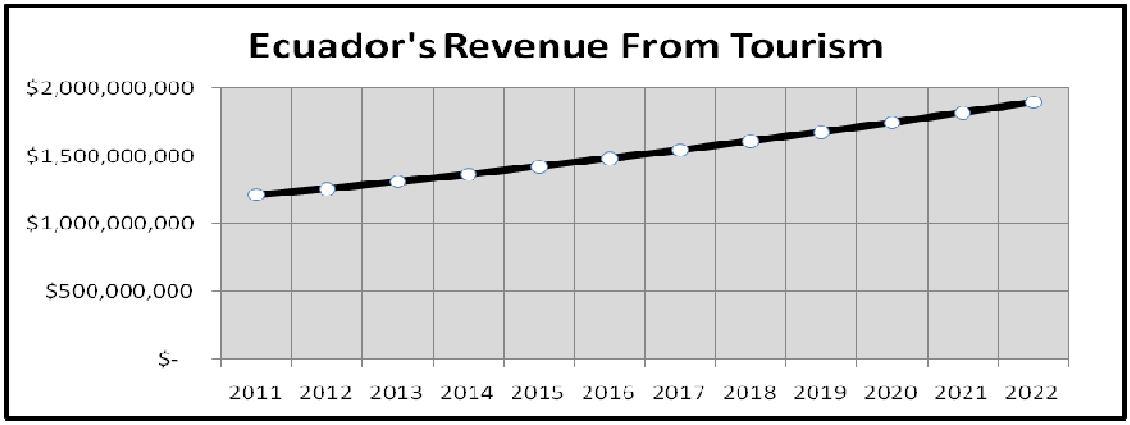
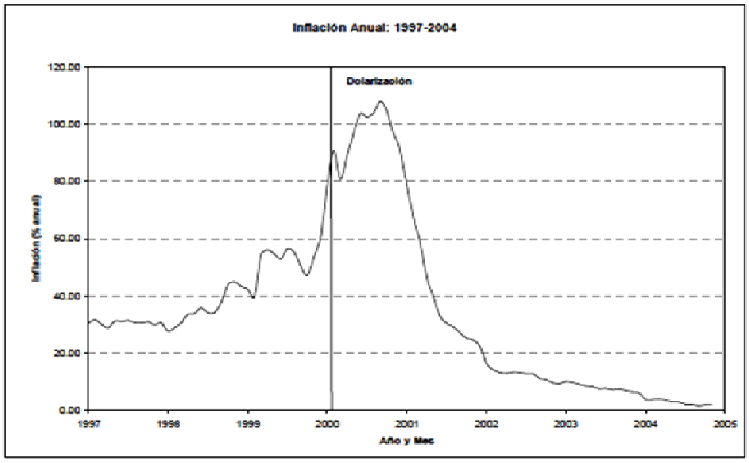


Figure 4. Extrapolation of data by the authors; World Travel and Tourism Council Economic Report, 2011.

Inflación en el Ecuador: 1997-2004



Fuente: Banco Central del Ecuador. Junio 2006 y números anteriores *Información Estadística Mensual* (Quito: Banco Central del Ecuador).

Figure 5. Graphic from the Central Bank of Ecuador

Currency can also have a psychological effect on travelers as they decide where to spend their money – they tend to make judgments of price based on *perceived* value. This means that a tourist from the United States might see a shirt for sale in Mexico for 132 pesos (or $10 based on the exchange rate on April 10, 2012) and decide that it is relatively expensive compared to a similar shirt in the U.S. even though it is actually the same price.

On the other hand, Ecuador has an advantage in this regard since prices are lower than they are in the United States so tourists can compare products as apples-to-apples and will likely view products and services cheaply. For example, $10 for a hotel room in Ecuador will sound much cheaper to an American than 132 pesos. Tourists can also avoid currency conversion fees or bad conversion rates and have a better understanding of how much things truly cost as compared to their reference point-their country of origin. Based on these factors alone, it would initially appear that dollarization would drive more tourists to the country (Emanuel, 2002).

