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Financial inclusion and socioeconomic well-being

Inclusión financiera y bienestar socioeconómico

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Abstract

Globally, the evolution of financial inclusion is reflected in the increase in the number of people who have greater opportunities to access financial services, which has an impact on the generation of new income and, therefore, on improvements in quality of life. This research evaluates financial inclusion and its impact on socioeconomic well-being in Pedernales during 2024, considering sociodemographic and economic variables. The dependent variable of the study is economic well-being, measured as a dichotomous variable, while the main explanatory variable is financial inclusion. Data collected through a structured survey applied to a sample of 376 people was used. An explanatory quantitative approach was applied, and the analysis was performed using descriptive statistics and multiple logistic regression. The results show that the financial inclusion index has a significant effect on the probability of not being poor, with a significance of 0.0%. Other sociodemographic factors also showed significant effects, such as urban area, gender, and educational level; the factor that did not show significance was age. These findings underscore the importance of strengthening access to financial services in rural areas, providing greater access to credit for women, and facilitating formal employment opportunities for the entire population.

Keywords: financial inclusion, poverty, socioeconomic well-being

Resumen

A nivel mundial, la evolución de la inclusión financiera se ve reflejada en el aumento de personas que tienen más oportunidades de acceder a los servicios financieros, lo cual impacta en la generación de nuevos ingresos y, por ende, en mejoras en la calidad de vida. En esta investigación se evalúa la inclusión financiera y su incidencia en el bienestar socioeconómico en Pedernales durante el año 2024, considerando las variables sociodemográficas y económicas. La variable dependiente del estudio es el bienestar económico, medida como una variables dicotómica; mientras como principal variable explicativa está la inclusión financiera. Se utilizaron los datos recolectados a través de una encuesta estructurada aplicada a una muestra de 376 personas. Se aplicó un enfoque cuantitativo explicativo, el análisis se realizó mediante estadística descriptiva y regresión logística

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múltiple. Los resultados muestran que el índice de inclusión financiera tiene un efecto significativo en la probabilidad de no ser pobre, con una significancia del 0.0%. Los demás factores sociodemográficos también mostraron efectos significativos, como la zona urbana, género y nivel educativo; el factor que no mostró significación fue la edad. Estos hallazgos subrayan la importancia de fortalecer el acceso a servicios financieros en zonas rurales, brindar mayor apertura de crédito a mujeres y facilitar oportunidades laborales formales a toda la población.

Palabras clave: inclusión financiera, pobreza, bienestar socioeconómico

Introduction

Financial inclusion has gained global recognition as a key driver of economic growth and well-being, particularly in strengthening small and medium-sized enterprises within emerging economies. The rise of digital wallets, mobile platforms, FinTech services, and online banking has fundamentally reshaped how microenterprises access financing and formal market structures, enabling them to compete more effectively in both domestic and international arenas.

At its core, the financial system functions as an intermediary channeling resources toward individuals and firms in need of investment capital and liquidity. The close relationship between economic growth and financial system development has accordingly become a focal point of economic analysis. Greater penetration of financial intermediation across different societal segments has been shown to contribute to poverty reduction, as documented in various studies on these economic variables.

Understanding economic well-being requires consideration of multiple contributing factors. Contemporary societies continue to grapple with persistent inequalities and poverty crises rooted in social, cultural, and labor marginalization affecting broad segments of the population. Effective political agreements that improve opportunities and address real societal challenges remain essential for achieving optimal and sustainable development. Prompt action is necessary to implement consensual diagnostics, define strategies, and coordinate detailed interventions.

The relationship between financial inclusion and monetary poverty constitutes a central theme in countries' socioeconomic agendas. Detailed national-level observation highlights the socioeconomic characteristics projected within each society, which are reflected on the liability side of banking systems through checking and savings accounts, and on the asset side through various financing mechanisms such as consumer loans and credit portfolios. Numerous studies confirm that greater access to digital services and financial resources is associated with lower rates of monetary poverty.

Ecuador has experienced notable progress in digital adaptation over the past decade. According to World Bank data, 60% of households now have internet access, representing a 28-percentage-point increase since 2014. The share of individuals making or receiving digital payments doubled over the same period, rising from 25% in 2014 to 47% in 2021. This widespread adoption of new digital technologies —encompassing greater connectivity, data growth, and processing capacity— is driving the development of the country's digital economy and technological advancement (World Bank, 2024).

Following Adam Smith's conceptualization, poverty is understood in material, primarily economic terms. Two distinct needs-based approaches can be distinguished in defining non-poverty: "not only the goods indispensable for subsistence but also the absence of consumption of any good or service that a country's customs associate with a situation of poverty" (Grados, 2021, p. 548). This perspective encompasses both relative and absolute poverty, which underpin the various theoretical frameworks used to explain poverty within a nation.

The multidimensional poverty approach has also gained prominence, representing one of the most complex challenges in the socioeconomic domain. This framework has moved beyond a strictly monetary conception toward a broader integration that addresses various dimensions of human well-being, including health, education, access to basic services, and employment. Consequently, poverty has become increasingly salient in Latin America in recent years. In Ecuador, significant methodological transformations and reforms have been implemented to redefine paradigms around social phenomena.

According to Gómez, Bolívar, and Reyes (2021), "Economic growth is driven by financial access, facilitated by the ease of digital management through financial transactions that provide security and transparency" (p. 23). Financial institutions remain at the forefront of this transformation, continuously improving digital service offerings to algorithmically facilitate entry into competitive international markets, thereby directly influencing economic growth.

