Original title / titulo original: The Panama Canal as a Factor

of Panama's Economic Growth

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Published originally as/ Publicado originalmente en:

Estudios Latinoamericanos, 36/37 (2016/2017), pp. 297-310

DOI: https://doi.org/10.36447/Estudios2017.v36-37.art13

Estudios Latinoamericanos is a journal published by Polish Society for Latin American Studies (Polskie Towarzystwo Studiów Latynoamerykanistycznych).

Polish Society for Latin American Studies is scholarly organization established to facilitate research on Latin America and to encourage and promote scientific and cultural cooperation between Poland and Latin America.

Estudios Latinoamericanos, revista publicada por la Sociedad Polaca de Estudios Latinoamericanos (Polskie Towarzystwo Studiów Latynoamerykanistycznych).

Sociedad Polaca de Estudios Latinoamericanos es una asociación científica fundada con el fin de desarrollar investigaciones científicas sobre América Latina y participar en la cooperación científica y cultural entre las sociedades de Polonia y América Latina.

The Panama Canal as a Factor of Panama's Economic Growth

Katarzyna Sierocińska

EL CANAL DE PANAMÁ COMO EL FACTOR DEL CRECIMIENTO ECONÓMICO PANAMEÑO

Abstracto

Entre 2005 y 2016, el crecimiento económico de Panamá fue a una tasa promedia anual de 7.8%, la mayor en América Latina. El propósito de este artículo es presentar el Canal de Panamá como un factor clave para acelerar el crecimiento económico. Las ventajas del control del Canal desde el 31 de diciembre de 1999 y la terminación del proyecto de expansión del Canal de Panamá en 2016 favorecieron a toda la economía panameña a través de cuatro tipos principales de influencias: directa, indirecta, inducida y paralela.

Palabras claves: Canal de Panama, Panama, crecimiento economico.

Códigos de JEL: O54, F63.

Abstract

THE PANAMA CANAL AS A FACTOR OF PANAMA'S ECONOMIC GROWTH

Between 2005 and 2016, the economic growth of Panama was at an average annual rate of 7.8%, the fastest in Latin America. The purpose of this article is to present the Panama Canal as a key factor for accelerated economic growth. The gain of full control of the Canal since December, 31, 1999 and the termination of the Panama Canal expansion project in 2016 affected the whole Panamanian economy through four main types of influence: direct, indirect, induced and parallel.

Keywords: Panama Canal, Panama, economic growth.

JEL codes: O54, F63.

1. Introduction

This article assumes that the Panama Canal is a fundamental factor in Panama's modern economic growth, which was in 2005-2016 the fastest in Latin America at an average annual rate of 7.8%. During the last 17 years two major events occurred: since December, 31, 1999 Panama had gained full control of the Canal, and between 2009-2016 the project of the Panama Canal expansion was conducted.

I assume that the improvement of the Canal affects the whole Panamanian economy and each of the main sectors of the economy is linked to the Panama Canal in four ways: direct, indirect, induced and parallel. All types of impact ways will be explained in this article, using the research methods: presentation of statistical data and description of the investments.

1. Characteristics of the Panama Canal

The Panama Canal, one of the busiest global sea routes, connects the Pacific Ocean and Caribbean Sea. It was built between 1904 and 1914 pursuant to the Hay-Bunau-Varilla treaty that was signed on the November, 18, 1903, by the United States of America and Panama. The United States was granted perpetual lease of the Panama Canal Zone and the right to station US troops. The signing of the treaty was preceded by Panama's secession from Colombia, which took place in 1903. Since its founding, Panama's politics were heavily influenced by the United States. This influence was weakened after December, 31, 1999, when Panama gained full control of the Canal and 1432 km² of adjacent areas (including infrastructure, buildings, etc.) under the Carter-Torrijos agreement of 1971. Since then, it has been managed by the Panama Canal Authority (Autoridad del Canal de Panamá – ACP), an autonomous government institution.

By 2016, the Panama Canal consisted of 12 locks capable of lifting vessels up by 26 m to pass through 80 km of the Panama Isthmus. In June 2016, two new wider locks were opened to allow larger New Panamax¹ vessels to pass through the Canal. The expansion plan, adopted by the government in 2006, was backed up by the Panamanian society in a referendum. It was awarded on July, 15, 2009, and work begun one month later. The project included the construction of two water-saving lock systems, building additional 6.1 km of Pacific Access Channel (excavation for the new Pacific locks to bypass Miraflores Lake), dredging of the navigational channels along the waterway, and improvements to water supply for Gatún Lake, which is part of the Canal. The cost of this investment was \$5.25 billion USD, of which \$2.3 billion USD came from loans borrowed from credit institutions², while the remainder was financed by ACP. The expected return on investment is 12% (*Proposal for the Expansion...* 2006: 20).