Ecuador is divided into four geographical provinces that attract a diverse group of visitors. The country offers tourism opportunities to the Galapagos Islands, the coast, the highlands and the Amazon Basin. In less than 24 hours, it is possible to travel though all four of these zones via car. Ecuador's tourism is run by the Ministerio de Turismo, or Tourism Ministry, which uses the national slogan "Ama la vida" (Love life) to attract visitors to the country. Some of the main tourist attractions in Ecuador include Quito (an UNESCO World Heritage Center), the Galapagos Islands (wildlife and center of Charles Darwin's research), Otavalo (one of the largest outdoor markets in South America) and Volcano Chimborazo which is the furthest point on earth from center.

In 2011, the World Travel and Tourism Commission reported that foreign-born tourism brought in $1.214 billion dollars in revenue which accounts for 1.9% of Ecuador's GDP. This number is expected to rise at an annual growth rate of 4.2% which would make it a $1.94 billion industry by the year 2022 (Figure 4). This sector

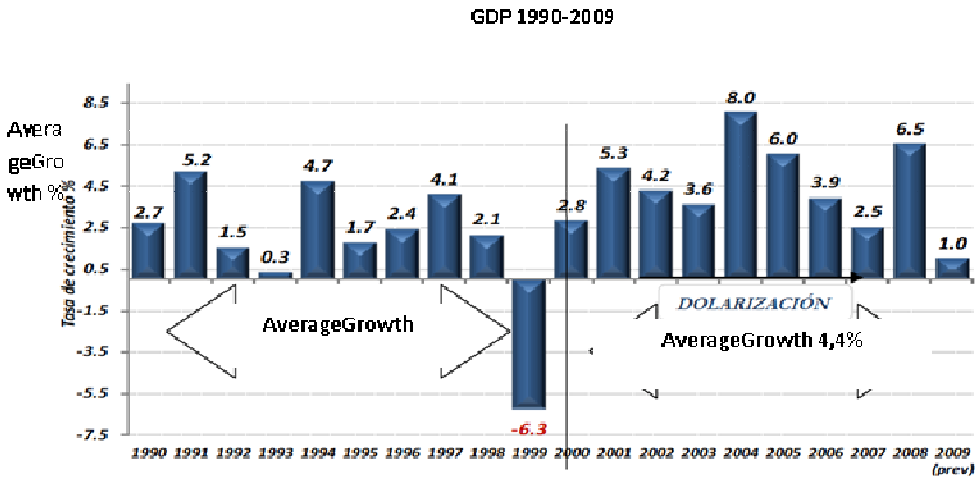


Figure 6. Source: Central bank of Ecuador, 2008

currently employs 100,000 people, thus accounting for some 1.7% of total employment in the country, and is expected to rise at a 2.9% annual rate bringing the total number of people employed in tourism to over 136,000 by 2022 (World Travel Economic Report, 2011).

While tourism currently makes up only a small part of Ecuador's economy, it presents an enormous opportunity for economic growth and foreign direct investment. Tourism, as a percentage of GDP in Ecuador ranks 147th relative to the 181 countries studied by the World Travel and Tourism Commission.

Dollarization and Inflation

As intended, dollarization appears to have reduced inflation and stabilize the economy in Ecuador. While inflation grew at an average annual rate of 41.4% from 1992 -2001 (the third highest rate in all of Latin America and the Caribbean) it has slowed to a rate of 4.5% (Appendix D) over the last 10 years (Central Bank of Ecuador, 2001). This compares to an average of 6.83% for the rest of the region (Figure 5).

Gachet, Maldonado and Perez (2008) estimated inflation and its root causes using the vector auto regression (VAR) model in an attempt to determine the uptick in the inflation rate after 2004in Ecuador. The variables used in their analysis included commodity pricing, exchange rate, political events, the weather, and legislation regarding trade. Their results suggest that public policy, legislation and commodity pricing are responsible for the slight increase in the inflation rate. Although commodities are traded in the US Dollar, the main culprit for the inflation rate in Ecuador is governmental policy and not dollarization, per se (Appendix E).

