

### UNIVERSIDAD DE ESPECIALIDADES ESPIRITU SANTO

## FACULTAD DE ECONOMIA AN IN-DEPTH ANALYSIS OF INVESTMENT IN THE BUILDING & CONSTRUCTION INDUSTRY OF ECUADOR

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## An in-depth analysis of investment in the building & construction industry of Ecuador

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#### ABSTRACT

This document aims to present the main changes of the Ecuadorian short-term economic dynamics of the investment in construction by provinces, consumption of materials, and investment, among other variables that involved the environment of the construction. These figures are widely used by analysts, politicians, the press, the business community and the general public, as synthetic indicator of economic activity, for decision-making. This report consists of general results of the Ecuadorian construction investment, the macroeconomic environment and the behavior of other economies in Latin America. In addition, the behavior of the demand in construction between provinces, which includes an analysis of final consumption and investment in the main markets that this activity have been increased in Ecuador in the gross capital formation.

### **CONSTRUCTION INDUSTRY OF ECUADOR**

Keywords: Construction, supply, demand, GDP, Investment, INEC, Ecuador

#### **INTRODUCTION**

The main purpose of this research is to discuss the importance of the construction sector in the economy of Ecuador, if it received more state support to develop a joint work and benefit all sectors that are related to this important activity. But, it has to touch important reasons to make the construction sector one of the strengths of the economy such as to determine the influence of each province in the economy of Ecuador in the construction sector, examine the benefits that could have the construction sector if the government contribution would include and the progress that would establish the sectors that are related to building new construction processes to innovate.

Because the growth of the economy in the third quarter of 2014 was 4.7%, 1.1 points higher than the growth recorded in the second quarter of that year. Moreover, in December 2014 the national unemployment stood at 4.12%, while full employment and underemployment nationwide showed levels of 42.8% and 50.9%, respectively. Thus, not only it has reduced unemployment but it has also improved the quality of employment compared to previous years. Improvements in the workplace have been accompanied by a reduction in poverty, which in December 2014 reached a level of 27.3%, while extreme poverty stood at 11.2%. (Economica, 2014).

The construction industry is undoubtedly one of the main engines for economic and social development of a country because it creates linkages with much of the commercial and industrial sectors of society.

This industry is made up of two economic activities, despite having in common the construction and raw material used; its final products are intended for different areas. The first involves the construction of basic infrastructure, roads and public

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buildings; and the second, who is called the real estate industry, includes the construction of housing and buildings (Naveda, 2013).

Based on these two installments, in the subsequent edition we estimates and present possible scenarios in the sector for the coming years. Although the expectation of the construction sector pointed to an increase of at least 10% this year, 2015 did not start with an encouraging outlook for the effects of falling oil prices. Placing less and less confidence credits for long-term debt by the citizens are some of the effects of concern to the union, according to Enrique Pita García, president of the Chamber of Construction of Guayaquil.

This production segment achieved growth in the third quarter of last year from 9.1% compared to the same period of 2013. One of its segments, real estate, will close 2014 with a growth of 8.5%, a figure above expectations which started this year, says Jaime Rumbea, director of the Association of Real Estate Housing of Ecuador. "It was a year of recovery after the 2013 mortgage loans of Biess (Bank Affiliate) fell; we recover USD 600 million, "he explains. 2015 raises an adverse scenario and the sector will slow, adds Hermel Flores, president of the Chamber of Construction Industry of Ecuador.

The Chamber considers, however, that public works can still drive the sector. This is because, according to Flores, hydroelectric enter a final phase of construction. Investment is also expected in the millennium schools and medical units, driven by Chinese credits earned earlier this year (AENOR, 2015).

This paper aims to make a comparison to prove the differences of buildings and the money invested in each province during the last 5 years in Ecuador. It is important in order to know which places in the country are focusing to develop the construction sector with the object to change the lifestyle of the citizens in the different provinces.

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#### LITERATURE REVIEW

#### **Building sector in Ecuador**

Construction accounted for 9.2% of total GDP in 2010. An Ecuadorian percentage represents a decrease from the 10% rate recorded in 2009, representing the fourth consecutive year of reducing the weight of brick on the set of the economy. The percentage contribution of the construction sector in GDP and returned to stand at 2003 levels, when it stood at 9%, according to the management of large construction companies.

