

Relationship between Economic Growth and Unemployment: Analysis since 1991 to 2015

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Abstract

In the years 90`It began with the democratic process in Panama, considering that ended with the military dictatorship that prevailed since 1968. This rigid condition will remove the country competitiveness, which prevented the participation of the private sector in various economic activities, producing up to 16% unemployment, difficult situation begins to reverse more foreign investment, strengthening the service sector of the economy. The general objective was raised: To analyze the level of unemployment as a result of economic growth given from 1991 to 2015. The specific objectives: a) assess the level of unemployment as a result of the share of public investment in economic growth between 1991 and 2015 b) assess the conditions presented by the distortion of informal employment in the economy, c) Corroborating Okun's law, that is, the inverse relationship between the rate of real GDP and the unemployment rate from 1991 to 2015 were analyzed statistics jobs and wages section of Panama in figures, as well as series of national accounts series; with the deductive-quantitative method, and it includes analysis through simple correlations and multiple regressions of the variables. The results are used to make decisions concerning establishing macroeconomic policies, in order to reverse the increase in unemployment as a result of the economic slowdown experienced in 2016.

Keywords: Full Employment, Economic Slowdown, Unemployment Rate, the Beta Coefficient, Okun's Law, Unemployment by Economic Activity.

1.0 Introduction

It is conceived that in Latin America for the decade of 90s, economies recover from the so-called lost decade, the result of the problems caused by external debt. Consequently, the growth started from the low experienced economic indices in the same, coupled with an idle capacity (unemployed), pushing wages down and therefore the phenomenon of the informal economy increased, that Panama stood at 62.1% (Yañez).

The structural problems of employment in the early 90`s meant that our economy was not able to absorb all the labor that was generated, apart from the little private investment in productive sectors (agriculture and industry), occasioned 135.951 people in 1991 who suffered from having the ability to generate worthy and important income for their family.

These developments present significant ups and downs in absolute terms as evidenced in Fig. 1, which indicates that

until 1993, the levels of absolute unemployment reached the 124.718 individuals, while for 1998 will produce about 150,475 unemployed, therefore two international crises, as in the Mexican tequila crisis in 1995 and the Asian caratazo version 1.0 since 1997. Despite these two cyclical processes, in relative terms unemployment showed a decrease, as seen in Fig.1, 2, 3 below.

Upon reaching the first decade of the 2000's, Panama abandons the two-digit unemployment, mainly by increased foreign direct investment which focused on the logistics sector (ports specifically) as well as the increase in hotel investments in communications, coupled with the fact that the Panama Canal is already part of the national heritage, earning large incomes for all Panamanians.

In recent semesters unemployment levels have begun to rise as a result of the economic slowdown in our economy, so its possible causes and consequences for the population as workers have acquired an acceptable social status in recent years are analyzed, as well as for those seeking opportunities to have first job or decent jobs to meet their needs, both basic and recreational and personal.

2.0 Objectives of the Study

- Analyze the level of unemployment as a result of the share of public investment in economic growth between 1991 and 2015.
- Evaluate the conditions presented by the distortion of informal employment in the economy.
- Corroborating Okun's law, that is, the inverse relationship between the rate of real GDP and the unemployment rate from 1991 to 2015.
- Determine through simple and multiple relationship between growth and unemployment in Panama regressions.

3.0 Methodology

The research is descriptive based on secondary sources of information (Table 441-01 Population 15 years of age in the Republic of Panama, by employment status: Labor Market Survey, years 1991 to 20152 and other pictures of the

Labour Market survey, as well as the Report of Fiscal Balance the Ministry of Economy and Finance, 2010-2015).

For its part, the design rests on the hypothetical-deductive approach, which tries to validate the hypothesis through the correlation of the variables used by the regression method.