Dollarization and the Gross Domestic Product

The average GDP growth rate in the pre-dollarization period was less than the period after dollarization was implemented in Ecuador. Thus, between the years 1990 – 1999 GDP growth was 1.8% while the next decade showed an increase to 4.4%. Central Bank data for the decade prior to dollarization is indicative of economic stagnation with average GDP growth rate at -0.2% per capita (Figure 6).

Post dollarization growth averages are 2.9% with the years of 2004 and 2008 recording the largest growth rate in a decade; 6.5% and 5.0% respectively. GDP per capita, as measured in USD rose from a pre-dollarization 1.336 to a post-dollarization 1.514 clearly indicating that dollarization had a major influence on Ecuadorian gross domestic product.

Post dollarization data from the central bank of Ecuador shows a steady rise in GDP exports in both oil and non-oil exports beginning in 2002 and continuing until the global economic recession which began in 2008. The most dynamic non-oil exports are cocoa 47.2%, coffee 40.4%, metals manufacturing including light vehicle assembly 38.3%, wood 27.4%, fish 17.8%, and floral (flowers) 16.9%.

As GDP is commonly used as an indicator of economic health, it can concurrently be used to make assumptions regarding the standard of living among the population. Thus, one area associated with gross domestic product analyzed in this study is employment.

According to data from the Institu to Nacional de Estadística y Censos Ecuador (INEC), the percentage of employed people in 1992 fluctuated between 32 and 39%, while in 1999 it was 27%, the lowest percentage of the entire period. The following three years showed a significant rise in employment climbing to 30.5% in

Ecuadorian Employment

1992 - 2009

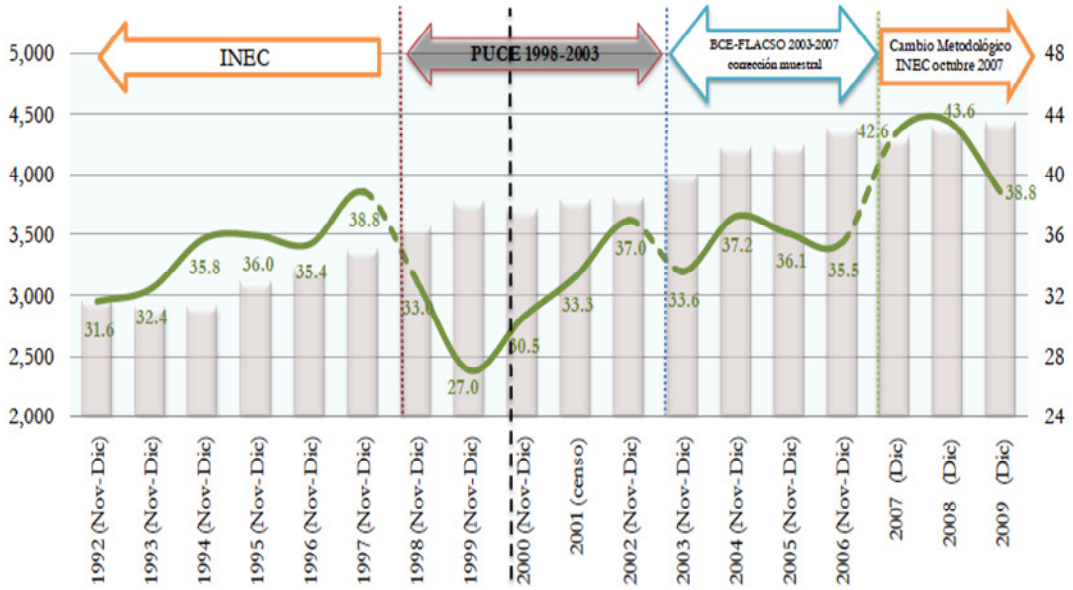


Figure 7. Source: Reference: INEC (Instituto Nacional de Estadística y Censos Ecuador), 2008

2000, 33.3% in 2001 and 37.0% in 2002 respectively.