The purpose of the Panama Canal expansion was to achieve a sustained and long-term growth of payments to the National Treasury which may have the impact on Panamanian society. The other goal was to maintain the Canal's competitiveness worldwide.³ The Panama Canal's significance was threatened due to the growing number of cargo ships larger than Panamax. Therefore, it was necessary to increase its throughput to cover global demand.

2. The impact of the Panama Canal on the economy of Panama

The operation of the Panama Canal was the foundation of Panama's economic development from the very beginning of its existence. Panama has a relatively small area and population. It has 4.034 million inhabitants⁴, of which the majority (over one million) live in the capital city, Panama. The country's economic potential is rather small, but thanks to its favorable geographical location, Panama has become a regional hub for trade and transport through the Panama Canal.⁵ Panama is also home to one of the largest airports in the region (Tocumen International Airport). The economy and the developed financial sector are also boosted by the presence of the significant special economic zone – the Colón Free Trade Zone.

For several years, the country has experienced considerable economic growth. Between 2005 and 2016, the average GDP growth rate was 7.8%. According to 2011 World Bank data, Panama had the highest economic growth in Latin America at 11.8% - also one of the highest results worldwide.⁶ At present, GDP growth has slowed down, but the country still leads in the ranks and has one of the highest results in Latin America. In 2016, the economy grew by 4.9%.

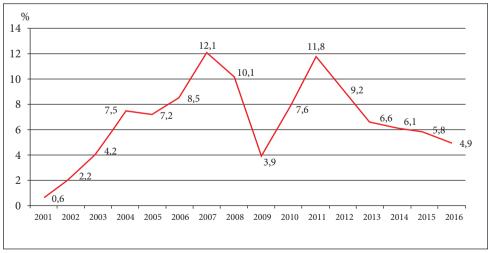


Figure 1. The growth rate of Panama's GDP in 2001-2016 (%)

Source: Own elaboration based on Instituto Nacional de Estadística y Censo de Panamá data.

Fig. 1 shows the GDP growth rate of Panama between 2001-2016. By 2007, the pace of growth, apart from a slight decline in 2004-2005, was steadily increasing at an average level of 6.6%. In 2006, a Panamanian national referendum approved the project of the Panama Canal expansion. This major investment increased investors' confidence⁷ and improved economic stability. It helped Panama to survive the global crisis of 2008-2009 in a stronger position than most other nations. The economic growth after 2009 is, among other factors, the consequence of appropriate public investment, mainly in infrastructure development. This has led to an increase in the activity of related sectors, such as transport and mining.

Between 2012-2016, economic growth started to decrease. During these four years, it averaged at 6.5%. The lower level of the indicator is related to two main factors: recession of the Colón Free Trade Zone and the conclusion of large infrastructure projects. However, there are plans to carry out new projects that will arguably again have a positive impact on generating economic growth (subsection 3).

Table 1. GDP	structure of Panama	in	2000-2016 ((%)
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Specifications	2000	2005	2010	2012	2014	2016
Agriculture, hunting and forestry	5.3	4.5	3.2	2.6	2.4	2.1
Fishing	1.5	2.1	0.6	0.5	0.7	0.5
Mining	0.7	1.0	1.4	1.4	1.8	1.9
Manufacturing industry	9.5	6.9	5.3	6.4	5.8	5.0
Electricity, gas and water	2.9	3.3	2.3	3.5	3.5	4.0
Construction	4.7	4.3	6.3	11.1	14.6	15.3
Bulk sale and retail environment; repair of cars and motorcycle, personal belongings and household articles	14.1	14.2	14.7	19.8	17.8	17.4
Hotels and restaurants	2.0	2.4	2.9	3.0	2.7	2.6
Transport, storage, communication	13.3	15.6	17.5	15.3	14.5	13.9
Financial intermediation	9.4	8.7	7.8	7.5	7.4	7.9
Real estate, rental and business services	7.2	6.7	6.0	8.1	8.5	8.8
Private education	0.8	0.9	0.8	1.1	1.0	1.1
Private healthcare and social assistance	1.2	0.9	0.8	1.2	1.3	1.3
Other community, social and individual services	3.2	3.1	2.8	1.9	2.1	2.0
Production of products for own needs	11.1	11.8	14.2	7.4	7.8	7.6
Other non-market production	10.6	9.7	8.8	7.2	6.3	6.8

Source: Own elaboration based on Instituto Nacional de Estadística y Censo de Panamá data.

