

# FACTORS THAT IMPACT ON INSTITUTIONAL INTEGRITY AND LOCAL GOVERNANCE FIRST EMPIRICAL STUDY IN PERU

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## Abstract

This paper presents an empirical study that seeks to strengthen the concept of institutional integrity and local governance as multidimensional constructs. It also analyzes the relationships and effects with institutional development, leadership, ethical commitment, financial capacity and professional capacity. The literature review identifies the concepts and relationships, five dual hypothesis and a multidimensional model inductively developed. The methodology used a valid sample of 153 Peruvian local governments, a measuring instrument with 65 questions in 7 levels of Likert scale, factor analysis technique and correlation analysis to confirm the structure of the model. The two multiple linear regression analyses prove the causal effect of the institutional development, leadership and ethical commitment in the institutional integrity and local governance. The academic contribution lies in the generated model that can be used for future research. The practical contribution is the instrument as a measuring tool in the management of the public sector.

*Keyword: institutional integrity, local governance, institutional development, leadership, ethical commitment, financial capacity, professional capacity.*

## Introduction

This study focuses on local governments because of the important relationship that they have with citizens. Local governments provide public services. This needs an effective management that encourages local development with public support; but involving institutional integrity through transparency, responsibility and accountability (Pope 2000). In addition, most of civil servants live in the town for that reason they have a close relationship with citizens. This makes it difficult to separate the public service of private interests (Pope 2000; Anechiarico, 2010; Warburton and Baker, 2005).

In Peru, corruption and inefficient government bureaucracy are the most problematic factors for doing business (WEF, 2013). There are laws that seek to stop these cases (eg Organic Law of Municipalities of Peru - Law 27972) but these institutions and their authorities still have a loss of confidence and credibility. In this scenario, having as a scope of research to local governments of Peru from an organizational vision the following research question is proposed: ***What are the factors that affect the institutional integrity and local governance?*** For this reason, this research starts with a literature review of institutional integrity and local governance, addressing the concepts of organizational development, leadership, ethical commitment, financial capacity and professional capacity as potential factors involved.

## Literature review

### Institutional integrity

Integrity means to hold a position oriented to an *institutional development* and using adequate *leadership* and *ethical commitment* (Amundsen and Pinto, 2009; Lewis and Gilman, 2012; Kolthoff, 2007; OECD, 2009a; Ulman, 2013, Arredondo and Maldonado, 2010). This concept is a dynamic dimension (Verhezen, 2008; Dobel, 1990) that can be enhanced or threatened depending on the ethical standards in management (Ulman, 2013; Armstrong, 2005). For this reason, the institutional integrity is defined and measured by the **transparency** (Pope, 2000, Amundsen and Pinto, 2009; OECD, 2008; Ullman, 2013), **accountability** (Dobel, 1990; Boardman and Klum, 2001; OECD, 2008) and **responsibility** (Dobel, 1990; Kayes et al, 2007; Brody, 2012).

In general, **transparency** is the flow of information to the public in an accessible, timely, relevant and reliable (Amundsen and Pinto, 2009); it is a core value of integrity (OECD, 2008) which also helps identify responsible as a deterrent mechanism of unethical behavior (Pope, 2000). Transparency is related to **accountability**, which is also a core value of integrity (OECD, 2008). It occurs when the bodies or public officials are accountable to citizens explaining, justifying and documenting their actions and decisions with ethical commitment (Dobel, 1990; Boardman and Klum, 2001; OECD, 2008).

Finally, Kayes et al (2007) consider that the institutional integrity is also defined by a **responsibility** with organizational goals, fulfilling the duty and charge reasonable expectations (Dobel, 1990; Brody, 2012; Pope, 2000).

### Local Governance

Local governance or managing a local government is a decentralized public administration in a municipality. The strengthening of the decentralization process and the greater flow of information make citizens better informed of their rights and duties, is therefore considered *professional capacity*, a good *financial capacity* and *ethical commitment, leadership* and an *institutional development* as factors that can affect it (Arriagada, 2002).