The mean rate of employment between the years of 1992 – 1999 was 33.8%, however, from 2000 to 2009 the average rate of those fully employed rose to 37.5%, having peaked in 2008 with 43.6%. Moreover, employment in the urban areas showed a dynamic differentiation between the two periods. From 1992 to 1999, INEC data shows a clear upward trend and positive average growth rate of 3.6% per annum. In the years 2000, 2001 and 2007, employment decreased -1.6%, -0.7% and -1.8 respectively.

From 2000 to 2009 employment grew at an annual average rate of approximately 1.7%. The reduction from the year 2000 and onward can be explained primarily due to the migration wave that has slowly increased after that year (Figure 7).Based on the Central Bank and Ecuador Census data it can be concluded that dollarization has positively impacted the GDP overall and specifically within the export and employment segments.

Poverty

From 1995 to 1998 the household consumption per capita has been used by the Central Bank of Ecuador to calculate poverty rates. In 2000, 2001 and 2003 the household per capita income has been used to calculate the poverty from those years. Pre and post World Bank indicators through the years 2000 through 2012 show a steady rise in purchasing power parity (PPP). Post dollarization GDP per capita PPP in USD shows a consistent increase from 5505.83 in January, 2002 to 8486.40 in January, 2012. Pre-dollarization GDP per capita decreased 7.649% between the years 1998 and 1999 or roughly from 1380 USD to 1270 USD.

There is also a significant difference between pre and post dollarization in regards to poverty and extreme poverty. According the World Bank (2012), poverty, per se, is generally defined as having a daily consumption between $2 and $5 per day with extreme poverty defined as a daily consumption of $1.25 per day or, in other words, living on the very edge of begin able to sustain oneself.

Poverty and extreme poverty rates both show a decrease directly after the USD became the official currency. Although the poverty rates fluctuated each year measured, on average the World Bank and the Ecuadorian Census show that poverty dropped between the years of 1998 through the year 2000 from 62.6% to 59.6% respectively. This occurred in both the rural and urban areas which include the major cities of Guayaquil and Quito, the capital city.

On average, extreme poverty decreased significantly between the years of 2000 and 2003 from a high of 40.3% to a low of 32.9%, respectively. Again, this decrease was noted in both the rural and urban areas of

Ecuador that includes the major cities, the coastal, sierra and Amazonian regions. The capital city of Quito showed the highest drop in extreme poverty, specifically between the years of 2000 and 2003 dropping by more than one-half from 19.6% to 8.2% respectively. Thus, it can be safely assumed that dollarization has impacted the poverty and extreme poverty rates in a short-term positive manner.

DISCUSSION

This purpose of this paper is to determine the effects of monetary integration on the Ecuadorianeconomy by examining primary factors related to dollarization. These factors or variables includeinflation, poverty, gross domestic product and employment deviation trends over time. As an additional variable, tourism and tourism rates were analyzed due to their reach into each of these sectors of the Ecuadorian economic system and as the fastest growing industry in Ecuador.

As a barometric, the findings of this research conclude that dollarization has reduced poverty, increased the employment rate, reduced and sustained inflation at a low rate per annum as well as increased the GDP. Thus, overall and in the short-term (13-years), dollarization has been an economic success as it continues to play a role in stabilization of the economic system.

Regarding tourism, the findings of this research indicate that inflation; tourist arrival rates and revenues were not necessarilyaffected by external variables such as inflation or dollarization during the period 1999-2004. The analyses of the statistical regression suggest that tourism is independent from inflation – and although the introduction of dollarization did not show a significant increase due to dollarization, it has sustained and helped to grow the industry in Ecuador. Dollarization has provided several conveniences as a world currency and may have helped tourists feel more comfortable booking tours in advance concurrently allowing for simple and fast currency conversions which in turn made prices easier to understand.

Based on the analysis of the data, this research suggests that tourists will continue to visit Ecuador regardless of inflation or global economic environment. While the rates of inflation indicate a statistically weak positive relationship with the number of tourist arrivals (Appendix C), comparing Ecuador's tourism sector to the aggregate total of arrivals throughout the Americas provides a much stronger correlation. Based solely on the statistical analysis, the initial hypothesis that dollarization played a significant role in the growth and/or sustainment of the tourism sector in Ecuador is likely rejected.