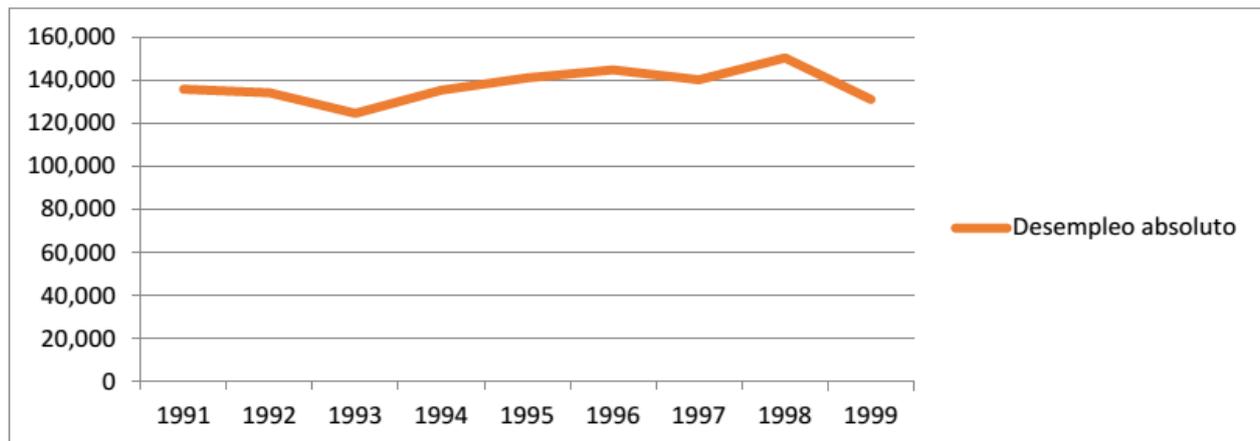
4.0 Results

The causes of unemployment in recent semesters point to the decline in public investment, considering that it generates about \$ 4 to the economy for every dollar invested, impact is of great importance in a country that has a huge platform in the services, especially for the international environment (Valverde, 2015).

Now, looking at the chart below exposed appreciate the evolution of investment spending, whereas for 1994 a deep low rate (-20%) occurs in runlevels, recovering from 1995, a time when it was the crisis originated in Mexico (tequila effect)² by the devaluation of the currency and has its global impact (Gascon, 2014). In this sense, the government's move was to strengthen the Panamanian service platform, encourage foreign direct investment, expand public expenditure among other things, obtaining economic stability and reducing the unemployment rate from 14% to 11%.

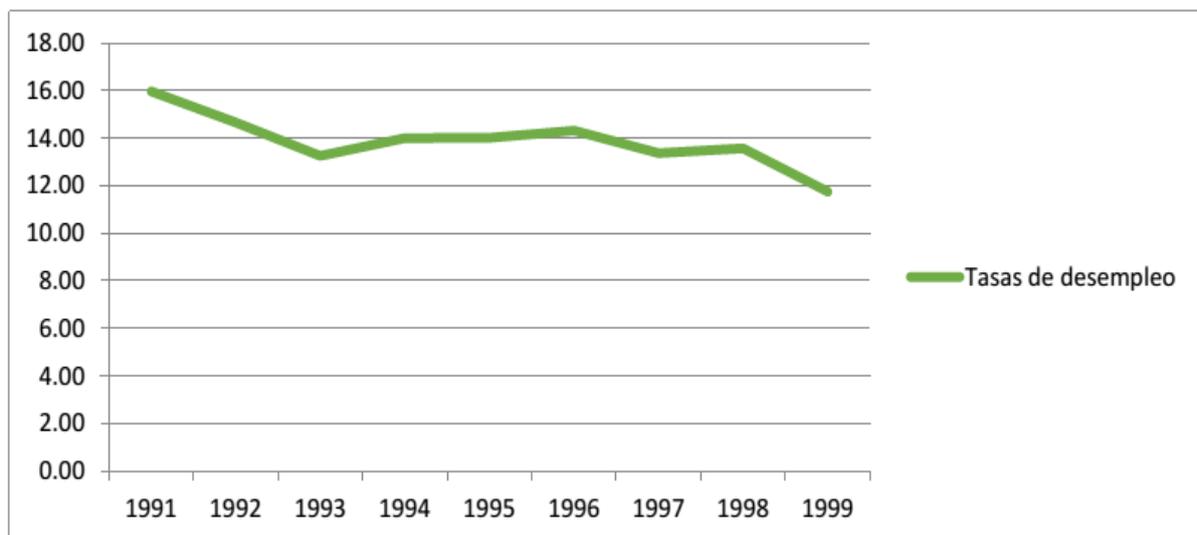
¹Section of jobs and wages of the Panama in numbers (1991-2014).

