Social Policies and the Financing of Social Development Programs in Ecuador

Dante Ayaviri Nina1,2, María Rivera Llanos1 & Gabith Quispe Fernandez1,2

1 Facultad de Ciencias Políticas y Administrativas, Universidad Nacional de Chimborazo, Ecuador
2 Universidad Técnica de Oruro, Bolivia

Correspondence: Dante Ayaviri, Universidad Nacional de Chimborazo, Ecuador. Tel: 593-9-6937-7165. E-mail: dayaviri@unach.edu.ec

Received: October 11, 2019     Accepted: November 17, 2019     Online Published: November 28, 2019
doi:10.5539/jsd.v12n6p128                  URL: https://doi.org/10.5539/jsd.v12n6p128

Abstract
This article explores and examines the social policies implemented in Ecuador, aiming to determine how social programs of education, health and housing impact on social development programs and beneficiary population. For analysis, an econometric model of multiple linear regression is applied, which allows to analyze and demonstrate the relationship between studied variables, in turn, is accompanied by a survey of 146 beneficiaries in communities receiving the programs. The effect of financing such policies – implemented through social programs – has had significant impact on social development programs, as well as on the population receiving them, contributing to well-being and quality of life improvement.

Keywords: social policies, financing, development programs

1. Introduction

The study of policies entails a strategic dimension incorporating social and economic elements, aiming to increase logic in the building, selection and development of alternatives and interventions with positive impact on society (Ruggiero & Duncombe, 1995; Dunn, 1997; Hammerschmidt & Staat, 2000; Lewin, 2003; Lee, 2004; Vásquez, 2014). Starting the eighties, social policy has been temporary and passive, focused on providing social assistance and basic services, possibly insufficient to achieve social and economic development (Sojo, 2006), in the fifties and sixties, social policies were considered of minor importance and with scarce financing, often contributing to mitigating adverse effects arising from crises or problems in regions (Cohen, 1998; Fernández & Caravaca, 2006; Franco, 2004; Fernández, 2011).

The social policy lies on a comprehensive planning approach, considering population’s needs and demands, it should focus on long-term actions and aim for social and territorial change and transformation (Feres & Mancero, 2001; Arriagada, 2006; Satriano, 2006; Medina, 2014; ECLAC, 2015). In recent decades, Ecuador implemented a series of social development programs aimed at improving population wellbeing, and national development strategies for the establishment of socially inclusive regions; thus, a better quality of life. These development strategies posed an opportunity to rethink the development of regions (West, 2004; Sterck & Scheers, 2006; Sotelsek, 2007; Sánchez, 2015); however, to be effective, strategies need to be supported by the population, actors and territory-agents, including the State, business sector, organized civil society, and others.

Social policies translated into social programs in Ecuador were diverse, including education, health and housing areas; being probably, the most representative the Literacy Program, Nutrition and the Housing Bonus. Achieved results, contribution to beneficiary, and financing impact on population – based on the Basic Needs Index (BNI) – are unknown. Therefore, this research considers a macroeconomic focus for analyzing the characteristics and contexts of social policies implemented in Ecuador. Based on these considerations, the research aims to determine the impact of social policies financing on Ecuador’s social development programs for the 2008-2015 period, incorporating the following hypothesis: the financing of social policies in the education, health and housing sectors have a great impact in social development programs.

2. Theoretical Aspects

Policy study derives from the idea of government’s operation and instrumentation, considering political factors associated with the generation of programs and action strategies; that is, it analyzes the different instruments and
areas highlighted by the government, considering a clearly positive dimension and incorporating a methodology for the policy building process (Swindell & Kelly, 2000; Sims, 2001; Fernández, 2006). This resource aims to increasing the rationality and development of policy options. Therefore, this is the privileged perspective for specialists linked to policies design. Knowledge focus in policies emphasizes the process for identifying needs and demands, public policies making and enforcement (Lahera, 2000, Charles, 2014). This approach involves the setting of standards for constructing and evaluating best policy options related to certain public problems (Valenti & Flores, 2009).

