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Human Capital and Its Contribution to Economic Development Models: The Case of Virgen De Fátima Parish – Ecuador

Guillermo Isaac Castillo ¹, Ana María Guerra², Eva Loaiza Massuh³

Abstract

With the purpose of evaluating the human capital living standard in an endogenous development model and according to the United Nations Development Program (UNDP) parameters, the variables (income, education and health) taken from the census were analyzed, which was carried out in the Virgen de Fátima parish, with the help of the statistical method used: descriptive; correlational; qualitative mixed, with a sample of 2,480 families and 100% representativeness, the variables were parameterized, resulting in the intervened population having a low country relating human development index (45%).

Keywords: *Endogenous Development Theory, human capital, social entrepreneurship, human development index.*

Introduction

This paper was born as a result of the execution of a research project at the Universidad de Guayaquil, Ecuador, named *Model of socioeconomic development for the inhabitants of the Virgen de Fátima parish*, where it is sought to obtain relevant information for the creation of an economic development pilot for the area, one of the edges of great importance is human capital and its contribution to one of the models of economic development, such as the endogenous one.

Within the economic growth of each country there are some common elements, such as; the human factor, natural resources, physical capital. Added to this list must obviously be technology, a necessary tool to increase productivity. It should be noted that in the long term, however, sustained growth can only be achieved through factor performance (Salazar et al., 2020). On the other hand, achieving an increase in sustainable production is more difficult than accumulating productive agents (Coopa Cana, 2021). Finally, it is concluded that strengthening skills and developing people's skills becomes of vital importance for socio-economic development.

¹Universidad de Guayaquil, Contadora Pública Autorizada, Magister en Contabilidad Pública Internacional, estudiante del programa Doctoral en Economía de la Universidad de Cuyo Mendoza-Argentina. ana.guerrat@ug.edu.ec.

² Universidad de Guayaquil, Ingeniero comercial, Magister en administración de empresas mención negocios internacionales, estudiante del programa Doctoral en Economía de la Universidad de Cuyo Mendoza-Argentina guillermo.castillotu@ug.edu.ec.

³ Universidad de Guayaquil. Licenciada en Ciencias de la Educación con Mención en Inglés, Magister Degree in Theological Studies (2008), obtenidos en los Estados Unidos, estudios de Doctorado en Administración Estratégica de Empresas (DBA), eva.loaizam@ug.edu.ec.

Despite the debate on development and its continuous paths, conceptualization work is still necessary in this direction, added to this is the critical examination of practical applications in different nations; It should be noted that in almost all these models the standards imposed from the capitalist countries predominate. Large countries, or also called developed, where the logic of productivity goals is established (Raji, López Toro, 2020). Additionally, it is carried out without assessing the economic, political and social effects and consequences of small countries. (Casanova Montero & Zuaznabar Morales, 2017)

The increase in sustainable productivity is much more difficult than accumulating elements, therein lies the importance of the formation and accumulation of human capital, since the increase in productivity depends on the ability to combine technological progress and knowledge, which, at in turn, depends on the abilities and skills of the workers, remembering that human capital is an economic and not a social indicator.

The current study started on the assumption that most of the important factors affect the production of human capital, which includes factors that characterize the standard of living, these include the size of the average salary, free transfer payments to the population. Báez (2020) concluded that under current conditions the main statistical indicator that characterizes the quality of life of a population is salary. The main factors that affect the migration intentions of the rural population are: dissatisfaction with wages; territorial distance from the regional center; low availability of educational and medical services. (Antonova et al, 2019)

The growth of a country, far from signifying development, could become a setback (Ortíz et al. 2020). Moreover, it would be impoverishing. On this basis, it is necessary to study the conceptualization of human capital. In addition to raising the diagnosis and evaluation of the capacities that an individual possesses to carry out a job. In capitalist or developed countries, the goals of production, productivity, consumption growth, following the logic of capital, without assessing the economic, political and social effects and consequences, all these results point to a complex multi-causal basis of the crisis of socialism, which makes it think that the economies of the countries do not do it out of ideology but thinking of human capital as the main part of endogenous development.