Table 1 shows the GDP structure of Panama for 2000-2016 by sectors of economic activity. The sectors with the largest share in GDP are: a) "transport, sto-

rage, communication", which includes operations in Panama Canal; b) "bulk sale and retail environment; repair of cars and motorcycle, personal belongings and household articles", which contains the trade within the free zones, particularly the Colón Free Trade Zone; c) the expanded financial sector (sector: "financial intermediation") and d) infrastructure for public investment (sector: "construction").

As it was mentioned before, this article assumes that the Panama Canal is a fundamental factor in Panama's modern economic growth. Each of the abovementioned sectors of the economy is linked to the Panama Canal and it impacts in four ways: direct, indirect, induced and parallel (Table 2).

Direct Indirect Induced **Parallel** Panama Canal Shipping lines Harbours • Financial sector • Shipping agencies • Free trade zones (in Airline hub • Ship provisioning particular, Colón Free Telecommunications • Ship repair and Trade Zone) services maintenance Canal tourism • The Panama Registry • Pilotage services • Logistics management of ships • Canal dredging • Land transport, freight • Maritime insurance service and Intermodal services freight transport • Panama Maritime • Container repair Court Legal services

Table 2. Impact of the Panama Canal on the Panamanian economy

Source: Own elaboration based on Impacto Económico... (2006).

The Panama Government's Strategic Plan for 2010-2014 predicts that Panama will become "Hub de las Américas" – the logistic center of the North and the South America – by 2020 (*Panamá. Plan estratégico...* 2009). It is projected that, due to the increased number of vessels passing through the Panama Canal, there will be more opportunities for interactions related to trade, transport, logistics, tourism, financial services, etc. Further development of the foundation of the Panamanian economy – the Panama Canal – will help to bolster other sectors of the country's economy (*Impacto Económico...* 2006: 15). The statistics presented in this article so far confirm these predictions⁸.

2.1. Direct impact

Direct impact is generated through revenues of the Canal, mainly from tolls, and ACP's marine services, such as sales of electric energy, drinking water, etc., which are partly passed on to the Panamanian economy as:

1) transfers to the Panamanian Treasury, which are realized each year in two forms⁹: as transfer equal net income reduced by operating costs, capital

projects, management, maintenance, modernization, Canal expansion, and the reserves provided according to the ACP Organic Law and approval of the ACP Board of Directors. Other form of payment to Panamanian Treasury are fees paid by the ACP in concept of per ton transit right and public services fees. The Panamanian Constitution doesn't pledge ACP to pay taxes, duties, tariffs, charges, rates or tribute of a national or municipal nature, with the exception of Panama Social Security payments, educational insurance, workmen's compensation and public utilities.

Despite the decline in Canal's revenue in 2016 as a result of the overall slow-down in international trade (*Informe...* 2016), increasing amounts of money were transferred by the ACP to the Treasury in the years 2000-2015 (Table 3). Between 2012-2016, \$1.024 billion USD were transferred annually on average.

Table 3. Budget revenue of Panama and transfers to the Treasury from ACP in 2000-2015

Specifications		2005	2010	2015
A. Total budget revenues of Panama (bn, USD)		3.438	6.324	10.656
B. Transfers to Panamanian Treasury from ACP (bn, USD)		0.489	0.815	1.043
Share (B in A, %)	6%	14%	13%	10%

Source: Own elaboration based on: *Annual Reports of ACP* 2000-2015 and *Instituto Nacional de Estadística y Censo de Panamá* data.

- 2) Wage sum of approximately 10,000 ACP employees, of which more than 99.5% are Panamanians¹⁰. The average payment of wages for 2014-2016 was \$0.46 billion USD.
- 3) Purchases of Panamanian goods and services made by ACP.