The contribution rate of 9.2% in 2010 for the construction is also almost two points lower than the peak of 10.8% to the construction activity contributed to the national economy in 2006, in the 'boom' of the sector (MUNDO, 2011). By subsectors highlights the decline recorded by the construction of major infrastructure, 13.5% and the first to experience this activity in twelve years. The housing development activity moderated its contraction in contrast to 9.3%.

Consequently, the construction sector accounted for 67% of the sector last year, compared to 33% that led to the civil works, which thus gained on infrastructure projects for the first time since 1997. The current crisis in the sector is mainly reflected in employment. Busy construction now represent 9.3% of the total compared to the rate of 13.8% which meant in 2007, in the boom in the sector (MUNDO, 2011).

According to INEC, construction accounts for over half (57%) of the total jobs lost since the beginning of the crisis, as it has lost thousands of jobs. But, Ecuador is not the only country that is crossing a crisis in the construction level and which of course affect the development of the country. Actually, Colombia also has a huge influence of the construction in the economy. Dane director, Mauricio Perfetti del Corral, pointed

out that the construction industry had an increase of 9.9 percent, justified in a rebound of 7.4 percent in the execution of buildings and 12 percent for civil works.

The emitted hypothesis is denoted by H0 and called null hypothesis, which is the one that this research want to reject because the province might have a different in the investment on the construction. On the other side, the opposite hypothesis is denoted by H1 and is called alternative hypothesis, which accept that the provinces have a difference between them.

#### **Construction in other countries**

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"The 9.9 percent growth of the construction sector GDP is a good figure, but it should improve," said the president of the firm Ospinas Andres Arango, who added that the results seen in buildings and civil works realize that this sector of the economy became "the consent of the Government" and a generator of employment (2014, 2015). In turn, the president of the Colombian Chamber of Construction (Camacol), Sandra Forero said that the sector is generating 1.4 million jobs and also made clear that this would grow 9.7 percent in 2015.

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And in Argentina, the investment rate (gross domestic fixed investment (IBIF) / GDP) represents the average propensity to invest in an economy. The greater the proportion of investment on aggregate demand, further expansion is the productive capacity of the economy or potential output, thus more likely to sustain this growth in the long term. Moreover, by multiplying effect, the growth of investment can increase aggregate demand and thereby increase output growth in the short term.

In the version constant price, this variable is approximated increasing production capacity of an economy; while at current prices, measures the relative cost effort or money you need to spend the economy to achieve the physical volume of investment. This distinction is important because it introduces a clear distinction between the impact of investment on aggregate supply and total savings needed to finance it, a distinction that originates in shaping the relative prices of capital goods and their correlation with the real exchange rate. For example, in a context of increase (decrease) in the relative prices of capital goods, the investment effort can be increased (reduced) to generate the same physical volume of investment (DANE).

The investment effort (investment rate at current prices) is relatively greater than the increase in installed capacity associated with the investment rate at constant prices (relative physical volume of investment for the product) in times of real depreciation of the domestic currency as a result of the high incidence of durable equipment imported in total private investment, although the sensitivity of this relationship would be less for the important contribution of the buildings, well quintessential no tradable. Therefore to

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evaluate the effect of the investment on the productive capacity of a country over time, achieved with evaluating the investment rate at constant prices, since it is assumed that this would not be influenced by changes in relative prices (Coremberg, 2006).

According to INDEC figures for 2004, the stock of buildings is an asset that has increased participation in gross domestic fixed investment: 60%, with the remaining 40% in durable production equipment. The latter in turn is divided into machinery and equipment with 27% and transport 13% of the total. The imported durable equipment involved in 57% of the total investments in durable equipment. The breakdown by origin of the machinery and equipment is as follows: imported participates in 15% of the total investment in machinery, while the foreign origin of investments in transport equipment consuming 8% of total gross domestic investment, 60% of all transport equipment investment.

#### **Tools of Analysis**

#### Anova

The analysis of variance allows the null hypothesis that the mean K populations are equal, versus the alternative hypothesis that at least one of the populations mean differs from the others in terms of their expected value. This contrast is critical in the analysis of experimental results, in which interested in comparing the results of K 'treatment' or 'factors' to the dependent variable or interest. The table of results of ANOVA, the value of the test statistic F if significantly different from 1 for any level of significance and, therefore, the null hypothesis of equal means is rejected and confirmed the first impression is provided by the Error bar chart.