Areas for Future Research

Areas for future research can include a similar analysis of those countries which have experienced a monetary integration policy; an analysis of GDP foreign direct investment (inward and outward) during the pre and post dollarization period (independent of fiscal policy), and identifying trends and fluctuations of the consumer price index combined with other barometric indicators. Finally, a longitudinal study over 30-years starting from the date of dollarization would serve to strengthen the proposition and the findings of this research identifying dollarization as an economic stabilizer and major contributor of growth; and finally confirming through additional studiesthat tourism rates are not likely affected by the external factors regarding economic condition and monetary integration policy - in this case the dollar.

A survey of value and consumer perception would go a long way in predicting trends based on the specific variables such as population percentage living below the poverty line, in extreme poverty, or average wages per month. These results could affect future governmental policy as it relates to variables analyzed in this study, e.g., employment, inflation, and tourism.

Additionally, a specific and detailed look into dollarization through statistical analysiscould highlight patterns or trends that would serve to open-up new avenues of understanding of monetary integration as it affects policy and standard of living within a specific population.

Quite obviously, to make the claim that local or global economic conditions do not affect the tourism industry without significant, relevant data analysis is somewhat premature, however, as of this writing the trends in tourism sustainment and growth are increasing, regardless of the economies in Europe, Asia, or the United States . Tourists continue to arrive in Ecuador in record numbers, and the resulting revenues continue to appreciate over time. A longitudinal study that correlates arrivals, revenues and economic conditions globally using economies that have been "dollarized," would add to the scope of tourism and those conditions which affect it.

The addition of adding other countries in South America as additional variables would be necessary in order to substantiate the sustainment of the null hypothesis in this particular research; the null was not rejected.

Because tourism is a growth industry that affects economic condition on a holistic basis, a sector-by-sector analysis of demographic and geographic information regarding the visitors who vacation in Ecuador would assist in determining futuristic trends-understanding who is coming, where they are going, and their spending habits will assist local policy makers and community leaders in developing a long-term strategic plan in order to capitalize on the tourism phenomenon. An underdeveloped, or even worse, an undevelopedstrategic plan that clearly shows theincomplete capture of market shareis inefficient, wasteful and counterproductive to emerging economies similar to Ecuador's.

Finally, it would serve the tourism industry greatly if research would identify, define and categorize some of the basic assumptions regarding the phenomenon of sustainable tourism. Thus the question that perhaps should guide this/these studies is this: Is tourism, per se, an exclusive entity upon itself or is it an activity that encompasses holistic economic development, e.g., infrastructure development, etc.? Knowing the answer to this question could determine if tourism, as an industry is sustainable over time and based on or regardless of global economic condition.

Limitations to the Study

Limitations to this study include, but are certainly not limited to having similar data for the twenty years up to the year 2000 in which to better analyze trends through statistical analysis, e.g., regression; the lack of an a quantitative *n* size based original document research or survey instrument, and other data correlations identifying various independent and dependent variables.

Additional limitations include the use of Ecuador's tourism as a dependent variable; the probable tourism package sales price is not exact, but estimated; specific costs, including tax and inflation in USD amounts were not calculated or used as a variable, nor was the mean spending per tourist for each geographic location in Ecuador analyzed.

What can be classified as "hidden revenues" and their probable effect on the Ecuadorian economy were not included in this study because they are not reported or known. These include tourism revenues spent on non-taxed or unlicensed activities including unregulated street vendors, illicit drug purchases especially to tourists from the United States, Ecuadorian businesses that do not comply with the tax laws e.g., failing to report taxable sales, and of course monies spent on corruption including payoffs to governmental or other entities, bribery and graft, i.e., tourists bribing officials for favors, etc.