On the other hand, the public choice approach introduced mathematical models, methods, approaches and theories into the political science, oriented to determinism and economism, developed initially for the economic science – under the logic of economic rationality (Subirats & Gomà, 2001; Gilardi, (2010; Ragin & Fiss, 2008; Schneider & Wagemann, 2012). Fuenmayor (2014), points out that “the first application of the assumptions of economic rationality to political decisions came from the economist Anthony Downs”, who published his work “An economic theory of democracy in 1957”. In this work, Downs, devises a theoretical model for political decision making process in a democratic government, assuming that both the rulers and the ruled act rationally, that is, guided by their selfish interests. It concludes that members of a government make their decisions in order to achieve their main objective: increasing the number of votes for their political party, while citizens vote for the party that gave them in the past, or believe that will give them in the future, most benefits” (p.40)

Thus, public policies are determinants of policy and decisions in government institutions (ECLAC, 1998; Moreno, 2003); therefore, a policy can be structured based on the social and economic needs of a territory; in turn, being a fundamental part for public management tasks and responsibilities (Dolowitz & Marsh, 2000; Satriano, 2006; Dobbin, Simmons & Garrett, 2007). Also public policies involve areas and elements of a government in a country; in this line, State policies are also those emerging from institutional objectives (Martínez, 2015); however, this is a disciplinary branch in social sciences, linked to society problems (Lahera, 2004, Fernández, 2006). Public policies, therefore, are instruments to conduct a society, in accordance with the socio-economic, political and ideological interests of groups that dominate the society or a State (Moreno, 2003). Finally, public policies, to the extent that they constitute State intervention in development, only become effective when political conditions so predispose (Pacheco, 2012). These are classified into economic, social, welfare and control policies.

2.1 What is a Social Policy?

According to Fernández & Caravaca (2011) social policy is comprised by three areas. First, as a historical and epistemological mediation, between the economy (wellbeing) and politics (the common good) in the face of the emerging social fractures caused by its conflicting dialectics; the second considers the political organization of social thinking, established to overcome the “social fractures” through the legal recognition of a specific social order (General Social Policy), and the satisfaction of population’ needs and vital opportunities through a set of goods and services (Specific social policy). And third, materialization of social policy, as a means, in a legal and institutional system for the protection, provision and assistance of certain vital needs and opportunities determined by the current social order, through two major instruments, the guarantee of social welfare or economic security, and the promotion and support for people’s personal fulfillment (p.5). Whereas Ortiz (2007) defines it as the way to promote and create appropriate scenarios for society development.

Thus, social policies refer to the set of administrative and institutional actions conducted by public power to address a broad, diverse and relative set of social problems within a territory, aiming for the State of Wellbeing (Subirats, 2001; Rodriguez, 2008; Charles, 2014). Since the end of the eighties, social policy in most Latin American countries has undergone major changes due to State changes and economy restructuring, having had immediate consequences in the improvement of public administration systems and local actors and agents’ participation.

There are two reasons for social policy to assist other vulnerable social groups or with basic needs, not only the poor, but society as a whole. Public institutions are responsible for their formulation and implementation (Cohen, 1998). It should be noted and underlined that problems addressed by social policies relate to poverty and resulting social exclusion, aside from the lack of access to basic services or basic needs (food, health, education, housing and basic services), productivity and employment problems are also addressed, where the tendency is to underutilize labor. In this scenario, the State designs labor policies, aiming to address under-paid labor problems derived from the lack of labor demand (Howlett, 1991; Pacheco, 2012; Graham et al., 2013).

2.2 Sectoral Public Policies

Since public policies are deliberately designed and planned, with objectives, courses of action and established
guidelines, they need a variety of resources as well as the interaction of political and social actors. It can be stated that a public policy is an instrument that allows the State to comply with its obligations to respect, protect and promote human and nature rights, eliminate inequities and mainstream traditionally marginalized or minimized approaches, while linking State short-term needs to mid and long-term political vision (SENPLADES, 2011, p.10). Thus, sectoral public policies refer to regional-level policies oriented to social and economic aspects, health, education, housing (Subirats & Gomà, 2001, Gutiérrez, 2005, Satiano, 2006, Sojo, 2007, Rodríguez, 2008; Garrido, 2017; Menar et al., 2017). Therefore, strengthening the State’s role in planning implies, at its most basic level, obtaining knowledge of the main instruments that guide the different levels of planning (Gómez, 2015), as processes developed in different stages, but mutually articulated and fed-back.