This model gave rise to those in which the determinants of growth were endogenous, for example, the externalities of capital through the learning processes of making or spilling knowledge, human capital, R&D, public spending and taxes, social capital, processes local development, etc. (Moreno-Hurtado & Ochoa-Jiménez, 2018)

To measure the human development of the investigated sector, the indices of the United Nations Development Program (UNDP) (2018) were considered, it indicates the ways to evaluate the standard of living of the inhabitants of a territory, the most important are: Index of human development: a social and statistical indicator based on the analysis of three parameters: a) A long and healthy life, measuring life expectancy at birth; b) Educational level, studying the adult

literacy rate, and the enrollment rate in the different stages of the educational system (primary, secondary and higher education); c) Quantification of a decent standard of living, measured through the Gross Domestic Product (GDP), or in terms of Purchasing Power Parity (PPP), in US dollars, in order to establish comparisons.

As an indicator of the standard of living of each country, life expectancy, education and real income comes from the United Nations Development Program (UNDP), where it measures the achievement of a better standard of living for the population. (Neris, Lobo & Anato, 1997). In Ecuador, an economy based on public spending has been carried out, which represents 44% of the Gross Domestic Product (GDP), which is why the level of indebtedness tripled and the economy began to depend on the State (Chacha et al, 2019) mistakenly ignoring taking into account the productive sectors, which are those that generate income as well as sources of work. Consequently, unemployment developed a high rate, which leads to more poverty. Therefore, it is very necessary to focus on a model where the main factor of growth is human capital, and thus apply the principle of endogenous development, which mentions that the growth of the country involves the growth and development of skills and abilities of their habitants.

For this study, the case of the Virgen de Fátima Parish was taken with a population of 10,708 inhabitants where the urban area represents 58% and the rural area 42%, where we have results such as: the prevailing level of education is secondary 25% , the families that have broken their health are 48%, the biggest activity they carry out is commerce and being in a dependency relationship 16%, their economic condition borders between very poor and moderately poor with 80%, these are the variables that will be studied in this article, to determine the standard of living of families and perform a correlation to verify the association between two or more variables and how they affect the determination of optimal human capital or not.

The objective of this article is to evaluate the standard of living of the inhabitants of the Virgen de Fátima Parish with the variables: Income, education and health to find the factors that lead human capital to develop as a micro entrepreneur in a model of endogenous growth.

Literature Review

Endogenous Development Theories

The theory of endogenous development is revealed as a process that is motivated by frequent investment decisions, as well as the constant location of companies (Seane & Santos, 2014). Additionally, it is related to actions generated by economic agents, which revolve around companies or industries that are frequently innovating thanks to new technologies implemented in their production processes (Carbajo, 2021). Romer (1983) determined that productivity is born from learning by doing and years later, Lucas (1988) proposed that productivity is determined by human capital, where it seeks to understand and establish the components that explain the creation of Human Capital; This theory is characterized by a long-term growth rate

and by the incorporation of human capital, adding investment in Research and Development (R&D), as endogenous factors that determine growth. (Rodríguez-Arana, 2017)

The following table shows the different theories of economic development.

Table 1. Economic Development Theories

Modern	Neoclassical	Growth is exogenous caused by population growth and technological progress.	Solow (1956)
Traditional School			Swan (1956)
Human Capital Theory		Education increases the productivity and wages, generating economic growth.	Mincer (1958). Schultz (1961) Denison (1962) Becker (1964)
Endogenous Growth		Human capital is a fundamental variable for technological progress and economic growth.	Romer (1986, 1990) Lucas (1988)
Post Keynesian School		Growth is generated by investment, aggregate demand and technological progress.	Harrod (1939) Domar (1946, 1947) Robinson (1962) Kaldor (1966)

Source: Working document 02 University of Zaragoza (2002)

From the endogenous perspective, and considering its importance in society, the factor of capital in creating incentives to generate economic growth, the normative part that the State intervenes in the economy as a corrector of the imbalances of the economy is considered essential, all that it does so with the promotion of local development with policies that allow endogenous factors of production effects and is not changing the accumulation of physical and human capital (Moreno-Hurtado & Ochoa-Jiménez, 2018).