This dimension is measured by the **efficiency** in the management of resources, and the **efficacy** in achieving the objectives and delivery of public services at the lowest possible cost (UNDP, 2009; Camou, 2001; Arriagada, 2002, and Matei et al, 2010).

The local governance should also be measured by the local development reflected in the welfare and the public support is seen in the level of satisfaction of their claims (Arriagada, 2002; Boffill et al, 2009).

## **Institutional development**

Institutional integrity is also influenced by the institutional development (Balogun, 2003) to be driven by senior management and the implementation depends on its **political management capacity** (Hoekstra and Kaptein, 2012).

Institutional development in local government allows the production and delivery of goods and services to citizens (Arriagada, 2002). It is also important to promote integrity (Hoekstra and Kaptein, 2012; Kayes et al, 2007) because it can support the activities, development and implementation of integrity standards (Ulman, 2013).

Also defines the **values and principles** to qualify right or wrong behavior (Lewis and Gilman, 2012, Amundsen and Pinto, 2009; Bautista, 2009 cited by Naessens, 2010), and can provide processes, structures and implementation strategies, as well as **regulation** mechanisms (OECD, 2009a; OECD, 2009b; Hoekstra and Kaptein, 2012; Sakr, 2004).

When an institutional integrity development plan is elaborated, it should be considered **evaluation** of the efficacy and efficiency to define **regulations** to adjust and correct deficiencies (Hoekstra and Kaptein, 2012). As such, the following hypotheses are proposed:

***H1a:** More institutional development will have positive effect on institutional integrity*

***H1b:** More institutional development will have positive effect on local governance*

## **Leadership**

Leadership enable to achieve the objectives of the local government management and it is critical for the success of integrity systems (Balogun, 2003). It also drive to efficacy in the programs and activities implementation, and can **influence** and generate **credibility** in citizens; for that reason plays a role in the success or failure of the government (Brillante et al, 2011).

Leaders play a crucial role in building and maintaining the institutional integrity (Larmour and Wolain, 2001; Tomescu and Agatador, 2013; Pope, 2000) and therefore they must committed to it in decision-making and actions taken (Balogun, MJ, 2003; Arredondo and Maldonado, 2010). Citing local public leadership should mention the ability to govern, which is related to the experience and knowledge held by the leader (Furlan, 2007 & Brillantes et al 2011). The hypothesis established are:

***H2a:** More leadership will have a positive effect on institutional integrity.*

***H2b:** More leadership will have a positive effect on local governance.*

### **Ethical commitment**

Institutional integrity depends on the organizations ethical commitment (Ulman, 2013), therefore it is important the ethical guidelines **institutionalization** in order to promote good behavior (Larmour and Wolain 2001, Lewis and Gilman, 2012; Naessens, 2010). The institutionalization defines an ethical commitment to the interests of the community (Naessens, 2010; Pope, 2000) and improves its institutional integrity through **compliance** to citizenship (Naessens, 2010; Zipparo, 1998). A public server requires three conditions to be honest: moral conscience, ability to judge what decision take (moral reasoning), and the action in accordance with the standards (moral behavior) (Van Montfort et al, 2013) in compliance with moral values and accepted standards organization. For these reasons, the following hypothesis are proposed:

***H3a:** More ethical commitment will have positive effect on institutional integrity.*

***H3b:** More ethical commitment will have positive effect on local governance.*

### **Financial Capacity**

The local government develops a financial capacity through **economic activities** for the city; providing infrastructure services, among others (Warburton and Baker, 2005), for this purpose, it requires financial resources (ILO, 2007; Gomes et al, 2013). Therefore, financial capacity is an important factor in local government management because of the resources allocation (Owen E. Hughes, 2003; Arriagada, 2002) to have a good performance (Gomes et al, 2013). Financial capacity must start by an **income structure** to have the resources to achieve their objectives (Pope, 2000). It should be governed by principles and values that guide them toward good management and raising standards of integrity. It should eliminate legal loopholes and create mechanisms to reduce corruption; and increase transparency (Pope, 2000). In addition, as part of financial capacity should reward ethical behavior through **incentives** (OECD, 2000; Sakr, 2004). As such, the following is proposed:

***H4:** More financial capacity will have positive effect on local governance.*

### **Professional Capacity**

The civil servants and local governments should have adequate professional capacity to fulfill their responsibilities and improve management. **Professionalism** is a variable of this capacity, and its relevant to protecting and promoting the individual and institutional integrity (Gomes et al, 2013; Lewis and Gilman, 2005; Sakr, 2004). In addition, **organizational culture** defines the professional capacity of civil servants (Zipparo 1998 citing Chen, Sawyer & Williams 1997; Kayes et al, 2007) motivating them to act with integrity or putting pressure against it (Verhezen, 2008; Sakr, 2004). For these reasons, the following hypotheses finally arises:

***H5:** More professional capacity will have positive effect on local governance.*

## Research Model

Based on the literature review and using the inductive method, the multidimensional model considered the institutional integrity as well as local governance as dependent variables; and institutional development, leadership, ethical commitment, financial capacity and professional capacity as independent variables. Also, they were identified 20 measuring variables, detailed in Table No. 1.

<b>Table N° 1. Multidimensional Model</b>		
<b>Type</b>	<b>Multidimensional Variables (Dimensions)</b>	<b>Measurement variables</b>
<b>Dependents variables</b>	<b>INSTITUTIONAL INTEGRITY</b> (Amundsen y Pinto, 2009; Lewis y Gilman, 2012; Kolthoff, 2007; OECD, 2009a; Ulman, 2013; Arredondo y Maldonado, 2010)	Transparency (Pope, 2000; Amundsen y Pinto, 2009; OECD, 2008; Ulman, 2013)
		Accountability (Dobel, 1990; Boardman y Klum, 2001; OECD, 2008)
		Responsibility (Dobel, 1990; Kayes et al, 2007; Brody, 2012)
	<b>LOCAL GOVERNMENTANCE</b> (Camou, 2001; Arraigada, 2002; PNUD, 2009; Matei et al, 2010; Boffill et al, 2009)	Efficiency (Camou, 2001, Arraigada, 2002, Matei et al, 2010)
		Efficacy (PNUD, 2009)
		Local development (Arraigada, 2002; Boffill et al, 2009)
		Citizen support (Arraigada, 2002; Boffill et al, 2009)
<b>Independents variables</b>	<b>INSTITUTIONAL DEVELOPMENT</b> (Arraigada, 2002; Balogun, 2003; Sakr, 2004; Kayes et al, 2007; OECD, 2009a; OECD, 2009b; Hoekstra y Kaptein, 2012; Lewis y Gilman, 2012; Ulman, 2013)	Principles and values (Amundsen y Pinto, 2009; Bautista, 2009; Lewis y Gilman, 2012)
		Evaluation (Hoekstra y Kaptein, 2012)
		Regulation (OECD, 2009a; OECD, 2009b; Hoekstra y Kaptein, 2012; Sakr, 2004)
		Political management capacity (Hoekstra y Kaptein, 2012)
	<b>LEADERSHIP</b> (Rojas, 2006; Iglesias, 2010; Balogun, 2003; Brillantes et al, 2011; Larmour y Wolain, 2001; Tomescu y Agatador, 2013; Pope, 2000; Arredondo y Maldonado, 2010)	Credibility (Brillantes et al, 2011)
		Level of influence (Brillantes et al, 2011)
	<b>ETHICAL COMMITMENT</b> (Ulman, 2013; Larmour y Wolain, 2001; Lewis y Gilman, 2012; Naessens, 2010; Sakr 2004; Zipparo 1998; Van Montfort et al, 2013)	Institutionalization (Larmour y Wolain, 2001; Lewis y Gilman, 2012; Naessens, 2010)
		Compliance (Naessens, 2010; Zipparo, 1998)
	<b>FINANCIAL CAPACITY</b> (Warburton y Baker, 2005, OIT, 2007; Gomes et al, 2013; Owen E. Hughes, 2003; Arraigada, 2002; Gomes et al, 2013; OECD, 2000; Sakr, 2004)	Economic activity (Warburton y Baker, 2005)
		Incentives (OECD, 2000; Sakr, 2004)
		Income structure (Pope, 2000)
	<b>PROFESSIONAL CAPACITY</b> (Gomes et al, 2013; Lewis y Gilman, 2005; Verhezen, 2008; Kayes et al, 2007; Sakr, 2004; OECD, 2000; Zipparo 1998)	Organizational culture (Zipparo 1998; Kayes et al, 2007)
		Professionalism (Gomes et al, 2013; Lewis y Gilman, 2005; Sakr, 2004)