²Coined specially by South American countries to refer to the effects that caused the crisis to their economies.



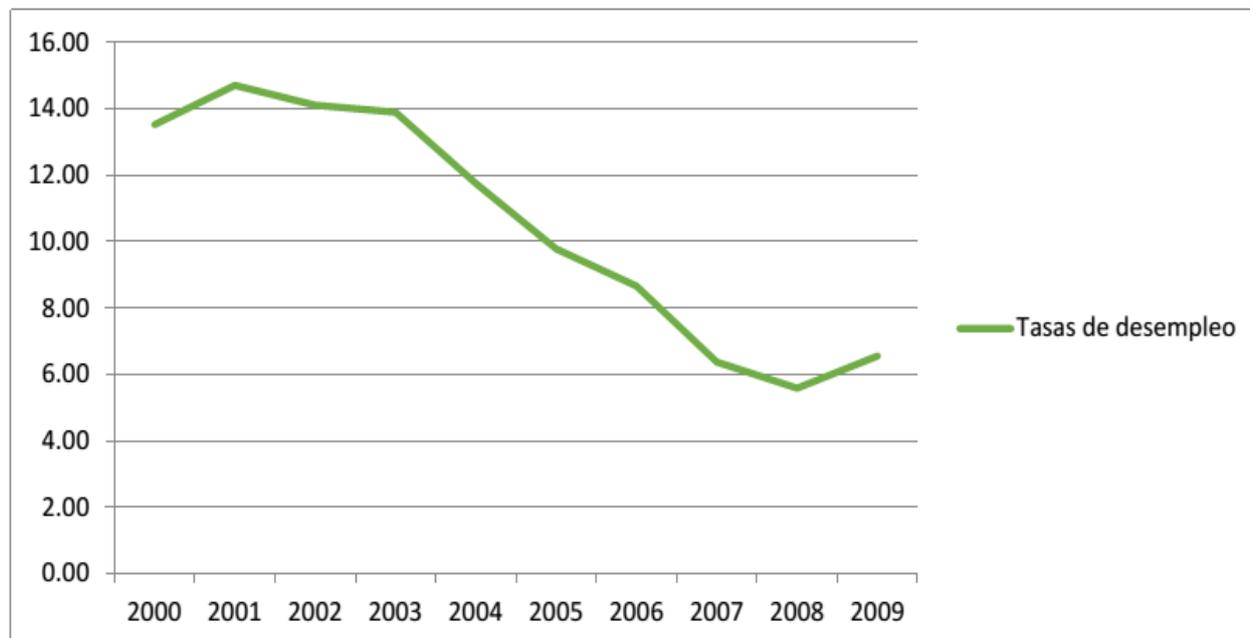
Source: Prepared by the author based on data from INEC.

Figure 1: Behavior of the unemployed between 1991-1999.



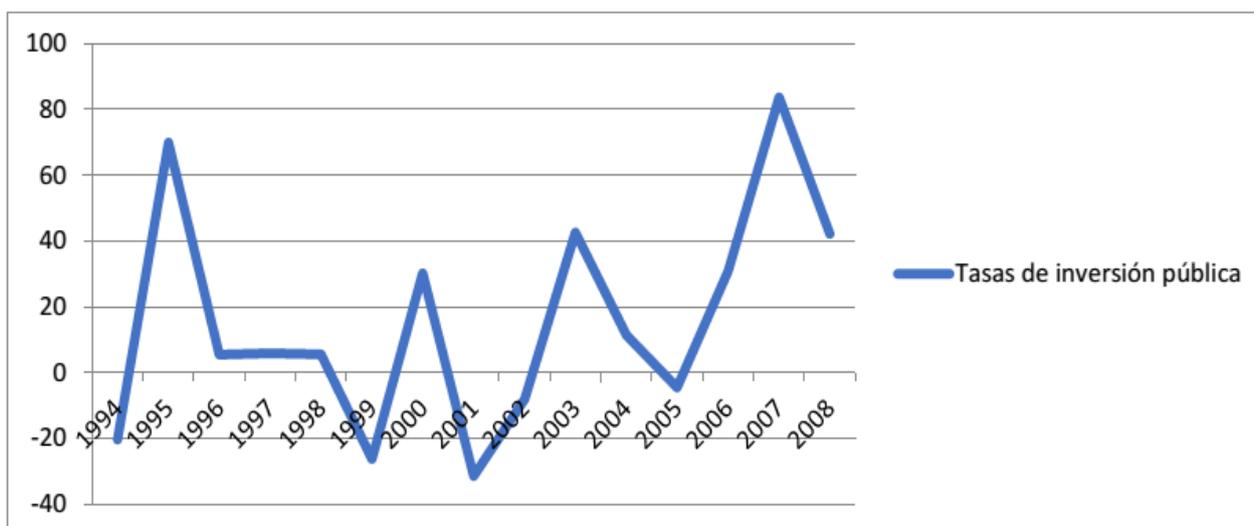
Source: Developed by the author on the basis of data of the INEC.