Endogenous development is the ability to transform the socio-economic system; the ability to react to external challenges; the promotion of social learning; and the ability to introduce specific forms of social regulation at the local level that favor the development of the above characteristics. Endogenous development is, in other words, the ability to innovate locally. The endogenous is linked to the action of popular participation and government support for the realization of any productive project within a community, in such a way that the necessary resources for its execution are obtained within that same community. (Gil, Boada & Alzate, 2018)

Human Capital

The Organization for Economic Cooperation and Development (OECD), explains that Human capital comprises the knowledge, skills, competencies and attributes embodied in individuals to facilitate the creation of personal, social and economic well-being (Freeman, et al, 2021). Espín-Jordán (2020) expressed that Human capital involves skills and training. But those skills and

training can be defined as capital only if they are conceptualized as factors that can generate some value in return. Finally, according to Obando-Murillo (2020), economic success depends largely on human capital, where knowledge, skills, competencies, and attributes contribute to personal and social well-being

In globalization issues, skills, technology and adaptation become more necessary, the importance of human capital will grow in the following years, therefore, investing in it represents increasing levels of health, participation in the community and perspectives of employment (Salamanca, 2020).

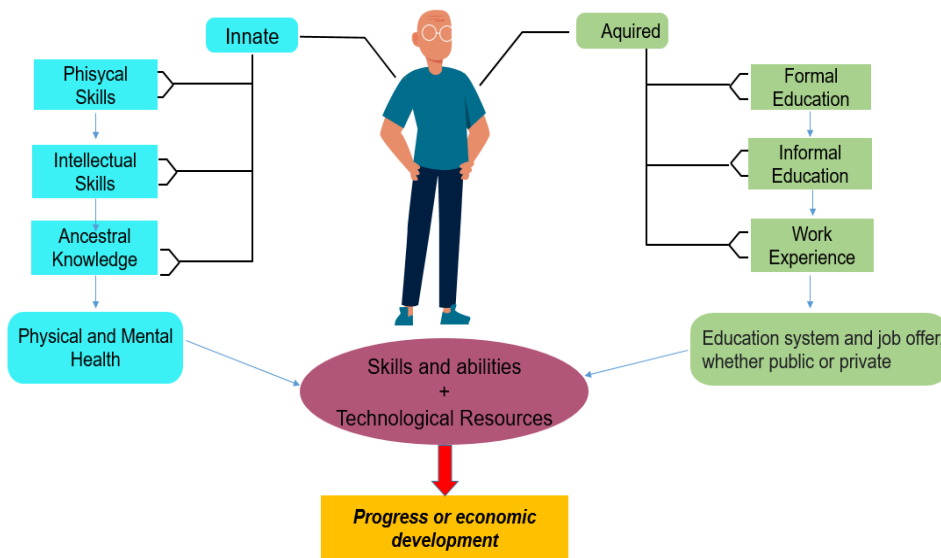


Figure 1. Human Capital Concept

Source: Working document 02 University of Zaragoza (2002)

According to the previous figure, the concept of human capital is described as the innate and acquired knowledge that all people have, where the innate includes physical and intellectual aptitudes and ancestral knowledge, which can be modified by food and health. On the other hand, acquired human capital is built throughout life, through formal and informal education and accumulated work experience. These three types of acquired knowledge will condition the work experience and values of people: All that innate and acquired knowledge determines the skills and abilities for their work performance as well as to start a formal business, in this way it contributes to the endogenous development of the territory (García, Chávez & Rivera, 2017).

Human capital is an essential element in the relationship between economic growth and quality of life in developing countries, education is an investment that has an income curve of individual

and collective productivity, people no longer contribute only their physical strength, but the accumulation of knowledge associated with experience form substantial elements within the theory of the market. (Manrique & Varon, 2019)

Education in Endogenous Growth

A theoretical model shows that the quality of education is a major source of inequality in developing countries. The endogenous growth model both the rate of technology and the quality of education interact in the formation of human capital and its distribution. The change in technological progress alters the level of human capital, the direction depends on the quality of education. Inequality in development, countries grow if there is a higher quality of education, and the country converges compared to the developed country (Hall, 2015).