Forecasts anticipate that the Panama Canal expansion will have a positive influence on the Panamanian economy. However, there is a threat of the so-called Dutch disease (*Programa de Dimensión...* 2012). According to ACP expert evaluations, Canal expansion is expected to increase New Panamax traffic, generating greater revenue and, at the same time, saving on individual vessel servicing, as the canal toll depends primarily on tonnage. In addition, more vessels will likely create more opportunities for Panama's economy to interact with commercial, transportation, logistics, tourism, and financial services. However, appraisal of the effects of the Canal expansion will be available in a few years. Moreover, Canal modernization affect some of its associated ports. Ports like Baltimore, Charleston, Miami, New York and Savannah were preparing to service New Panamax vessels (*The Panama Canal...* 2016).

2.2. Indirect impact

Indirect impact refers to the revenues of the Panamanian economy related to Panama Canal activities that would not have been realized without the Canal existence. This category includes, among others, the operation of Panamanian shipping lines and agencies, maritime services like ship provisioning, ship repairing and maintenance, piloting services across the Canal and additional services. It is estimated that, in 2015, the supply of fuel to vessels alone had generated \$3 billion USD¹¹.

2.3. Induced impact

Induced impact includes financial resources generated by activities not directly related to the operation of the Canal, but being a result of close contact, such as the operation of ports related to the operation of vessels passing through the Panama Canal, the associated activities of the Colón Free Trade Zone and Canal tourism. For example, the Miraflores Visitor Center, Agua Clara Visitor Center and The Panama Canal Railway which are currently the most important tourist attractions in Panama.

Panama has 20 free trade zones located primarily in Panama City and Colón, which are on both sides of the Panama Canal¹². The largest of these is the Colón Free Trade Zone established in 1948, which is also one of the main import and export centers in Latin America. Initially it occupied 35 hectares, but currently it is divided into nine divisions with a total area of 1064.6 hectares. There are 2960 companies operating in this free zone.¹³ The main import products are: pharmaceuticals and chemicals, electrical machinery and equipment and textiles, which come mainly from China, Singapore, USA, Taiwan and Mexico. The same products are then re-exported to Latin American countries, mainly to Venezuela, Colombia, Puerto Rico, Panama and Dominican Republic.

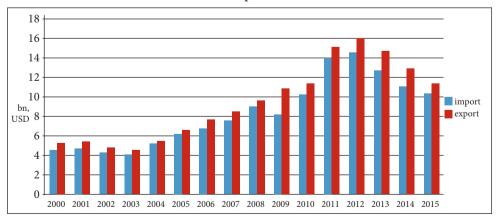


Figure 2. Import and export in the Colón Free Trade Zone in 2000-2015 (bn, USD) Source: Own elaboration based on *Instituto Nacional de Estadística y Censo de Panamá* data.

The value of import and export of products in the Colón Free Trade Zone between 2003-2012 was constantly increasing (Fig. 2). Since 2013, there has been a decline in Zone activity due to trade problems between two key partners, Colombia¹⁴ and Venezuela.¹⁵

2.4. Parallel impact

Parallel impact represents a side effect of the Panama Canal's functioning. The most important sector in this category is the financial sector. For many years, Panama has been a significant financial services center in the region, due to its favorable geographic location and international trade in the Panama Canal.

Panama is consistently on the OECD list of "tax havens". In order to be removed from the list, among others, it is required to sign more than 12 tax exchange agreements. Although Panama did so, it still does not comply with all of the OECD's requirements to leave the "tax havens" list¹⁶, but now Panama sets standards. The supervision over the transactions and the transparency of the procedures is being improved and the legal regulations are being adopted¹⁷. In April 2016, the so-called "Panama Papers" scandal emerged. Some of the approximately 11.5 million internal documents from Panamanian law firm Mossack Fonseca were leaked. However, it is not observed that the circumstance, at least in the short-term, has negatively impacted the Panamanian financial intermediation services sector (Table 4).

Table 4. The value of production of the financial intermediation sector in Panama in 2015-2016 (bn, USD)

Year	1Q	2Q	3Q	4Q	Total
2015	681.9	671.2	673.0	740.1	2766.1
2016	713.1	731.1	726.1	776.4	2947.4

Source: Own elaboration based on Instituto Nacional de Estadística y Censo de Panamá data.

Since 2006, Panama has become more attractive to foreign investors¹⁸ (Fig. 3). Foreign direct investment in 2011 amounted \$2789.8 million USD and, in 2015, it increased to \$4494 million USD. Since March 2010, Panama has obtained investment grade by rating agencies Fitch, Standard & Poor's and Moody's. Ratings of these agencies remain positive, classifying Panama's economy as stable¹⁹.