In the case of Ecuador, an institutional framework has been established: Constitution of the Republic of Ecuador 2008, which highlights the key elements of Good Living, understood as the integrality of rights, that is, all rights are fundamental without exception, for a decent life (Malo, 2014). Therefore, the Constitution of the Republic of Ecuador emphasizes the comprehensive nature of rights, recognizing them as indivisible, interdependent and of equal hierarchy. On the other hand, National Plans for Good Living (PNBV) 2009-2013 and 2017-2021, contain the programmatic orientations to operationalize the Good Living. To this end, inter-sectoral coordination instruments are created, defining public policies, programs and key mid-term projects, used as a link between the PNBV and policies implemented by public institutions.

3. Methodology

This research uses the deductive analytical method, based on the analysis of the under-study phenomenon, determination and analysis of variables, such as, social policies for the areas of education, health and housing, their financing and social development programs in Ecuador, arising from studies and recommendations made by different authors, such as, Acosta & Serrano (2009), Acevedo & Valenti (2017), Arjun et al., (2002). The research is conducted with data from the Ministry of Education, Ministry of Health and Ministry of Urban Development and Housing, National Institute of Statistics and Censuses, cataloged in the following study period of Ecuador: 2008-2015; on the other hand, a survey of 146 beneficiaries in communities receiving assistance was done. For analysis, an econometric model of multiple linear regression is applied, allowing analyzing and showing the relationship between under-study variables.

4. Results

It is established that financing of social policies focused on the three study variables (education, health and housing sector) are considered a responsibility and duty of the Ecuadorian State towards greater social development in territories; therefore, the following figure illustrates the financing – in millions of dollars – of social spending the State allocated during the 2008-2015 period.
As seen in the Figure, in the last ten years, Ecuador has allocated important resources to Social Programs, based on principles and guidelines established by the Millennium Development Goals and country poverty reduction objectives.

4.1 Accrued Health Budget as a Percentage of GDP

Figure 2 presents the health sector budget behavior against GDP, from 2000 to 2010 investment in the health sector has been of 0.6% to 1.7% of the GDP; however, in 2011 it decreases by -0.1% moving this gap to the following year with 0.3%, after, in 2014, it also suffers a decrease of -0.2%; 2015 presents 2.7% in relation to GDP, being this the same for 2016.
As seen in Figure 3, education budget behavior against GDP shows that from 2000 to 2008 it had a cyclical process between ascending and descending from 1.5% to 3.0%, but starting 2009, there is a budget growth in the sector of 4.5% compared to GDP, being this the same until 2012, only in 2013 we have in increase of 1%; therefore, as of the following year, there was a decrease of -0.3% (4.7%). 2014, 2015 while 2016 reached 4.2%.

Figure 4 shows the urban development and housing budget behavior as a percentage of GDP, from 2000 to 2016 with ascending and descending processes in certain periods. From 2000 to 2001 there was an increase of 0.1% to 0.6% in investment, but in the following years there was a very rapid decline of -0.4% until 2006; from 2007 to 2008, there is an increase of 0.3% to 0.8% respectively; however, until 2011 there is – one more time – a significant decrease of -0.4%. Starting 2012, social policies are subject to changes as established in the National Plan for Good Living 2009-2013; in 2015, it decreased to -0.7% until reaching in 2016 to 0.3% of GDP.
As presented in the above Figure, from 2000 to 2010 period, there is a GDP growth from 2.6% to 8%, this behavior continues until 2012. It can be seen that in 2013 there is an important investment in the social sector, being similar in 2015.

4.2 Specification of the Model

For data analysis, the multiple linear model, established through the method of Ordinary Least Squares (OLS), is applied, allowing analyzing the dependence of a variable (dependent) against one or more variables (explanatory); therefore, determining which independent variable (Financing for the education sector “Literacy”, health sector “Nutrition” and housing sector “Housing Bonus”) has a greater or lesser impact in the Index of Unsatisfied Basic Needs against the promotion of social development programs in Ecuador.

To explain the model, the databases of the Ministry of Finance, SICES, macroeconomic data of the National Institute of Censuses and Surveys and the National Information System are considered, these are systems that provide relevant information for each variable studied during the 2008 to 2015 period, supported by quarterly data with 32 observations, transformed into logarithmic values with double logarithmic application based on the following equation:

\[ Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu_i \]

Where:

- \( Y_i \): Social development programs against the Unsatisfied Basic Needs Index (poverty)
- \( X_1 \): Financing of the education sector = Literacy
- \( X_2 \): Financing of the health sector = Nutrition
- \( X_3 \): Financing of the urban development and housing sector = Housing Bonus
- \( \mu_i \): Stochastic disturbance