Health in Economic Growth

Empirical studies closely identified education with human capital, but ignore health as a primary aspect of human capital, therefore, it is a critical element of growth. The healthiest workers physically and mentally, are the most productive and earn the highest wages, are the ones who miss the least from work. Sickness and disability substantially reduce earnings, with an especially strong effect on the country's development, because a higher proportion of workers are engaged in manual labor than industrialized countries. In the form of life expectancy, health has appeared in many cross-country growth regressions, and researchers generally find that it has a significant and positive effect on the rate of economic growth. (Bloom, Canning & Seville, 2004)

Variables and indicators that influence human capital

It is necessary to measure with valid variables and indicators in the development of this capital, according to elements that make up the concept of human capital, as we have said, this resource is essential in the search for productivity, innovation, competitiveness, and the insertion of MI SMEs. Only if it can be measured can its evolution be known and improvements proposed. The non-existence of a single model of variables and indicators that is condensed and approved is evident, there is only the need to find the indicators and determine how it can be quantified appropriately. Measurements of human capital have been established as one of the main indicators of the economic growth of a territory that seeks human development. Indicators have been defined that help to evaluate human capital, but there are three that are constant according to various authors: 1) Average years of study; 2) experience (years in the labor market); 3) Training and/or continuing education.

There are other indicators that are presented frequently and have the same purpose of analysis: health, Ability to use ICTs, professionals with postgraduate degrees and/or specializations, characteristics of the school, motivation index, and number of professionals with high external categorization. The list shows all the indicators found in various authors and that have been the most recurrent in the measurement of human capital to establish situations of the same within

MSMEs, these indicators are not the definitive ones, but can be adapted to other objectives according to different disciplines such as psychology, sociology, public policy, among others (García, Chávez & Rivera, 2017).

Methodology

The research method in this article is: descriptive, correlational and mixed qualitative with prevalence of the qualitative, concurrent, phenomenological, ethnographic. The design used is concurrent of the same status, where both methods have equality, qualitative + quantitative, one is not prioritized over the other, only the order in terms of concurrence varies

The quantitative approach, which starts from an idea that is delimited and, once delimited, objectives and research questions are derived, the literature is reviewed and a theoretical framework or perspective is built. (Hernandez-Sampieri, Fernández-Collado & Batista-Lucio, 2010) In the qualitative research approach "qualitative studies can develop questions and hypotheses before, during or after data collection and analysis" (Ortega, 2018, p.14). With what it is possible to describe situations and events that are important within a socioeconomic investigation. With this approach, the research design is non-experimental. According to the paradigms of social research, the assumptions and methodologies used in this work could be assembled:

Table 2 Research Methodology

Assumption	Quantitative Methodology	Qualitative Methodology
The empirical evidence was built through the observation made by the work of linking with society, carried out by the University of Guayaquil with the	<ul style="list-style-type: none"> - Use of deduction in design and induction in analysis. - Operationalization of theoretical concepts in terms of variables, dimensions and indicators and their categories. - Use of statistical techniques, SPSS or R - Source role of theory in study design 	<ul style="list-style-type: none"> The empirical evidence was built through the observation made by the work of linking with society, carried out by the University of Guayaquil with the - Use of deduction in design and induction in analysis. - Operationalization of theoretical concepts in terms of variables, dimensions and indicators and their categories. - Use of statistical techniques, SPSS or R - Source role of theory in study design - Emerging concepts and categories inductively throughout the entire research process. - Multiple factors influence each other. - In-depth and detailed analysis in relation to the context is privileged. - Trust and authenticity
	<ul style="list-style-type: none"> - Use of statistical techniques, SPSS or R - Source role of theory in study design 	<ul style="list-style-type: none"> Source: Sautu Methodology Manual- 2005

Source: Sautu Methodology Manual- 2005

Within this approach, the descriptive method will be used, the same one that focuses analysis on description, observation of phenomena and things observed. Another method used will be the correlational one when performing the analysis of the variables, such as the endogenous potential of the population, where it is desired to know the skills, and the economic development of the area.