## **Research Methodology**

### **Sample**

The universe of local governments in Peru is 1838 (INEI, 2012). The measuring instrument consisting of a survey sent to the universe (addressed to the senior officials - mayor or municipal manager-) between January and July 2013. 153 valid questionnaires (8.32% of total) were received. With a 7% margin of error and 90% of confidence level of random sample 129 was minimum required of local governments. The study is part of a research project of the Institute for Governance and Corporate Governance of ESAN University (IGGC-ESAN) with the support of the Association of Municipalities of Peru (AMPE).

### **Instrument development**

This research aim to study the institutional integrity and local governance, as well as the dimensions of organizational development, leadership, ethical commitment, financial management and professional capacity. The measuring instrument is structured based on the measuring instruments that are recently empirically explored on integrity in public management (Camerer, 2006, Matei and Ewoh, 2011; Matei et al, 2010) but adapted to the proposals and discussions of literature review in the local governance field.

Multiple measurement variables were refined towards each conceptual dimension of the constructs in Table No. 1. The items were reviewed in the literature, consulted with specialists through a focus group and validated by two academics with experience in governance, control, and integrity in all three levels of government in the country (national, regional and local).

The measuring instrument consisted of a questionnaire divided into two parts, the first of 14 categorical items to measure the characteristics of local government; and the second, 66 items on 7 Likert scale points (at 3 items approximately for the 20 measurement variables according to the multidimensional model developed in Table No. 1). The scale developed followed the guidelines established by DeVellis (1991). With the outlier's analysis for the obtained sample, globally missing data was 2.56%. The item 24 was withdrawn from the structuring factor process because it only have 41.83% response.

An exploratory factor analysis was performed to examine the factor structure of the measurement variables of the model. The traditional factor analysis with orthogonal rotation (Varimax) was used to explore the factor structure of the items of the model. Factor analysis was performed separately, first with the dependent variables and then the independent variables. The decision to retain an item was based on two criteria: (a) item loadings greater than 0.50 on at least one factor, and (b) a minimum gap of 0.1 between cross-factor loadings (Nunnally, 1978). For reducing items we used the iterative process of factor analysis until arise a clean structure factor. Several criteria were used to determine the number of factors to extract (a) Cronbach's alpha, (b) Eigenvalue test, (c) the percentage of variance, and (d) the scree plot test (Hair, et al 1979).

## Measurements and Procedure

The measuring instrument was divided into two parts. The first part considers categorical variables to measure 14 characteristics of the institution<sup>1</sup> and the second part of the multidimensional model items using 7 points of Likert scale. In previous studies (Triandis, 1989), it was found that Hispanics often tend to use the endpoints of a scale more than non-Hispanic, for that reason 7 points are enough to capture the variance in perception without creating an extreme tilt of data. Hispanics also respond and expect a more sympathetic or friendly behavior (Triandis, et al, 1984), so that the wording of the scale reflected this preference, where one (1) meant completely disagree and seven (7) meant totally agree.

As shown in Tables No. 2 and No. 3, the factorial analysis in dependent variables indicates four (4) factors as result, two (2) factors for local governance and two (2) factors for institutional integrity.