Thus, the econometric equation is proposed

\[ \ln Y_i = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \mu_i \]

\( \beta_0 \) = Intercept of the model
\( \mu_i \) = Term of stochastic disturbance

4.3 Estimating the Econometric Model

Once secondary sources variables information has been obtained, data is processed, obtaining the following results:
Table 1. Presentation of input and eliminated variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Input variables</th>
<th>Eliminated variables</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lnX3 (Housing)</td>
<td>-</td>
<td>By steps (Criteria: Probability-of-F-to- input &lt;=, 050, Probability-of-F-to- eliminate &gt;=, 100).</td>
</tr>
<tr>
<td>2</td>
<td>lnX2 (Nutrition)</td>
<td>-</td>
<td>By steps (Criteria: Probability-of-F-to- input &lt;=, 050, Probability-of-F-to- eliminate &gt;=, 100).</td>
</tr>
</tbody>
</table>

Dependent variable: lnY.

The estimation of the econometric model shows that only two independent variables explain the dependent variable, demonstrating the efficiency in the collection of data through reliable sources. Results of the econometric model are presented below.

Table 2. Summary of the econometric model

<table>
<thead>
<tr>
<th>Model summary^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

^a. Predictor: (Constant), lnX3

Previous Table presents a summary of the econometric model, showing a positive R of 0.760 in variable X3 (housing bonus), 0.797 in variable X2 (nutrition), establishing a direct relationship between ln X3 (financing of the housing bonus) and ln X2 (financing of the health sector “nutrition”) and ln Yi (Index of Unsatisfied Basic Needs); that is, said ratio means 76% and 80% respectively.

It also presents a coefficient of determination of R squared in X3 of 0.577 and X2 0.635, which measures the goodness of fit, affirming that 58% and 64% of times explain ln X3 (financing of the housing bonus), ln X2 (financing of the health sector “nutrition”) and ln Yi (Index of Unsatisfied Basic Needs). Also, Durbin Watson test shows the presence or absence of self-correlation, so the value of this indicator should approach 2, in this case, the model presents self-correlation from 7.7 > to 2.; therefore, remainders are between negative and positive.

Finally, the model summary reflects the standard error of the estimate of 0.0330 in X3 and 0.0311 in X2, that is, ln Yi, estimated values deviate from their true values by 0.33% in X3, and 0.31% in X2; thus confirming the previous approach.
Table 3. ANOVA (Analysis of variance)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>Gl</th>
<th>Root mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.000</td>
<td>1</td>
<td>.000</td>
<td>40,899</td>
<td>.000b</td>
</tr>
<tr>
<td>1 Remainder</td>
<td>.000</td>
<td>30</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.001</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>.000</td>
<td>2</td>
<td>.000</td>
<td>25,189</td>
<td>.000c</td>
</tr>
<tr>
<td>2 Remainder</td>
<td>.000</td>
<td>29</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.001</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **a.** Dependent variable: ln\(Y_1\)
- **b.** Predictor: (Constant), ln\(X_3\)
- **c.** Predictor: (Constant), ln\(X_3\), ln\(X_2\)

\(H_0: \text{Parameters} \neq \text{Linearity}; H_1: \text{Parameters} = \text{Linearity}\)

For analyzing above Table, established significance level is of 5%. If significance of ANOVA Table is less than that established, it indicates evidence against the null hypothesis. The result presents a column of significance of 0.000 on \(X_3\) and \(X_2\), lower than established level, that is, the alternative hypothesis is accepted, indicating that variables \(X_3\) and \(X_2\) are linearly related.

Given the statistical value of the factor test where \(F = 40,899\) in \(X_3\) and 25,189 \(X_2\) is very significant; therefore, the model explains a significant amount of ln \(Y_i\) variable (Social development programs) compared to UBN.