Population and fieldwork planning

The population under study is in Virgen de Fátima parish, where a socioeconomic population census was carried out on 2,480 families in all sectors of the parish, having a representativeness of 100% with a total population of 10,708 inhabitants, where 60 questions were worked on. To measure the socioeconomic and income level, within the main ones we have: the largest human settlement is in the parish seat (58%), education at the secondary level (25%), they refrain from answering (47%), with lack of training (89%), have their own house (75%), the house is affected by delinquency and floods (58%), family member with ill health (48%), workers without insurance (65%), feel unsafe and insecure (50%), feel unsafe on the street (70%), inactive at work (57%), the greatest activity is commerce and a dependency relationship (16%), nothing, little and a half income helps cover expenses (83%), their economic condition mica considers themselves between very poor and moderately poor (80%), they completely agree to start a business (80%), they completely agree that the parish authorities help them with a business (67%), they completely agree to get training in management issues to start their business (67%).

Statistical method

The method chosen to proceed with the data analysis is: proof test, this is used to study if there is a relationship between categorical variables, when their data are independent. This test is an expansion of the Z-test for two proportions when a variable has two or more levels. The independence test quantifies and sums up how different the number of events observed at each level is with respect to the expected number according to H_0 .

Results

In this study we analyzed the most important variables that affect human capital and influence to characterize the standard of living of the population. Under current conditions, the main statistical indicator that characterizes the standard of living is salary. The factors that affect the migration intention of the rural population are: dissatisfaction with wages; distant territory, little availability of educational and health services.

Given the interest of studying the Human Capital, first the place where the activities of the population will be carried out will be chosen, so Virgen de Fátima parish was chosen, located at kilometer 26 via Duran-Tambo, it belongs to the Yaguachi canton, province of Guayas is a small parish, but with the necessary characteristics to carry out this study of the socioeconomic factors that affect human capital.

Table 3. Activity of the inhabitants of the Virgen de Fátima parish by families

Activities	Parish Header	Precints	General Total	%
Agriculture, fishing and livestock	88	189	277	11%
Craftsmen - labor	67	33	100	4%
Informal commerce	222	123	345	14%
Does not answer	848	612	1.460	59%
Services	23	13	36	1%
Dependency relationship between Public or Private companies	166	82	248	10%
Education	8	6	14	1%
General Total	1.422	1.058	2.480	100%

Source: Population census of Virgen de Fátima GAD - 2019

In table 3, it is observed that 59% of the population does not answer the activity generates their income, which suggests that they have diverse and occasional activities, the activities that the inhabitants carry out the most are: informal commerce, agriculture; crops of agricultural products and animal husbandry; employees in a dependency relationship in public or private companies.

Table 4. *Income per activity*

Actividad	media de ingresos
Agriculture, fishing and livestock	\$ 297,59
Craftsmen - M/O	\$ 403,20
Informal commerce	\$ 390,42
Education	\$ 629,14
Occasional workers	\$ 334,56
Dependency relationship between Public or Private companies	\$ 412,54
Services	\$ 490,06
General Total	\$ 352,95

Source: Population census of Virgen de Fátima GAD - 2019

The main source of income for the vast majority of the population is wages. The study shows that the average salary for all types of economic activity in the precincts is lower than the same indicator for the parish seat. It is worth noting that less than 47% of the average number of employees in the area are employed in companies with lower wages.

Despite the fact that the minimum wage in Ecuador is 396 dollars (2019), in several areas there is a great difference and also the type of activity to which it belongs.

Statistical analysis

To calculate the standard of living of human capital, we use three variables from the human development indicators of the United Nations Development Program UNDP, the variables are: income; education and health. These variables have been chosen according to the importance that each one of them has in the development of the human being, as some authors present in their written empirical works. Although the choice of variables is justified, it does not mean that they are the only ones that intervene in the development of human capital.