#### Tukey

Tukey method used ANOVA to create confidence intervals for all differences in pairs between the average levels of the factors while controlling the error rate per family you specify. It is important to consider the family error rate when multiple comparisons are made because the probability of making a type I error for a number of comparisons is greater than the error rate for any individual comparison. To offset this increased error rate, Tukey method adjusts the level of confidence of each individual interval, so that the resulting level of confidence simultaneously is equal to a specific value. It will be used to classify provinces according the amount of investment.

#### Non-Parametric Test

An alternative in solving problems are nonparametric or distribution-free methods, which are not as numerous or severe cases and are applicable to any variable, in particular the nominal or ordinal type as well as various distributions. Most of these tests do not require assumptions about the shape of the population distribution. n accept non-normal distributions variables should not necessarily be measured in an interval or ratio level can be analyzed nominal or ordinal data n Yes nonparametric data analysis interval or reason like, these should be summarized discrete category. The variables should be categorical.

#### METHODOLOGY

The approach of this research is quantitative, non experimental, descriptive and correlated. And is not experimental because there is no control over the variables. To obtain information on analysis of data obtained from the database of the INEC in which a mapping method was applied to study the relationship between variables collected

will be tabulated. In order to identify the influence of economic factors between the Ecuadorian provinces with the level of construction due to balanced public investment in this sector over the royal government. The analysis of the variables is applied transversely and hopefully with low estimation error because of which comes from the sample and the fact that the universe to investigate is considered active sector. In this case it proceeds to perform the analysis only database obtained from INEC, where the principals variables will be the number of constructions by province and amounts invested in each of the works.

Also, the variables will be grouped per years in order to make a comparison between the variation of the total amounts of the construction and total amounts made during the 2010-2014. On the other hand, It will be specified the trends of the constructors in Ecuador in the structure and the materials that they used to use, showing in a characterization chart. And with a Duncan analysis the provinces are going to be classified in tree categories such as the one's which more investment, medium investment and the lower investment had; in order to verified which are the main provinces that have a huge influence of this important investment.

It will be used ANOVA to determine whether the province affect or not in the variable of the amount of investment. Then the analysis of which are the provinces that have different levels of investment in construction such as between all the provinces under low, medium and high amounts. If the variable does not satisfy de requirements for the Anova procedure then the non-parametrical test for independent samples will be applied.

### **CONSTRUCTION INDUSTRY OF ECUADOR**

#### DISCUSSION

### Variation per provinces

Descriptives							
Total builgind sum							
	N	Mean	Std. Deviation	Std. Error			
AZUAY	5	314162387	278381422.2	124495956.7			
BOLIVAR	5	51562275.2	72435099.33	32393961.21			
CAÑAR	5	41171094.6	9699850.435	4337904.989			
CARCHI	5	23050772.6	10101785.36	4517655.75			
COTOPAXI	5	200848237.4	330161390.8	147652662.7			
CHIMBORAZO	4	37899871.25	15959239.48	7979619.741			
EL ORO	5	55309859.4	1527015.74	682902.199			
ESMERALDAS	5	13598850.2	8760618.945	3917867.897			
GUAYAS	5	1658302474	1600730777	715868566.4			
IMBABURA	5	157813211.8	146603263.8	65562972.72			
LOJA	5	278443804.4	406879597.3	181962087.6			
LOS RIOS	5	35629730	8306154.142	3714625.058			
MANABI	5	319060805.6	352614371	157693940.7			
MORONA	5	16136342.2	3018600.558	1349959.209			
NAPO	5	11989483.2	2613832.756	1168941.545			
PASTAZA	5	7552615.8	704461.813	315044.9			
PICHINCHA	4	751261783	122093959	61046979.49			
TUNGURAHUA	4	118579636.8	17669817.33	8834908.663			
ZAMORA	5	20252760.4	8527213.03	3813485.599			
GALAPAGOS	5	12428982.2	4472540.661	2000180.99			
SUCUMBIOS	5	23007642.4	14033811.44	6276111.272			
ORELLANA	5	16555743.8	8292496.581	3708517.211			
SANTO							
DOMINGO	5	42789874	16117398.71	7207919.826			
SANTA ELENA	5	115507037.4	183856687.2	82223210.15			
Total	117	176981496.4	479767140	44354487.79			