Figure 2: Rates of unemployment and its evolution between 1991-1999.



Source: Developed by the author on the basis of data of the INEC.

Figure 3: Rates of unemployment and its evolution between 2000-2009.



Source: Developed by the author on the basis of data of the INEC.

Figure 4: Rates of public investment and its evolution between 1994 to 2008

However, as shown in Fig .4, also public investment remained stable between 1996 and 1998, despite being in the process of the Asian crisis that began with the devaluation of the Thai currency in 1997 and brought a domino effect, affecting the globalized world (Aghevli, 1999). But at 1999 public investment plummets and falls by 26%, affecting economic conditions and thereby raises the unemployment rate in 2002 above 14% again. Since 2003 the Panamanian economy develops rates significant growth, which places us until 2013 among the fastest growing countries in the world, with an average of 8% annually and as shown in the graphic, public investment was vital for get those results.

Since 2010 the economy experiences rapid economic growth, bringing the unemployment rate to full employment conditions, which allows for less than 100 thousand people unemployed in Panama, from 2011 (see Table 1). During this period public investment reaches a rate of 55% in 2011 compared to 2010, to thereby serve as a measure counter

cyclical of the international financial crisis in the United States and that affected the rest of the world(ECLAC-2012).

This public investment focused on improving the transport system (Metro Line 1, stops and adjustments for the bus meter), as well as for road realignment Panama City, improvement of the drinking water and sanitation; besides the construction of hospitals (Testa, 2015).

Arriving in 2015, the public investment rate falls to 6% (Fig. 5), which affects the economic outlook and therefore employment, to develop an economic slowdown and only allowed to grow to 4.9% in the first half 2016 and to grow 6% GDP in the third quarter should be at least B / 9 850 450 000, which is unlikely with the level of public investment presented in the report of the Fiscal Balance in June 2016 by the Ministry of Economy and Finance where execution not exceeding B / arises. 1,600 million and is required to be above the B /. 2,000 million for an investment project in 2016 B /. 4,100 million. This development of public

investment would allow private investment above the B /. 15,000 million and not the B /. 13.000 million are given about right now.

This condition affects several sectors of the economy, establishing jobless for economic activities that have an impact on the country's development. This can be seen in the table below, where these activities account for about

51% of total unemployment generated in the country, considering the above data in Table No.1; being the activities of hotels and restaurants the most affected, with an increase of 97% over the 2,015 unemployed persons for the year 2013³, after the construction with 39%⁴, followed by transport, storage and communication 21% and trade 9% (INEC, 2015).