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Appendix

Appendix A:

Type of Accommodation	Prices of Tours	Average Price
Economic	$875,1000,1200,1790	$1201
3-Star	$1730,2040,2099,2890	$2205
4/5-Stars	$3189,3900,4755,5,895	$4435

Source: Extrapolation of data by the authors retrieved March-May, 2012, from:

3-Star Tours
http://www.pioneerjourneys.com/10-day-ascent-of-ruco-pichincha-illiniza-norte-cotopaxi-and-chimborazo.html
http://www.thinkbirding.com/cloudforests-western-slopes.html
http://www.travelwizard.com/southamerica/vacation-packages/ecuador-vacation-package/avenue-of-the-volcanoes-11-days-ct/
http://www.adventure-life.com/tours/hotel-silberstein-780/#tab-hotels

4/5-Star Tours
http://freedombikerental.com/index.php?option=com_content&view=article&id=171&Itemid=222
http://www.atlastravelweb.com/Tours/Collette-Tours/405/Galapagos-Family-Adventure.html
http://www.galapagos-tours.travel/Galapagos_Odyssey_Natural_Treasures_of_Ecuador_-_10_Days
http://www.galapagos-tours.travel/Luxury_Galapagos_with_a_Taste_of_Quito_-_9d_8n

Economic Tours
http://www.retire-in-ecuador.com/Ecuador-Crash-Course.html
http://www.adiosadventuretravel.com/trips/ecuador/galapagos-for-budget-travelers.html
http://www.snailadventures.com/ourtours/ecuador/
https://www.sangay.com/amazon_jungle.html#CASA_DEL_SUIZO

APPENDIX B: Regression results of a $1201 economic tour in Ecuador based on inflation.

Year	Ecuador	USA
1991	0.246722383	726.8227135
1992	0.481879654	759.4803694
1993	1.047564465	782.969453
1994	1.954411316	807.1850031
1995	2.695739746	828.732036
1996	3.500960709	852.6049753
1997	4.624782972	878.0689756
1998	6.663952409	898.7399955
1999	10.37998818	913.353654
2000	21.62497537	933.8994417
2001	450.5203201	966.7696084
2002	754.6404022	994.6189387
2003	863.4329545	1010.791604
2004	938.5140809	1034.587108
2005	964.5571233	1063.296103
2006	986.2547273	1100.720603
2007	1019.911817	1137.108061
2008	1048.213584	1166.264678
2009	1149.357	1169.774
2010	$1201	$1201

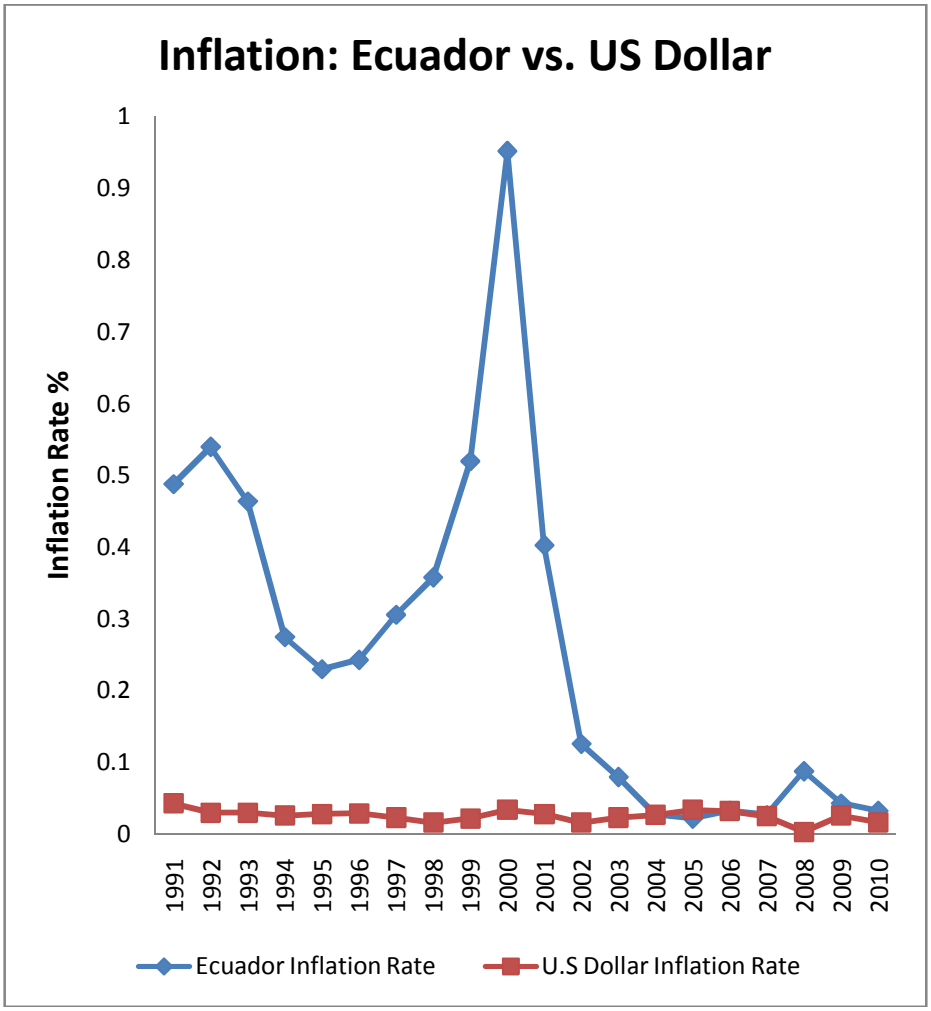
Source: SPSS Data extrapolation by the authors; Ecuador Census, International Monetary Fund (IMF), 2010