Table N° 2 - Rotated components <sup>a</sup>					Table N° 3 – Variables associated factors		
Items	Components				N°	Measurement Variable	Dependent Factors
	1	2	3	4			
P20_27	.792	-.128	.017	.096	27	Efficiency	Local Governance ( $\alpha$ Cronbach = 0.814)
P20_57	.565	.254	-.127	-.185	57	Efficiency	
P20_28	.835	.068	.208	.141	28	Efficacy	
P20_29	.747	.131	.308	.151	29	Efficacy	
P20_30	.763	.177	.073	.169	30	Efficacy	
P20_33	.377	.300	.221	.574	33	Public support	
P20_34	-.042	.105	.032	.835	34	Public support	
P20_31	.492	.014	.066	.609	31	Local development	Institutional Integrity ( $\alpha$ Cronbach = 0.746)
P20_19	.079	.080	.620	.424	19	Local development	
P20_54	.346	.374	.689	.020	54	Responsibility	
P20_55	-.012	.066	.840	.007	55	Responsibility	
P20_50	-.116	.752	-.069	.305	50	Transparency	
P20_51	.185	.790	.237	.105	51	Accountability	
P20_53	.273	.685	.405	-.099	53	Accountability	
<b><math>\alpha</math> Cronbach</b>	0.817	0.689	0.672	0.668			
<b>Eigenvalue</b>	4.861	1.896	1.378	1.137			
<b>%Var. Explain</b>	24.40	14.60	14.31	12.90			

Extraction Method: Principal component analysis. Rotation Method: Varimax Standardization.

a. The rotation converged on 7 iterations.

<sup>1</sup> The characteristics considered are: type of local government, regional location, population, total local government workers, main economic activities, periods of mayor in charge, main extractive activity, total periods won by the mayor's political party, management and development tools, type of management offices, public services provided, type of income (fee, royalties or transfers from government).

Considering the structure of the Local Governance dimension, items measuring efficiency and efficacy structured the Component 1 named **Effectiveness**, while the items measuring citizen support and local development Component 2 called **Local Support**. In structuring the dimension of Institutional Integrity, items measuring local development and responsibility structured Component 3 called **Local responsibility**, whereas the items measuring transparency and accountability structured Component 4 called **Accountability with Transparency**.

The factor analysis of independent variables indicates a rotated component matrix with five factors as described in Table N° 4, in order to identify measurement items and its association with the variables as shown in Table N° 5. Although a factor does not meet the traditional level of 0.70 for an acceptable reliability suggested by Nunnally (1978) also it suggests that alpha in the range of 0.5 to 0.6 are acceptable in the early stages of testing a theory. Therefore, it is suggested that the Professional Capacity factor in the Local Governance field should be considered as part of an early model test.

Table N° 4 - Rotated component matrix <sup>a</sup>					
Item	Components				
	1	2	3	4	5
P20_1	.676	.356	.223	.222	-.243
P20_3	.603	.118	.199	.440	-.099
P20_20	.666	.209	.023	.211	.292
P20_21	.659	.439	.237	.029	.327
P20_22	.544	.485	.224	.030	.193
P20_41	.519	.100	.399	.051	.395
P20_42	.591	.321	.464	.160	.231
P20_8	.115	.738	.275	.119	-.133
P20_36	.312	.593	.118	.280	-.019
P20_37	.197	.700	.035	.346	.218
P20_38	.241	.755	.171	.066	.271
P20_10	.343	-.042	.635	.095	.242
P20_43	.120	.193	.830	.165	.095
P20_44	.087	.285	.795	.174	.119
P20_9	.347	.168	.025	.601	.295
P20_13	.481	.126	.223	.552	-.174
P20_46	-.009	.193	.212	.707	.028
P20_47	.150	.124	.122	.759	.179
P20_65	.051	.055	.235	.131	.752
P20_17	.217	.301	.436	.166	.501
<b>α Cronbach</b>	0.863	0.791	0.736	0.712	0.571
<b>Eigenvalue</b>	8.237	1.600	1.307	1.077	1.036
<b>% Var.Explain</b>	16.86	15.04	14.15	12.14	8.07

Table N° 5 – Variables associated factors		
N°	Measurement Variable	Independent Factors
1	Principles and values	Institutional Development (α Cronbach = 0.863)
3	Principles and values	
20	Evaluation	
21	Regulation or correction	
22	Regulation or correction	
41	Political management capacity	
42	Political management capacity	
8	Trust and credibility	Leadership (α Cronbach = 0.791)
36	Level of influence	
37	Level of influence	
38	Level of influence	Ethical Commitment (α Cronbach = 0.736)
10	Institutionality	
43	Compliance	
44	Compliance	Financial Capacity (α Cronbach = 0.712)
9	Economic activity	
13	Incentives	
46	Income structure	
47	Income structure	Professional Capacity (α Cronbach = 0.571)
65	Organizational culture	
17	Professionalism	

Extraction Method: Principal component analysis. Rotation Method: Varimax Standardization.

a. Rotation has converged in nine iterations.