Next, first the variables Income and education in the Urban and Rural population of the Virgen de Fátima parish will be analyzed, for which a descriptive statistic, graphs, normality test and correlation of the variables will be carried out. Using R we get the following information:

Table 5. Analysis of descriptive statistics of income vs. education

INCOMES	Min	1st Qu.	Media n	Mea n	3rd Qu.	Max.	Standard deviation	variance
Primary Urban	10.0	200.0	386.0	394.3	400.0	6000.0	441.9658	195333.80
Secondary Urban	47.0	200.0	350.0	361.6	400.0	3000.0	267.2025	71397.190
Upper Urban	50.0	250.0	400.0	428.8	500.0	1600.0	291.6285	85047.170
Primary Rural	15.0	200.0	320.0	348.4	400.0	5000.0	359.7589	129426.40
Secondary Rural	20.0	152.5	307.5	324.3	400.0	1510.0	220.0435	48419.150
Upper Rural	47.0	215.0	320.0	342.6	400.0	800.0	169.0203	28567.85
No Urban Answer	20.0	200.0	370.0	391.2	400.0	25000	972.1919	945157.1
No Rural Answer	15.0	200.0	300.0	318.2	400.0	1500.0	181.1317	32808.70

Source: Population census of the Virgin of Fatima GAD – 2019

It is observed that the minimum income of \$10 dollars, which corresponds to a person from the urban sector who only has elementary school education finished. The maximum income of \$25,000 for a person in the urban sector who does not answer their level of education, to better represent the set of average data because there are extreme data, is the median, where it is measured in the range of \$300 to \$400, which is close to the minimum wage of \$396 in the year 2019. The average squared deviation of the income of people who do not answer is 945157.1 is

far from the average number of income of the urban population, as is also the case with the standard deviation \$ 972.19.

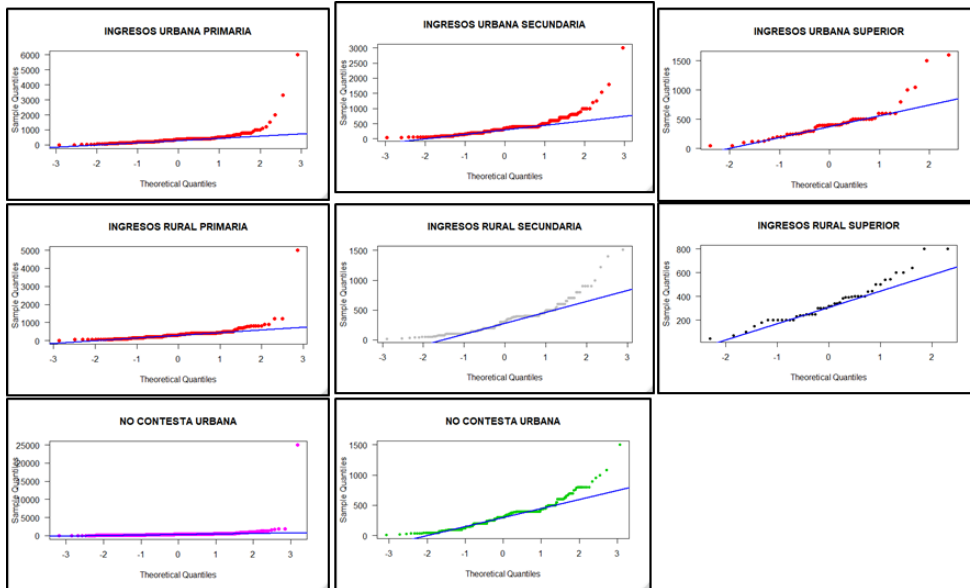


Figure 2. Income data dispersion vs. urban and rural education

Source: Population census of the Virgin of Fatima GAD – 2019

The following scatter plots (qqnorm), present data that does not follow the normal trend line, and scatter as income is higher, so we can say that these variables do not have a normal distribution.