Appendix C: U.S. Inflation vs. Ecuador Inflation and retrospective currency values 1991-2010 with regression

Year	Ecuador Inflation Rate	US Inflation Rate	$1 in Ecuador	$1 in USA	Ecuador	American
1991	0.488	0.043	$1	$1	0.246722	726.8227
1992	0.54	0.03	1.488	1.043	0.48188	759.4804
1993	0.464	0.03	2.29152	1.07429	1.047564	782.9695
1994	0.275	0.026	3.354785	1.106519	1.954411	807.185
1995	0.23	0.028	4.277351	1.135288	2.69574	828.732
1996	0.243	0.029	5.261142	1.167076	3.500961	852.605
1997	0.306	0.023	6.5396	1.200921	4.624783	878.069
1998	0.358	0.016	8.540717	1.228543	6.663952	898.74
1999	0.52	0.022	11.59829	1.248199	10.37999	913.3537
2000	0.952	0.034	17.62941	1.27566	21.62498	933.8994
2001	0.403	0.028	34.4126	1.319032	450.5203	966.7696
2002	0.126	0.016	48.28088	1.355965	754.6404	994.6189
2003	0.08	0.023	54.36427	1.377661	863.433	1010.792
2004	0.027	0.027	58.71341	1.409347	938.5141	1034.587
2005	0.022	0.034	60.29867	1.447399	964.5571	1063.296
2006	0.033	0.032	61.62524	1.496611	986.2547	1100.721
2007	0.027	0.025	63.65888	1.544502	1019.912	1137.108
2008	0.088	0.003	65.37767	1.583115	1048.214	1166.265
2009	0.043	0.026	71.1309	1.587864	1149.357	1169.774
2010	0.033	0.0163	74.18953	1.629149	1201	1201