Another parallel component of the economy is the operation of Tocumen International Airport²⁰, a regional hub. The airport serves more than 90 destinations in the Americas and Europe. It is ranked as 5th in Latin America (86th in the world) according to the 2016 World Airport Awards, a ranking of the British consulting firm Skytrax²¹. As with the financial sector, the functioning of hub airport in Pana-

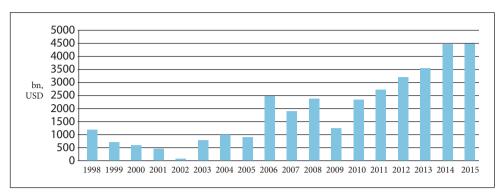


Figure 3. Foreign direct investment in Panama in 1998-2015 (bn, USD) Source: Own elaboration based on *Instituto Nacional de Estadística y Censo de Panamá* data.

ma is linked to the country's favorable geographic location and to the transport and international trade of the Panama Canal.

3. Public investments

Recently public investment represents one of main components of Panama's economic growth (Table 1). The most important project was the Panama Canal expansion. However, since 2011, other important projects with links to the Canal modernization have been launched, and have inspired the creation of a vision of Panama's development towards the standards of developed countries²². As many other developing countries, Panama has been characterized by a lack of adequate infrastructure, especially transport infrastructure. Since 2007, efforts have been made to make up for these deficiencies. Public (and private) investment have influenced Panama's economy by creating strong internal demand, thus significantly boosting not only construction but also related sectors such as transport and mining, and lowering the unemployment rate.

The most prestigious project besides extension of the Canal is the construction of the underground transit system (metro) in Panama City. The first 14 kmlong line was launched in April 2014 and is the first in Central America²³. The cost of the investment is about \$1,850 million USD. The construction of the second and third lines out of a planned total of eight is currently under development.

Other significant projects include the extension of the Madden-Colón highway (\$203 million USD) and improvements to other important roads. There are plans to build new airports and upgrade existing ones, including the expansion of the largest Tocumen International Airport (estimated cost of \$212.5 million USD). A fourth bridge over the Panama Canal is also to be built. Other realized or inprocess projects include construction of five new hospitals and 614 km-long power line between Panama and Colombia.

Among the infrastructure projects addressed to Panamanian society, the most important one, conducted in 2011-2013, was the renovation of the poorest and most dangerous area of Panama City – Curundú district. The cost of the project was approximately \$107.1 million USD. Over one thousand residential buildings were built for 5,040 beneficiaries²⁴. Thereafter, in April 2017, began the renovation of the city of Colón, located at the end of the Panama Canal on the Caribbean Sea.

4. Summary

Gaining full control of the Panama Canal in December, 31, 1999 and the Panama Canal expansion project have influenced the whole Panamanian economy in four ways: direct, indirect, induced and parallel. It also stimulated the increase of public (and private) investments, which have influenced Panama's economy by creating strong internal demand. Most types of impact, excluding the case of Colón Free Trade Zone, show an upward trend. The result is increased economic growth of Panama with an average GDP growth of 7.8% between 2005-2016. Other positive factors affecting the economy are also political stability²⁵ and, although it is a seismic area, the rare occurrence of natural disasters such as strong earthquakes²⁶, volcanic eruptions²⁷ and hurricanes²⁸, etc.

The barriers of economic development that still remain are characteristic conditions of developing countries: 1) weakness of the state institutions manifested by weak law enforcement and corruption. As a result, the OECD places the country on the list of "tax havens"; 2) the large economic inequality - in 2015 the GDP per capita in Panama was \$9,094 USD, which places Panama among the countries with higher average income. However, in 2016, 22.1% of the population lived below the poverty line, including 9.9% in extreme poverty²⁹. Gini coefficient has improved from 51.9% in 2010 to 50.7% in 2014 (World Bank 2016); 3) high levels of crime³⁰ and 4) low level of social capital³¹.

However, it is expected that by improving the infrastructure, financial institutions and the quality of life of the inhabitants, the investments, and in particular the Panama Canal expansion, will be profitable and will contribute to the further economic development of Panama.