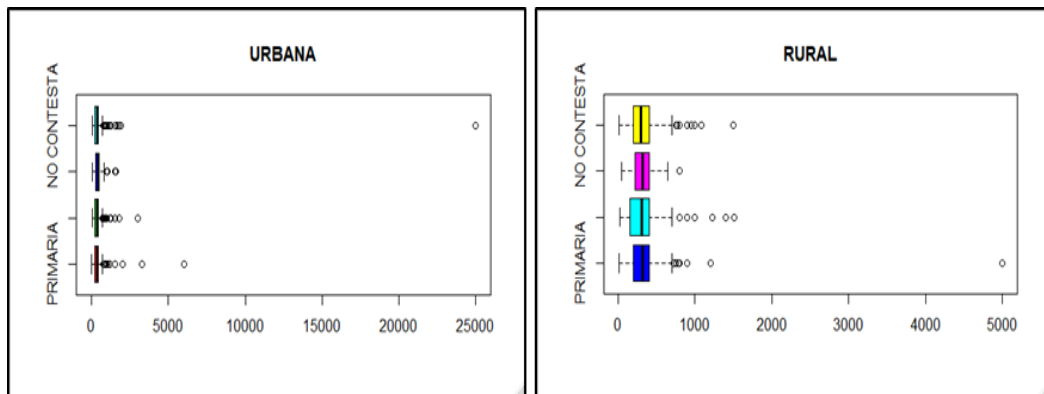


Figure 3. Revenue Data Histogram Vs. urban and rural education

Source: Population census of the Virgin of Fatima GAD – 2019

According to the box plot in the first quartile, it tells us that at least 25% of the inhabitants earn \$200 or less and that 75% of the inhabitants have incomes of \$200 or more. In the third quartile, it tells us that at least 75% of the inhabitants earn \$400 or less, and that 25% of the inhabitants have incomes of \$400 or more. Therefore, it can be indicated that the income between the three quartiles is within the basic salary of 396 dollars in 2019 and there are few who have a decent or high salary.

Table 6. Statistics test Analysis of income vs. Education

Shapiro-Wilk normality test	
data: INCOME_PRIMARY_URBAN W = 0.40661, p-value < 2.2e-16	data: INCOME_PRIMARY_RURAL W = 0.43636, p-value < 2.2e-16
data: INCOME_SECONDARY_URBAN W = 0.70929, p-value < 2.2e-16	data: INCOME_SECONDARY_RURAL W = 0.86297, p-value = 2.151e-14
data: INCOME_UPPER_URBAN W = 0.79246, p-value = 1.272e-07	data: INGRESOS_UPPER_RURAL W = 0.9434, p-value = 0.02401
data: NO_URBAN_ANSWER W = 0.10782, p-value < 2.2e-16	data: NO_RURAL_ANSWER W = 0.91075, p-value = 7.418e-16

Source: Population census of the Virgin of Fatima GAD – 2019

To confirm the above, a normality test (Shapiro-Wilk) will be used, where the P-values are significantly less than 0.05, the null hypothesis is rejected and it is concluded that there are reasons to suspect that the data do not come from normal populations.

Table 7. Statistical analysis of correlation of income vs. Education

Wilcoxon rank sum test with continuity correction	
data: INCOME_PRIMARY_URBAN and INCOME_PRIMARY_URBAN	
W = 36351, p-value = 0.04244	
alternative hypothesis: true location shift is not equal to 0	

95 percent confidence interval: 0.000035073 50.000020879

sample estimates: difference in location 10.00003

data: INCOME_ SECONDARY _ URBAN and INCOME_ SECONDARY _ URBAN

W = 45537, p-value = 0.08499

alternative hypothesis: true location shift is not equal to 0

95 percent confidence interval: -4.618661e-05 4.999996e+01

sample estimates: difference in location 10

data: INCOME_ UPPER _ URBAN and INCOME_ UPPER _ URBAN

W = 1611.5, p-value = 0.1094

alternative hypothesis: true location shift is not equal to 0

95 percent confidence interval: -2.000052 129.999960

sample estimates: difference in location 56.00001

Source: Population census of the Virgin of Fatima GAD – 2019

The WILCOXON test is used when we consider that the distributions of the variables follow a centrality model, that is: For some value of the parameter, the distribution of the Wilcoxon statistic can approximate a normal one. The Ho (null): the average income of urban people with primary education is related to the average income of rural people with primary education. H1(alternative): the average income of urban people with primary education is not related to the average income of rural people with primary education. Significance level is equal to 0.05.