Table #1.a: Description of provinces

Descriptives							
Total builgind sum							
	N	95% Confidence Interval for Mean		Minimum	Maximu		
		Lower Bound	Upper Bound	m			
AZUAY	5	-31493802.69	659818576.7	2.00E+08	8.00E+08		
BOLIVAR	5	-38377779.85	141502330.3	7919147	2.00E+08		

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CAÑAR	5	29127139.53	53215049.67	32964215	56713811
CARCHI	5	10507749.41	35593795.79	16989486	40532424
COTOPAXI	5	-209101275.2	610797750	42276740	8.00E+08
CHIMBORAZO	4	12505159.89	63294582.61	28344164	61577296
EL ORO	5	53413818.93	57205899.87	53697626	56812224
ESMERALDAS	5	2721105.05	24476595.35	614600	23338830
GUAYAS	5	-329267303.4	3645872251	5.00E+08	4.00E+09
IMBABURA	5	-24218782.89	339845206.5	71888314	4.00E+08
LOJA	5	-226763943.2	783651552	95551113	1.00E+09
LOS RIOS	5	25316277.44	45943182.56	28924055	46813263
MANABI	5	-118767764.1	756889375.3	1.00E+08	9.00E+08
MORONA	5	12388254.56	19884429.84	11967611	19946339
NAPO	5	8743981.17	15234985.23	9065790	15637730
PASTAZA	5	6677910.93	8427320.67	6512194	8501175
PICHINCHA	4	556983048.7	945540517.3	6.00E+08	9.00E+08
TUNGURAHUA	4	90463014.32	146696259.2	1.00E+08	1.00E+08
ZAMORA	5	9664826.98	30840693.82	12125758	34339241
GALAPAGOS	5	6875589.48	17982374.92	9328842	19502998
SUCUMBIOS	5	5582363.98	40432920.82	9840859	45763530
ORELLANA	5	6259249.34	26852238.26	8354675	29418172
SAN. DOMINGO	5	22777480.28	62802267.72	28412852	62130817
SANTA ELENA	5	-112781192	343795266.8	19461871	4.00E+08
Total	117	89131844.58	264831148.2	614600	4.00E+09

Table #1.b: Description of provinces

In the table 1.a and 1.b its illustrated the means that are going to be compared between the investment across the construction sector of the provinces of Ecuador at 95% of confidence interval of each mean, giving the lower bound and the upper bound of each province.

#### **Checking assumptions**

Normality





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Figure #1: Normality of variables

In the figure #1 its demonstrated by Histogram, Q-Q plot and Box plot how with the normal vale of the date base taken from INEC shows a huge frequency in the histogram an de Q-Q plot has not the normal form such as an 'S' in the figure. This is because the information has values really high. So, in order to manage correctly this information the best solution to get a good result its better to delete the outliers.

Homogeneity of variances

Test of Homogeneity of Variances					
Total building sum					
Levene Statistic	df1	df2	Sig.		
4.937	23	93	0		

Table #2: Test of Homogeneity of Variances

Testing assumptions to perform Anova procedure, the Levene's test for homogeneity variances.

H0:  $\sigma^2_{\text{prov1}} = \sigma^2_{\text{prov2}} = \dots = \sigma^2_{\text{prov24}}$ 

H1= At least one variance is different

The Levene's test p-value = 0, demonstrate that at least one variance within the provinces is different and therefore Anova procedure cannot be applied. And unless Anova it might be applied non-parametric tests for independent samples, Figure #3 shows the result of this.

It was attempted to normalize the variable values by reducing outliers, but the assumptions for homogeneity of variances was not satisfied anyway. Then it should proceed to use a non-parametric analysis for independent variables, where the null hypothesis is the same as ANOVA test.

#### **Non-Parametric test**

	Null Hypothesis	Test	Sig.	Decision	
1	The distribution of Total_building_m is the same across categories of PROVINCIA.	Independent– Samples Kruskal–Wallis Test	.000	Reject the null hypothesis.	
Asymptotic significances are displayed. The significance level is .05.					

Figure #2: Non-parametrical test for independent samples

According figure #2 the null hypothesis is rejected because of the sig=0, and at least one of the variance of the distribution of total building sum of the provinces are different between them.

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Figure #3: Classification of the provinces according the level of investment private and public in construction.

In this figure is demonstrating that the null hypothesis is rejected because at least

one o f the means compared are different from them.