Table1: Levels of employment and unemployment in Panama from 1991 to 2015

Years	Unemployment	Employment ⁵	Total ⁶
1991	135,952	715,144	851,096
1992	134,353	781,565	915,918
1993	134,353	815,583	940,301
1994	134,353	831,824	967,292
1995	141,224	866,658	1,007,882
1996	144,890	867,219	1,012,109
1997	140,316	909,055	1,049,371
1998	150,475	957,926	1,108,401
1999	131,244	985,615	1,116,859
2000	151,124	966,209	1,117,333
2001	169,727	984,223	1,153,950
2002	172,389	1,049,525	1,221,914
2003	170,351	1,080,523	1,250,874
2004	161,443	1,212,705	1,374,148
2005	137,663	1,269,795	1,407,458
2006	134,353	1,294,937	1,417,736
2007	92,345	1,356,973	1,449,318
2008	84,009	1,421,921	1,505,930
2009	101,103	1,440,801	1,541,904
2010	101,455	1,455,592	1,557,047
2011	72,162	1,538,082	1,610,244
2012	68,268	1,617,171	1,685,439
2013	71,469	1,672,352	1,743,821
2014	85,905	1,695,361	1,781,266
2015	92,260	1,733,851	1,826,111

Source: National Institute of Statistics and Census of the Office of the Comptroller General of Colombia⁷

Table 2: Unemployment economic activities between 2013 and 2015

Economic activity	2013	2014	2015
Construction	11,381	14,437	15,844
Trades	17,455	17,822	18,980
Hotels and Restaurants	4,253	7,768	8,399
Transport, storage and communication	3,332	3,754	4,023
Total	36,421	43,781	47,246

Source: National Institute of Statistics and Census of the Office of the Comptroller General of Colombia.

Another element to note is that in Panama, the economy is depended in the services sector by 80%, informality⁸ develops, this economic system is largely unable to generate permanent and stable jobs. That's why for the 2013 service workers, salesmen and markets represent 27.5% ie 145.804; of which 77.6% work for informal enterprises.

This figure increases in 2014, considering that there are 151.013, resulting in an increase of 3.6% and a share relative

to the total of people working in the informal sector, at 28.5%.

³Time when the economy was highly dynamic.

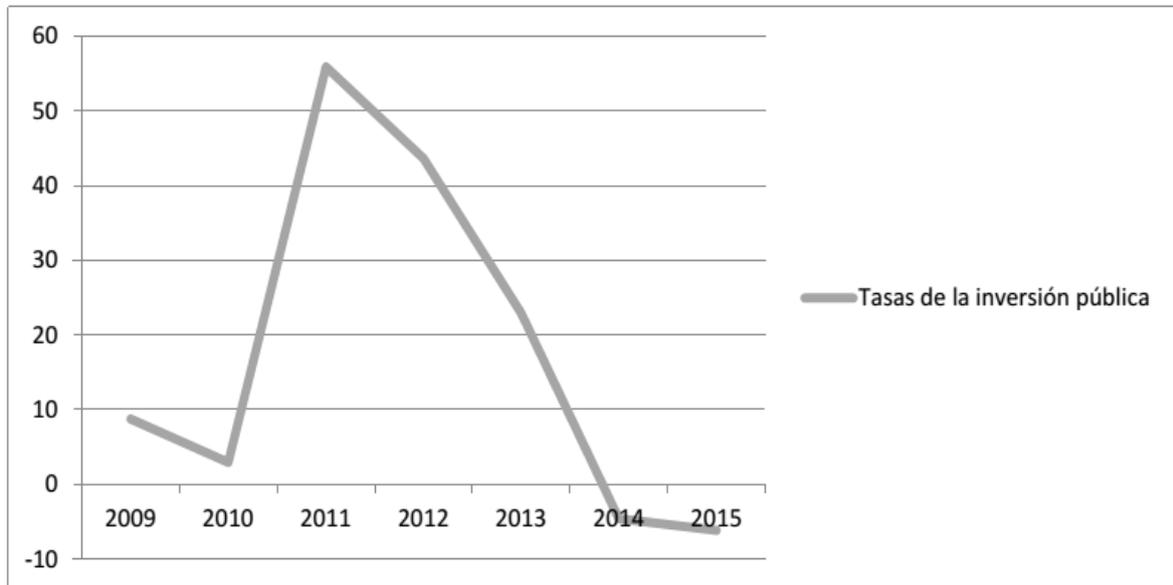
⁴It represents 34% of the unemployed in these highly sensitive activities.

⁵It includes informal employment.

⁶Economically active population.