Source: Data Extrapolation by the Authors, International Monetary Fund, 2010

Appendix D Ecuadorian inflation compared to the US Dollar



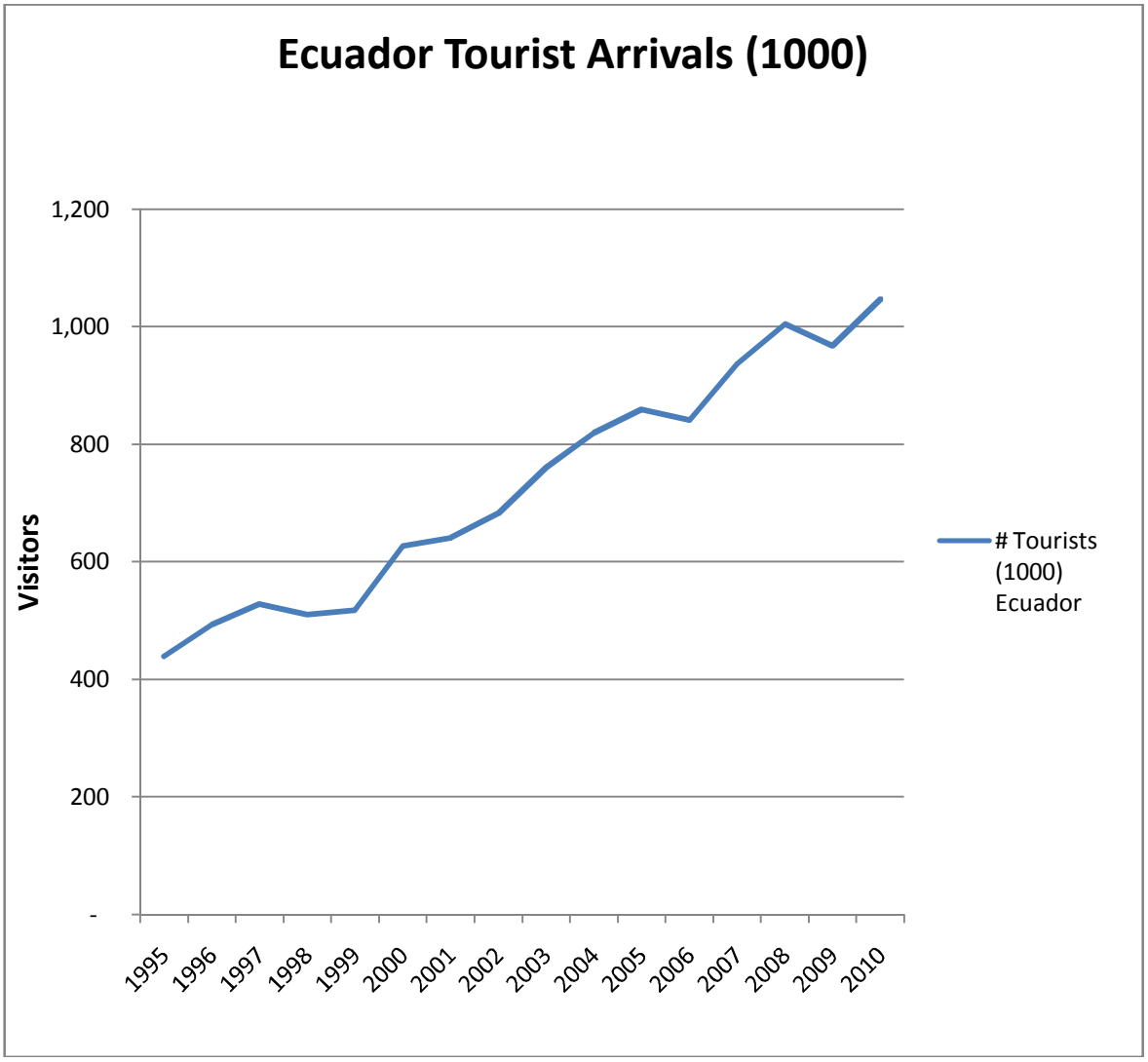
Source: Data extrapolation by the Authors, Ecuador Census, International Monetary Fund (IMF), 2012.

Appendix E Exogenous Variables on the Ecuadorian Inflation Rate

Exogenous Variables	**March 2005**	**March 2006**	**March 2007**	**March 2008**
International Pricing	0.388	0.148	0.314	3.815
Exchange Rates	0.563	0.715	0.074	1.235
Public Policy	0.158	0.212	0.274	0.507
Weather	-0.177	-0.304	-0.239	-0.140
Stationality	0.456	0.702	0.714	0.727
Freights	0.052	-0.003	-0.043	0.033
Politics	0.125	0.184	0.179	0.351
Unexplained	-0.927	2.262	0.119	-0.264
Annual Inflation Rate	0.637	3.917	1.392	6.264

Source: Gachet, Maldonado, & Perez, 2008. Determinants of inflation on a dollarized economy: The case of Ecuador. *Cuestiones Economicas*, Vol 24, nr 1:1-2, 2008

APPENDIX F: Ecuador's Tourist Arrivals 1995-2010



Source: Data extrapolation by the authors; World Travel and Tourism Council, 2010.