The first case primary urban income and primary rural income has a P-value of 0.04244 is less than 0.05, the null hypothesis is rejected, it means that the income of the means are not the same for these two populations. The second case secondary urban income and secondary rural income have a P-value of 0.08499 is greater than 0.05, the null hypothesis is accepted, it means that the mean incomes are the same for these two populations. The third case upper urban income and upper rural income have a P-value of 0.1094 is greater than 0.05, the null hypothesis is accepted, it means that the income of the means are the same for these two populations. It is concluded with this test that most of the average incomes have equality in the mean.

Measurement of human development

To measure human development, we take into account the parameters indicated by the United Nations Development Program (UNDP) where it classifies the Human Development Index HDI, which are derived from quartiles. HDI values below 0.550 for low human development, 0.550 to 0.699 for medium human development, 0.700 to 0.799 for high human development, and 0.800 or higher for very high human development.

Through an empirical method to determine the human development factor of the inhabitants of the Virgen de Fátima Parish, we take the data from the 2019 population census, the income

variable is calculated where only 19.44% of the population earns more than basic salary 396 dollars of the year 2019 we also calculate health where 68.55% of the population's state of health is between very good and good, and education only 46.49% of the population has secondary and higher education

Table 8. Indicator of human development of the population of Virgen de Fátima.

INGRESOS			EDUCACION			SALUD		
Ingresos del hogar con relacion SMV 2019	%	% Indicador	Nivel de educación	%	% Indicador	Población con edad de trabajar tiene salud	%	% Indicador
> Salario Básico	19%	19%	Primaria	46%		1. Muy buena	4%	4%
< Salario Básico	77%		Secundaria	40%	40%	2. Buena	29%	29%
NR	4%		Tecnológico	1%	1%	3. Regular	18%	
			Universitario	6%	6%	4. Mala	1%	
			Posgrado	0%	0%	Tercera Edad	13%	
			No Responde	8%		Niños	1%	
						N/R	34%	34%
Total	100%	19%		100%	46%		100%	68%
Promedio del indicador		45%						
DESARROLLO HUMANO BAJO, SEGÚN PNUD								

Source: Population census of the Virgin of Fatima GAD – 2019

In order to know the level of development of the Virgen de Fátima parish, an average was made of each of the percentages of the variables studied and we obtain the value of 45% if we place it within the parameters of the UNDP if it has a low human development, which contrasts with the indicator that the UNDP has for Ecuador of 75%.

An empirical method to determine the human development factor of the inhabitants of the Virgen de Fátima Parish, we take the data from the 2019 population census, the income variable is calculated where only 19.44% of the population earns more than the base salary of 396 dollars in 2019. We also calculate health where the health status of 68.55% of the population is between very good and good, and education only 46.49% of the population has secondary or higher education.

Conclusions

Since it is highly important, it is convenient to start with a review of the socioeconomic level of the territory that affects the formation of human capital; The main source of income for the majority of the population is: informal trade, agriculture; crops of agricultural products and animal husbandry; employees in a dependency relationship in public or private companies; The study shows that the average salary for all types of economic activity in the virgin parish of Fatima is lower than the country's minimum wage.

Of the economic-productive activities, the most important agricultural activity has been determined to be the cultivation of industrial sugar cane, followed by the plantations of various

fruits typical of the area; Industrial sugar cane and fruit crops occupy 1,325.08 and 1,075.82 hectares respectively in the territory. In the same way, but in smaller proportions, cocoa, rice and pasture crops are developed. (PDOT, 2015). With statistical test it is concluded that the income variables are related to the education variable, as well as the income variable is related to the health variable, all these variables are part of the human development indicator. By measuring the variables, it is determined that the Virgen de Fátima parish has a 45% development, if we place it within the UNDP parameters, it is deduced that it is a low human development, which limits the economic development of the area.

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