Subsequently, it work with the average value of each factor (where FD1 is Local Governance and FD2 is Institutional Integrity). In addition, when investigating the relationship among two or more quantitative variables, correlation and regression is the appropriate test (Mertler & Vannatta, 2002).

Bivariate correlation evaluate the degree of relationship between two quantitative variables. The Pearson correlation coefficient ( $r$ ), the most commonly used bivariate correlation technique, measure the association between two quantitative variables without distinction between the independence and dependent variables (Mertler & Vannatta, 2002).

For this, we enable the Pearson's correlation analysis between the factors, as shown in Table 6.

Table N° 6 – Statistical Summary and Pearson Correlation Analysis (1) (2)								
		FD1	FD2	F1	F2	F3	F4	F5
Local Governance	FD1	1						
Institutional Integrity	FD2	.447**	1					
Institutional Development	F1	.629**	.596**	1				
Leadership	F2	.547**	.552**	.636**	1			
Ethical Commitment	F3	.513**	.470**	.549**	.412**	1		
Financial Capacity	F4	.501**	.466**	.598**	.510**	.413**	1	
Professional Capacity	F5	.419**	.415**	.534**	.398**	.485**	.389**	1
Average		4.86	5.55	4.92	5.41	5.24	3.71	4.63
Standard Deviation		.99	1.04	1.10	1.04	1.10	1.29	1.22

\*\* . Correlation is significant at the level 0.01 (2 tails).

(1) The significance level in all cases is less than 0.01

(2) Number of cases (n = 153)

The results show that both the dependent variables as factors (independent variables) are positively correlated with levels of significance under 0.01. Finally, a multiple regression analysis results was made to prove causality between multidimensional variables (dependent and independent) was performed, and thus be able to confirm the hypotheses of the research.

Multiple regression is a procedure that takes into consideration the relative importance of a number of independent variables in accounting for the behavior of some dependent variable. The problem usually resolves itself into finding a small number of variables that will satisfactorily explain a large portion of the observed variability in the dependent variable. This chosen set should account for more variability than any other set using this number, or fewer, variables (Moore, 1962).

Suppose that three so-called independent variables  $F_1$ ,  $F_2$ , and  $F_3$  are picked out from amongst those available. Then the system used is to calculate by least squares those values of  $B_1 \dots B_3$  which minimize the sum of squares  $\Sigma (FD - FD)^2$ ,

where  $FD$  is the observed value of the dependent variable and  $FD$  the predicted value using the equation:

$$FD = B + B_1F_1 + B_2F_2 + B_3F_3$$

If  $R$  is the multiple correlation coefficient then:

$$1 - R^2 = \Sigma (FD - FD)^2 / \Sigma (FD - fd)^2$$

Where  $fd$  is the mean of the observed values of  $R$ . This set of three variables is considered to be a satisfactory basis provided that no other set of four gives a higher value of  $R^2$ . If an additional independent variable  $F_4$  is now considered, giving  $F_1 \dots F_4$ , the