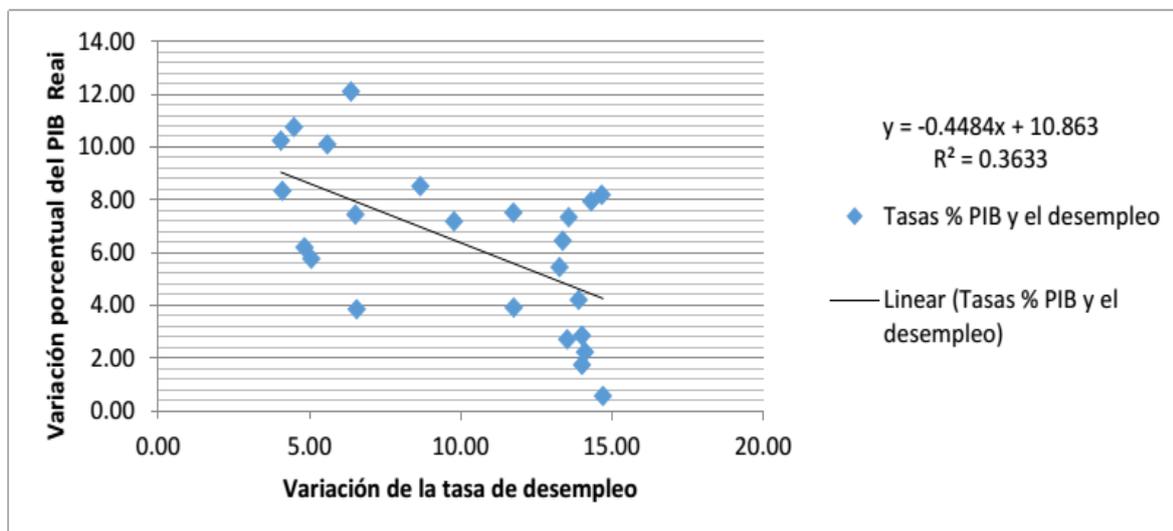
⁷Table 441-01 section of jobs and wages of Panama in Numbers

⁸Until 2015 the level of informality is 39.9%.



Source: Prepared by the author based on data from the Ministry of Economy and Finance

Figure 5. Rates of public investment and its development between 2010-2015



Source: Prepared by the author based on data from INEC Panama.

Figure 6: Variation rates of unemployment and GDP from 1991 to 2015.

Another aspect that affects informality is little or no qualification of the worker, or that or that person who has no relevant studies or technical skills specific activities in the labor market; what constitutes the years analyzed as the second group (includes unskilled services of mining, construction, manufacturing, transportation and other elementary occupations workers) in the year 2103 and first in 2014, surpassing workers services and trade.

In this sense, there are 152.744 individuals in this category, with 28.8% of informal employees.

Undoubtedly informal work poses a risk to the economic future of the country, because having a population under this condition has negative implications for sustainable growth of our economy, because these people cannot access mortgage or personal loans, to ensure procurement of goods necessary for life, such as houses, cars, furniture and household goods, etc. Also a problem with fiscal revenues to governments because they do not report their taxes and therefore a lot of resources that can be managed for social and infrastructural works that benefit all Panamanians lost.

For these reasons, the State should direct its economic policies related to the labor market in two ways;