Table 4. Non-standardized coefficients and Multi-collinearity

<table>
<thead>
<tr>
<th>Model</th>
<th>Non-standardized coefficients</th>
<th>Standardized coefficients</th>
<th>T</th>
<th>Sig.</th>
<th>Collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Standard error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>2,418</td>
<td>.050</td>
<td></td>
<td></td>
<td>48,088</td>
</tr>
<tr>
<td>ln(X_3)</td>
<td>.113</td>
<td>.018</td>
<td>.760</td>
<td>6,395</td>
<td>.000</td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>2,378</td>
<td>.051</td>
<td></td>
<td></td>
<td>46,649</td>
</tr>
<tr>
<td>ln(X_3)</td>
<td>.105</td>
<td>.017</td>
<td>.703</td>
<td>6,096</td>
<td>.000</td>
</tr>
<tr>
<td>ln(X_2)</td>
<td>.024</td>
<td>.011</td>
<td>.247</td>
<td>2,142</td>
<td>.041</td>
</tr>
</tbody>
</table>

- **a.** Dependent variable: ln\(Y_1\)

- **Estimated model**

\[
\ln Y_i = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \mu_i
\]

\[
\ln Y_i = 2,378 + 0,24 \ln X_2 + 1,05 \ln X_3 + \mu_i
\]

**Interpretation of the coefficients:**

- **\(\beta_0 = 2,378\):** It represents the constant value or model intercept, which means that, when values of the independent variables remain constant, the model will have a constant value of 2.38%.
- **\(\beta_2 = 0.24\):** It corresponds to ln \(Y_i\) partial coefficient compared to ln \(X_2\) (financing of “nutrition”). Thus, by keeping ln \(X_1\) constant, an increase of 1% in ln \(X_2\), enlarges/stimulates the 2.4% to ln \(Y_i\).
- **\(\beta_3 = 1.05\):** Regarding ln \(Y_i\) partial coefficient compared to ln \(X_3\) (financing of house bonus), keeping ln \(X_2\) constant, an increase of 1% in ln \(X_2\) results into an increase of 10.5% in ln \(Y_i\).
In addition, the coefficients Table shows t-scores indicating variables that contribute the most to the proposed model, noting that, ln X3 (financing of housing bonus) has a contribution of 60.96% and ln X2 (financing of “nutrition”) has a contribution of 21.42%; these variables contribute to the improvement of the model analysis. In addition, the degree of significance is less than 5%, demonstrating the absence of multicollinearity.

Table 5. Model excluded variables

<table>
<thead>
<tr>
<th>Model</th>
<th>In beta</th>
<th>T</th>
<th>Sig.</th>
<th>Partial correlation</th>
<th>Tolerance</th>
<th>VIF</th>
<th>Minimum tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lnX1</td>
<td>.275c</td>
<td>1.746</td>
<td>.092</td>
<td>.313</td>
<td>.473</td>
<td>2,114</td>
</tr>
<tr>
<td>a. Dependent variable : lnY1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Predictor in the model: (Constant), lnX3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Predictors in the model : (Constant), lnX3, lnX2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows that variable lnX1 (financing of literacy) is excluded from the model with a significance of 9.2% higher than 5%; therefore, this variable does not explain lnY1 dependent variable (social development program) against the UBN. Being the hypothesis: the financing of social policies in the education, health and housing sector significantly impact on social development programs focused on the Basic Needs Index. The econometric model of multiple linear regression shows a positive R of 76% in lnX1 variable and 80% in lnX2 variable, suggesting a direct relation to the dependent variable (social development programs) compared to the UBN; likewise, R squared in lnX1 variable is of 58% and lnX2 variable is of 64%, affirming the times it relates to the dependent variable and a significance t of lnX2 variable of 2.14, which measures the individual partial coefficient of lnX2 (financing of nutrition). Being that it has a significant impact on social development programs.

Regarding the survey conducted to housing beneficiaries in Riobamba city – Chimborazo Province, it aimed to incorporate and feed lnX3 variable “housing bonus”, which at national level grants a degree of exclusive significance to explain how the Basic Needs Index depends on this variable, and consequently, its importance for country’s social development context.

5. Conclusions

The State of Ecuador has financed social programs (Literacy, Nutrition and Housing Bonus) with an important budget against GDP, presenting a cyclical behavior in the 2008-2015 period. The Literacy program budget presents an important concentration of resources until 2012; however, the Nutrition program has had less investment compared to the Literacy Program, while the Housing Program has an important significance in terms of financing, due to its importance and lack of housing of Ecuador’s population during the study period.

Social policies and the financing of social development initiatives in Ecuador have an academic and social relevance, considering that this research is innovative in Ecuador. The effect of policies financing – implemented in the analysis period – in the Education, Health and Housing sector has had a significant impact on Social Development Programs as well as in beneficiary population, since when surveyed about the benefits of Social Programs, they state that such programs contribute to well-being and quality of life improvement.

References


Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).