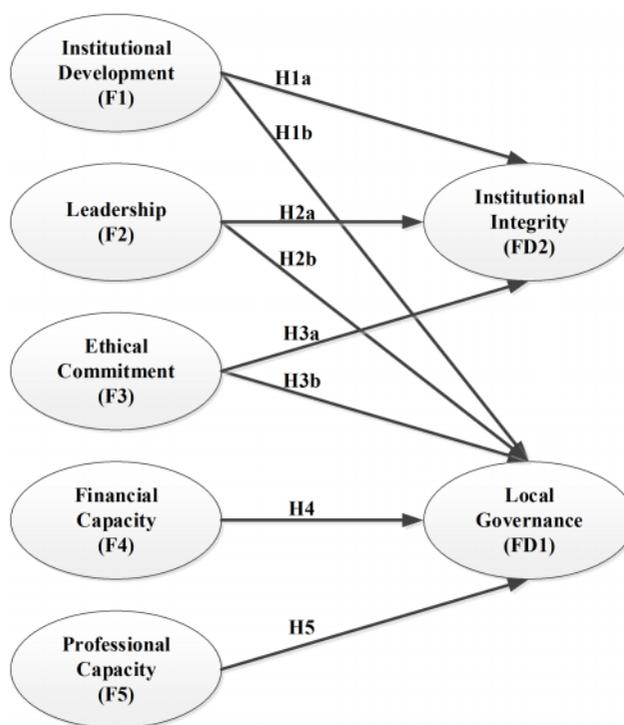
process can be repeated and a new minimized sum of squares  $\Sigma (FD - FD)^2$  formed. The difference between the preceding sum of squares and this one can be used to gauge, by ordinary F-ratio tests of significance, whether or not a significant gain has been made by including the fourth variable.

Moreover, the Durbin-Watson D statistic is used to detect autocorrelation. The D values are obtained from a D statistic table and are dependent on the number of independent variables included in the model and the sample size. For this study, a D value of less than 1.20 indicates positive autocorrelation, whereas a D value greater than 2.80 signifies negative autocorrelation. D value between 1.41 and 2.59 indicates no significant autocorrelation (Wilson & Weld, 1997).

## Results

Considering the hypotheses made as part of the multidimensional model, multiple linear regressions were divided under two models tests mainly, one for each dependent variable.

**Figure N° 1. Multidimensional Model**



A multiple linear regression model was structured to examine the impact of the factors on the Local Governance (FD1). The results supported the H1a (Institutional Development – F1), H2a (Leadership – F2) and H3a (Ethical Commitment – F3) because affect direct and positively the Local Governance. While H4 (Financial Capacity – F4) and H5 (Professional Capacity – F5) have a significant level in correlation analysis, the results of the multiple linear regression show a not significant causality so were rejected.

**Table N° 7 - Model Summary for Local Governance <sup>b</sup>**

Model 1	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson D
FD1	.690 <sup>a</sup>	.475	.458	.733	2.081

a. predictors: (Constant), F5, F4, F3, F2, F1 | b. Dependent variable: FD1 (Local Governance)

**Table N° 8 - Coefficients for Local Governance <sup>a</sup>**

Model 1		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Standard Error	Beta		
FD1	(Constant)	1.091	.364		2.999	.003
	F1	.272	.084	.302	3.234	.002
	F2	.186	.076	.195	2.449	.015
	F3	.180	.068	.198	2.654	.009
	F4	.096	.059	.125	1.625	.106
	F5	.029	.060	.035	.477	.634

a. Dependent Variable: FD1 (Local Governance)

Similarly, a multiple linear regression model was estimated to examine the impact of the factors on Institutional Integrity (FD2). The results supported the H1b (Institutional Development – F1), H2B (Leadership – F2) and H3b (Ethical Commitment – F3) because affect direct and positively the Institutional Integrity.

**Table N° 9 - Model Summary for Institutional Integrity <sup>b</sup>**

Model 2	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson D
FD2	.654 <sup>a</sup>	.428	.416	.795	1.900

a. Predictors: (Constant), F3, F2, F1 | b. Dependent variable: FD2 (Institutional Integrity)

**Table N° 10 - Coefficients for Institutional Integrity <sup>a</sup>**

Model 2		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Standard error	Beta		
FD2	(Constant)	1.687	.389		4.341	.000
	F1	.306	.083	.325	3.690	.000
	F2	.270	.080	.271	3.353	.001
	F3	.171	.071	.180	2.422	.017

a. Dependent Variable: FD2 (Institutional Integrity)

While the two final models of multiple linear regressions supported strongly three (3) independent factors (Institutional Development, Leadership, and Ethical Commitment) to Institutional Integrity and Local Governance, in a test of simple linear regressions are supported each of the five (5) independent factors with Local Governance to understand the causality from the Financial Capacity (H4) and Professional Capacity (H5).