#### **Finding significant differences**

Tukey

	Multiple Comparisons						
Depen	Dependent Variable: Total_building_m						
	(J) provincia	Mean Difference (I-	Std. Error	Sig.	95% Con Inte	nfidence rval	
Tuke		J)			Bound	Bound	
y HSD	AZUAY	4559.80948	1250.96394	0.067	-125.5637	9245.1826	
	BOLIVAR	4822.40121*	1250.96394	0.036	137.0281	9507.7743	
	CAÑAR	4834.29863*	1250.96394	0.035	148.9255	9519.6718	
	CARCHI	4851.08578*	1250.96394	0.034	165.7126	9536.4589	
	COTOPAXI	4676.7193	1250.96394	0.051	-8.6538	9362.0924	
	CHIMBORAZ O	3681.69987	1250.96394	0.352	-1003.6733	8367.073	
	EL ORO	4817.79522*	1250.96394	0.036	132.4221	9503.1684	
	ESMERALDA S	4858.86426*	1250.96394	0.033	173.4911	9544.2374	
	GUAYAS	3202.99178	1250.96394	0.629	-1482.3814	7888.3649	
	IMBABURA	4706.46505*	1250.96394	0.048	21.0919	9391.8382	
	LOJA	4595.90457	1250.96394	0.062	-89.4686	9281.2777	

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LOS RIOS	4838.03183*	1250.96394	0.035	152.6587	9523.405
MANABI	4560.0939	1250.96394	0.067	-125.2792	9245.467
MORONA	4858.15535*	1250.96394	0.033	172.7822	9543.5285
NAPO	4861.12020*	1250.96394	0.033	175.7471	9546.4933
PASTAZA	4867.06304*	1250.96394	0.032	181.6899	9552.4362
TUNGURAH UA	3666.00435	1250.96394	0.36	-1019.3688	8351.3775
ZAMORA	4854.28394*	1250.96394	0.033	168.9108	9539.6571
GALAPAGOS	4861.95386*	1250.96394	0.033	176.5807	9547.327
SUCUMBIOS	4848.93211*	1250.96394	0.034	163.559	9534.3052
ORELLANA	4857.32828*	1250.96394	0.033	171.9551	9542.7014
SANTO DOMINGO DE LOS TS ACHIL AS	4829.01268*	1250.96394	0.035	143.6396	9514.3858
SANTA ELENA	4759.07554*	1250.96394	0.042	73.7024	9444.4487

Table #4: Tukey comparison of total building in millions.

The table #4 represents a comparison of Pichincha province with other provinces of Ecuador, since this is really unlike investment in construction it is unlike than the others. In this case the significant difference of P >0.05 as shown in the table value has a difference with: Tungurahua, Manabi, Loja, Guayas, Cotopaxi, y Azuay.

Total_building_m				
		Subset for alpha =		
		0.05		
	PROVINCE	1	2	
	PASTAZA	7.137		
	GALAPAGOS	12.2462		
	NAPO	13.0798		
	ESMERALDAS	15.3358		
	MORONA	16.0447		
Tukey	ORELLANA	16.8717		
HSDa	ZAMORA	19.9161		
	CARCHI	23.1142		
	SUCUMBIOS	25.2679		
	LOS RIOS	36.1682		
	CAÑAR	39.9014		
	SANTO DOMINGO DE LOS	45.1873		

TSACHILAS		
BOLIVAR	51.7988	
EL ORO	56.4048	
SANTA ELENA	115.1245	
IMBABURA	167.735	
COTOPAXI	197.4807	197.4807
LOJA	278.2955	278.2955
MANABI	314.1061	314.1061
AZUAY	314.3906	314.3906
CHIMBORAZO	1192.5002	1192.5002
TUNGURAHUA	1208.1957	1208.1957
GUAYAS	1671.2082	1671.2082
PICHINCHA		4874.2
Sig.	1	0.051

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Table #5: Tukey Analysis

In the table #5 the Tukey analysis shows that the provinces classified into two sectors where it might also assume Pichincha as a single sector since the difference of investment building area is too high compared with low and medium level. Cotopaxi, Loja, Manabí, Azuay, Chimborazo, Tungurahua and Guayas are located in the second group is that of the medium investment and therefore other provinces covers a low investment compared to the two aforementioned groups.