Notes

- Size of Panamax vessels: 294.1 m long, 32.3 m wide, 12.0 m submersion, 5,000 TEUs. New Panamax sizes: 366 m long, 49 m wide, 15.2 m submersion, 13,000 TEUs.
- The credits were provided to ACP by following credit institutions: Japan Bank for International Cooperation (JBIC) 800 million US dollars, European Investment Bank (EIB) 500 million US dollars, Inter-American Development Bank (IDB) 400 million US dollars, International Finance Corporation (IFC) 300 million US dollars, Corporación Andina de Fomento (CAF) 300 million US dollars.
- ³ For example, alternative routes between the US and Asia are: the Suez Canal, land transportation by the US or Mexico, and the route around the continent of South America.
- Data for 2015 (World Bank 2016).
- Between 2013-2015, the average annual flow through Panama Canal was 13,600 vessels, 51.2% of which were on the route between Asia and the East Coast of the United States. The average tonnage of ships was about 4000 TEUs.
- According to 2011 World Bank data, Panama, together with Timor-Leste, had the fifth largest GDP growth in the world.
- The International Finance Corporation, the largest international financial aid organization to developing countries, in donated \$300 million USD to Panama in 2008 as a part of the investment for the Panama Canal expansion.
- There is a threat of competition from Nicaragua Canal which is planned to be built. However, since November 2016, when the inauguration of the construction took place, no works were done. The reduce of the wealth of the main Chinese private investor is the reason of this delay. There are also suspicions that the project might be canceled (Watts 2016; Peralta 2017).
- According to ACP Organic Law 1997, http://www.acp.gob.pa/eng/legal/law/index.html (access: 04.04.2017).
- According to the ACP report for 2015, among 9926 employees 9758 were Panamanians, 113 were Panamanians born abroad, 36 naturalized citizens and 19 foreigners.
- 11 Agencia EFE 2015.
- http://logistics.gatech.pa/en/assets/special-economic-zones/free-zones (access: 27.04.2017).
- For comparison the second largest free zone in Panama is Zona Franca Vaguil where 55 companies are operating.
- In 2013, Panama has lodged to WTO a trade dispute with Colombia. The reason was the imposition by Colombia of additional fees for textile products, shoes and clothing exported from Panama. The dispute is still not resolved. https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds461_e.htm (access: 24.08.2017).
- Due to internal problems, Venezuela was unable to repay debt of approximately 1.2 billion of US dollars (La Nación 2013).
- ¹⁶ Countries that are OECD tax havens feature, among others, no taxes (or only nominal), rigorous protection of financial data, and a lack of transparency.
- New Panama Banking Law was established in 2008. It was designed with the help of the World Bank. https://www.superbancos.gob.pa/superbancos/documents/laws_regulations/laws/blaw.pdf (access: 24.08.2017).
- ¹⁸ It is assumed that it was influenced by the decision to extend the Panama Canal.
- http://www.tradingeconomics.com/panama/rating (access: 17.04.2017).
- Tocumen Airport service about 15 millions of passengers on average per year.
- http://www.worldairportawards.com/Awards/world_airport_rating_2016.html (access: 13.09.2017).
- Panama's Development Strategy for 2010-2014 and 2015-2019 (Panamá. Plan estratégico de Gobierno... 2009, 2014).
- This article assumes that other Central American countries are: Belize, Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica.
- http://www.mef.gob.pa/es/noticias/Paginas/Solucioneshabitacionales.aspx#.WY2snrZpxdg (access: 11.08.2017).
- Panama and Costa Rica are more politically stable than some of countries of the Central America: Nicaragua, Honduras, El Salvador and Guatemala.

- The last major earthquake (7.0-7.9) M_L was in 1991 http://www.panamaviejaescuela.com/listasismos-fuertes-panama/ (access: 13.09.2017).
- ²⁷ The last eruption was in 1620 of La Yeguada volcano.
- The last hurricane and only one recorded in Panama: Hurricane Martha in 1969.
- These indicators are improving: in 2011, 25.9% of the population lived below the poverty line, including 11.1% in extreme poverty.
- Panama has missed civil wars that hit Guatemala, Honduras, Nicaragua and El Salvador in the 1970s and 1980s. Thanks to this, Panama is relatively less dangerous now. In Guatemala, Honduras and El Salvador, the level of security is still low due to the ongoing fighting with drug mafia. The average annual of homicides in these countries ranges from 4,000 to 6,000 people. In Panama this problem also exists, but the number of homicides is smaller: 759 people was killed in 2010 and 663 people in 2013 (United Nation Office on Drugs and Crime 2016).
- Based on own research conducted in July 2011, in Panama City and surrounding areas. The author conducted a survey among 102 people. Respondents were mostly highly-educated people.

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