Moreover, two alternative models were generated to test the causal factors of Financial Capacity and Professional Capacity to Local Governance. Without the presence of the Institutional Environment factor, the Financial Capacity (H4) is supported to predict the impact on Local Governance with Leadership and Ethical Commitment factors. Nevertheless, the Professional Capacity (H5) is not supported in the alternative model.

**Table N° 11 – Firth Alternative Model Summary for Local Governance<sup>b</sup>**

Model 3	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson D
FD1	.662 <sup>a</sup>	.438	.423	.756	2.221

a. Predictors: (Constant), F5, F4, F3, F2 | b. Dependent variable: FD1 (Local Governance)

**Table N° 12 – Firth Alternative Coefficients for Local Governance<sup>a</sup>**

Model 3		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Standard error	Beta		
FD1	(Constant)	1.154	.375		3.081	.002
	F2	.283	.072	.297	3.947	.000
	F3	.236	.068	.260	3.493	.001
	F4	.157	.058	.204	2.725	.007
	F5	.077	.060	.095	1.289	.199

a. Dependent Variable: FD1 (Local Governance)

However, if a multiple linear regression model is used where only the Financial Capacity (F4) and Professional Capacity (F5) to predict the impact on Local Governance (FD1), both factors are supported by this model.

**Table N° 13 – Second Alternative Model Summary for Local Governance<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson D
FD1	.557 <sup>a</sup>	.310	.301	.83189	2.185

a. Predictors: (Constant), F5, F4 | b. Dependent variable: FD1 (Local Governance)

**Table N° 14 – Second Alternative Coefficients for Local Governance<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Standard error	Beta		
FD1	(Constant)	2.730	.284		9.605	.000
	F4	.306	.057	.398	5.401	.000
	F5	.216	.060	.264	3.587	.000

a. Dependent Variable: FD1 (Local Governance)

These results give us evidence that independent factors have significant levels to prove causality on the institutional integrity and local governance.

## **Discussion**

At international level there's interest in measuring corruption but little developed to measure integrity. To develop this study, empirical work in public integrity was reviewed (Camerer, 2006; Matei and Ewoh, 2011; Matei et al, 2010), however, they are focused at national level and its still little literature in the local government field so it is left on the agenda the development of this area.

In this research, variables have a significant level of correlation but not all show causality. The regression models show that only the factors of institutional development, leadership and ethical commitment affect the institutional integrity and local government management. However, it is important to mention that in simple linear regressions with each independent and the dependent variable, all causal relationships were supported. So it is suggested future research with larger samples to test significance levels of financial capacity and professional capacity. Also, studying the causality between the dependent variables.

The control variables were not used for the purposes of this study so that future research could test the models making use of the control variables. In this regard, it can be explore whether internal local government variables (such as the total local government workers, type management and development tools, public services provided, type of incomes, among others) or external (as the regional location, population and main economic activities, etc.) have an effect in the local government management and institutional integrity. It is suggested to obtain additional samples and comparative studies for further analysis of the results.

## **Conclusions**

The correlation analysis leads to the conclusion that all relationships between factors have levels of Sig.  $<0.01$ , strengthening the structure of the multidimensional model.

After the study, the regression analysis conclude that institutional development, leadership and ethical commitment have a positive effect on institutional integrity and management of local government. Multiple Linear Regression Analysis leads to the conclusion that the hypotheses relating to institutional development (H1a, H1b), leadership (H2a, H2b) and ethical commitment (H3a; H3b), are supported because of the level of Sig  $<0.05$ , with positive effect on local governance (FD1), and institutional integrity (FD2).

In addition, it is concluded that the hypotheses of Financial Capacity (H4) and Professional Capacity (H5) does not demonstrate a level of Sig  $>0.05$  in the multiple linear regression with all factor to explain the local governance. However, with the alternative models, these hypotheses are supported.

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