#### Building Characterization per provinces by the level of investment according

**Tukey analysis** 



Figure #4: Characterization of structure and drape classified according the amount of money invested per provinces in construction.

Based on the results of Tukey it was characterized the type of structure and Time Slider among those that stand out is the reinforced concrete and metal structures. These materials despite their high cost in the market are the most recommended to build in Ecuador since the materials are seismic resistant and our country is in a highly seismic area.



Figure #5: Characterization of structure and drape classified according the amount of money invested per provinces in construction.

For middle and high sector investment blocks and prefabricated walls mixed with other forms of building are the most common in the construction industry in Ecuador. However, despite their value other matters that are not well specified are those in the highest value of use in buildings today.

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	Chart						
	<b>BUILDING PROPERTY</b>						
	Private	Private Public Private Public					
	Sum	Sum	Count	Count			
2010	\$38,809,122,866	\$2,548,124,523	39569	88			
2011	\$2,294,417,813	\$14,559,907	29487	63			
2012	\$3,028,116,630	\$67,166,041	28974	76			
2013	\$3,568,497,624	\$58,293,418	26326	53			
2014	\$3,125,726,819	\$44,526,565	24520	53			
Total	\$50,825,881,752	\$2,732,670,454	148,876	333			

#### **Building Characterization per year**

Table #6: Characterization by type of property



Figure #4: Building property comparison about private and public investment in the last 5 years.

The table #6 is represented by the Figure #4 which illustrate the big difference that the private investment has against the public investment in construction. With this figure also it's demonstrating the importance that the private investment through the construction sector has for the development of the country. Because it manage a

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relevant income for the economy every year and it is not based on the public investment.

#### CONCLUSION

During the last 5 years, the construction in Ecuador has grown considerably. As was showed, not all provinces have the same amount of investment in this sector but excel the most important as Pichincha, Guayas, Azuay and Manabí that according to the results shown by tukey in SPSS, are the provinces with the highest investment in this sector taking into account the private and public buildings. Certainly helps the development of the country because of this sector depend many providers of materials.

In Ecuador the construction in the private and public sector is the main sector that makes up the GDP, represented in 2013 the 9.90% stake. Other major sectors include services, Wholesale and retail and Manufacturing. It is very important to analyze the inflation because higher prices generated great uncertainty about the economic stability of the country, which affects the construction of infrastructure at the public level. The rise in prices of building materials limited budgets for creation of roads, schools, hospitals and increasingly make the less dynamic development and public works and the creation of centers and adequate space is difficult to improve quality of life of rural populations.

Regarding the Construction sector between low, medium and high investment, inflation causes an imbalance in investment in construction. On the one hand, with the high prices of materials the project profitability is declining, in many cases developers or builders who must assume certain costs to prevent the rise in prices affects the end customer and this influence as demand decreases. On the other hand, inflation produces

a large decrease in real estate investment because people are afraid to borrow mortgages that are not sure they can afford. On the other hand, banking limits the possibilities of access to credit and filters to people who actually have a credit profile increasingly higher incomes. Thus, rising prices of real estate, the demand is terribly affected and homes, offices and other goods will not be seen more as a profitable and safe investment.

And as a result Figure # 4, The main element that will impact on the economic stage of construction this year is a drop in gross fixed capital formation (investment in construction, machinery, equipment, etc.), which has been shrinking since 2011, the biggest drop since the Ecuadorian economy was dollarized. This is due mainly to a decline in public investment, which directly impacts the construction sector, which according to INEC grow this year 0%. Private investment, key in a resort like the year 2015, could also be affected after the president of Ecuador referred to the project to raise the Inheritance Tax to business sectors that creates uncertainty and discourages investment and family business.

Investment in the construction sector, at least in the last five years, was a major player: the State garnered about 80% of the investment and the private sector has 20% by union leaders and builders agree. But the situation in which this year changed. And not the implementation of new major public works such as roads or hydroelectric plants is counted. Private investment continues to walk in the country, but it will take a while to be balanced against the investment by the public sector. Private investment continues to walk in the country, but it will take a while to be balanced against the investment by the public sector. This is due to a climate of uncertainty about recent bills, coupled with an increase in raw materials and equipment, after the application of safeguards on a

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number of items used by the sector. For Cuenca builders engaged in projects and private and public, this 2014 is a year of contraction, but the causes are different.

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