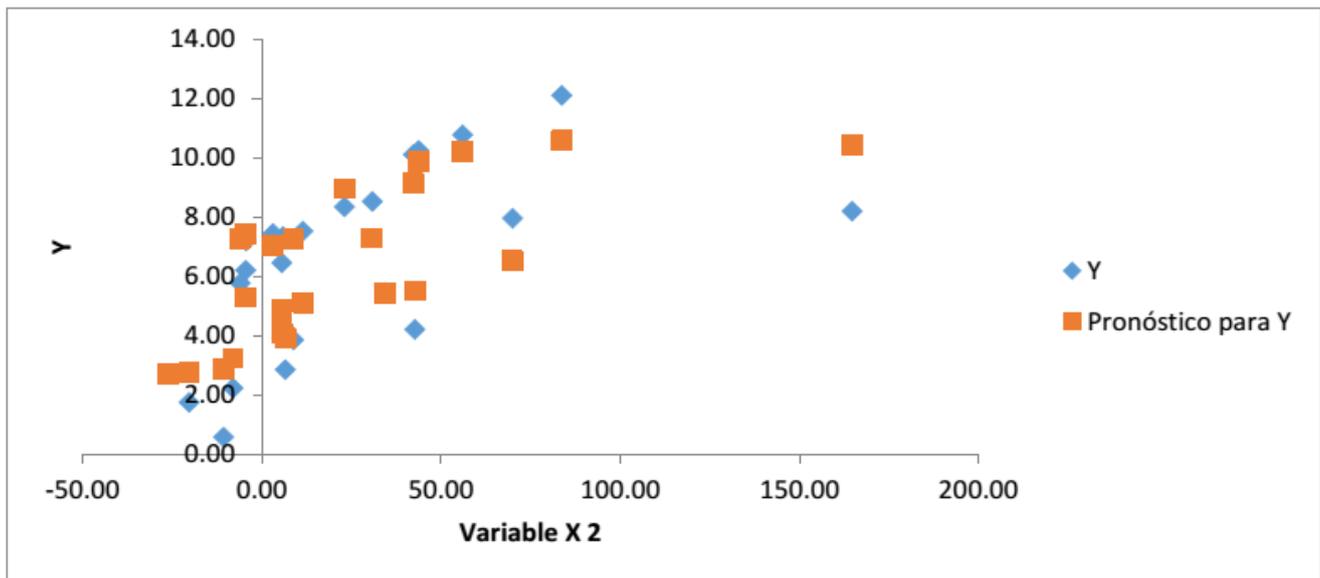
1. Creating incentives to companies with high added value and generate good quality jobs.
2. Improving professional skills through existing collegiate bodies (universities, institutes, etc.) to ensure highly specialized human resources.

The workforce is critical to any economy because it produces goods and services necessary for the development of human, such as food, clothing, utilities, and transport activities; among other activities. But to influence sustainable economic growth, it is required that labor is mostly formally hired by private and public entities in the country. Considering the above stated, it has analyzed the situation with the approach of Okun's Law, which establishes the negative relationship of unemployment and real GDP (Mankiw, 2005)⁹.

⁹It is in honor of Arthur Okun, a US economist who study this phenomenon for the first time.

The analysis prepared reinforces the importance of public investment as an engine of the economy, or in order to

maintain full employment status was obtained between 2011 and 2014, growth is required above 6%.



Source: Prepared by the author based on data from INEC of Panama and the Ministry of Economy and Finance

Figure 7:Regression curve adjusted to include investment rates in the multivariable analysis from 1991 to 2015

The phenomenon "**ARROW**" denotes the country's ability to adapt to changes from 1990 to the first democratized and then focus on the process of economic globalization, making adjustments in economic policy to strengthen pillars promoted by this phenomenon. The correlational variables in question a beta coefficient of -0.45 is obtained also called Okun coefficient (Pol, 2014). By including public investment since 1991, the results show a significant relationship by obtaining multiple correlation coefficient of 0.8365, 0.6997 and R2 whose function is as follows:

The function $y = 9.7465 - 0.4369X + 0.0431X^2$

Reference

1. Mankiw, G. (2005). Macroeconomics Fourth Edition. Barcelona: Antoni Bosch, Editor S.A.
2. Pol, J. S. (19 November 2014). the Relationship between Economic Growth and Unemployment. Okun Law in Spain. Retrieved from <https://jesussequeirapol.wordpress.com/2014/11/19/la-relacion-entre-crecimiento-economico-y-desempleo-la-ley-de-okun-en-espana/>
3. Testa, M. (May 18, 2015). Public investment fell 40.7% in the first trimester 2015.
4. Valverde, R. (2015). Analysis of the level of investment as a factor of economic growth and its implications for the productive sectors of Panama. Panama: Vice-Rector for Research and Graduate Studies at the University of Panama.
5. Yanez, C. (S. F.). Latin America in the Nineties: growth deficits. international economic America.

Annex

Summary	
Regression Statistics	
Multiple correlation coefficient	0.83647536
Determination coefficient R ^ 2	0.699691028
R ^ 2 adjusted	0.671090174
Typical error	1.757533409
Observations	24