Gallegos and Altamirano (2023) note that "the Social and Solidarity Economy plays an important role, developing through financing and production mechanisms that in turn foster new forms of associativity and

cooperation, reintegrating those who have been excluded from financing, production, and consumption." From this perspective, individuals engaged in this process broaden their path toward greater financial stability, thereby contributing to improved quality of life and demonstrating how such financing stimulates entrepreneurship and generates economic development.

León, Hernández, and Haro (2022) observe that "a segment of the population has received university instruction in economic and administrative fields; however, despite this training, students have not successfully translated theoretical concepts into practice" (p. 2). The close relationship between youth and the digital technological world thus creates a gap between what should be and what must be done, as knowledge of basic administrative and economic concepts does not guarantee sustainable economic growth for those implementing them.

According to Paz (2022), "the poverty gap in Latin America, viewed through a gender lens, proves considerably unfavorable for women, given that for many decades past, so-called defeminization processes of poverty existed in the region" (p. 32). In other words, assertions were made regarding reductions in female poverty rates compared to male poverty rates, without considering analytical indicators to identify poor households and individuals overall.

The gap between men and women has remained constant from the second quarter of 2019 through the fourth quarter of 2023, averaging a difference of 1.3 percentage points. By the close of the fourth quarter of 2023, 4.4 million men (35.9% of the adult population) and 4.4 million women (35.9% of the adult population) held at least one frequently used financial product within the financial system (13.9 and 13.6 million accounts, respectively) (BCE, 2024, p. 10). These percentage figures demonstrate how society has worked to narrow the gender gap in terms of ownership and management of financial products.

As Nina and Reyes (2021) state, "the poverty line and extreme poverty line represent a minimum income equivalent to the market-price monetary value of the food basket and non-food basket paid for basic services, which represents a minimum level of well-being" (p. 31). Accordingly, the region's reality involves survival on minimum income sufficient only for basic needs, while the most vulnerable sectors live in extreme conditions where they can barely cover food as a daily priority.

Collado, Segovia, and Silva (2021) argue that "economic disparity, child malnutrition, access to primary and secondary education, and gender inequity continue to be limiting factors in reducing poverty levels in the short, medium, and long term in the region." Overcoming these challenges that generate high poverty rates requires governments to act consensually in generating priority investment and social inclusion policies in key areas such as health, education, and social protection programs.

As Paredes, Arpi, and Cardenas (2023) note, "education has a significant impact on the reduction of monetary poverty" (p. 76). Education thus represents the appropriate and necessary tool for reducing and combating poverty; it is a determining factor that directly influences development and improvement in the quality of thinking and life of the general population. Maximizing the enrollment of children, youth, and adults in educational institutions has positive impacts on ways of thinking, acting, and living.

According to Urbano and Cieza (2023), poverty is not solely characteristic of low-income individuals but also of those dependent on work, those living in struggle, those most vulnerable to social risk, those lacking rights, and those excluded from participation in normal patterns of social life. In this sense, countries such as Ecuador, Peru, and Colombia daily experience an unpleasant reality for their inhabitants, marked by high vulnerability and elevated poverty indicators in the absence of public policies that would dignify the lives of those situated in geographically remote areas or dependent on labor informality. Given the foregoing, this study aims to evaluate, through a multiple logistic regression model, financial inclusion and its impact on economic well-being in Pedernales in 2024, considering both sociodemographic and economic variables.

Methodology

This analysis draws on the database generated for the thesis "Financial inclusion and its incidence on poverty in Pedernales," the authors of which are also contributors to this article. A new objective was established for this study: "to evaluate, through a multiple logistic regression model, financial inclusion and its incidence on economic well-being." A mixed methodology with an explanatory approach was employed, based on a review of primary and secondary literature. A structured survey was administered to a sample of 376 individuals, and the collected information was tabulated, cleaned, and processed using SPSS software. Missing values were defined, and variables were coded accordingly.

The study's dependent variable is economic well-being, measured as a dichotomous variable in which a value of 0 indicates non-poverty and a value of 1 indicates poverty. For the classification of poverty and extreme

poverty, the official income-based poverty line published by INEC in June 2025 (USD 91.98 per capita per month) and the extreme poverty line (USD 51.83 per capita per month) were used. Among the explanatory variables, financial inclusion served as the primary measure; an index was constructed as the sum of three binary indicators: bank account ownership, mobile banking usage, and credit access. Finally, statistical analysis techniques were applied, including binary logistic regression, multiple regression, and factor analysis.

Results and discussion

Table 1

Model Summary 1.

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	416,110[a]	,173	,231

Table 2

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5,201	8	,736

Note. Source: Authors' own elaboration based on database.

Tables 1 and 2 present the Hosmer-Lemeshow tests and the binary logistic model summary for measuring the impact of financial inclusion on poverty. The simultaneous chi-square coefficient, with statistical significance (5.201; p=0.736), indicates that the model fits the observed data well. The model summary shows a high -2 log likelihood value. The Cox and Snell R square, at 0.173, deviates from zero, and the Nagelkerke R square coefficient for the model is 0.231, considering that the maximum value is one (1). The model is therefore considered valid.

Table 3

Estimated coefficients of binary logistic model 1.

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	IF Index	-.589	.117	25.446	1	.000	.555	.441	.698
	Age	-.013	.008	2.524	1	.112	.987	.972	1.003
	Gender (1)	-.425	.239	3.178	1	.075	.653	.409	1.043
	Area (1)	-1.134	.244	21.651	1	.000	.322	.200	.519
	Constant	2.303	.432	28.450	1	.000	10.002		

Note. Source: Authors' own elaboration based on survey data.

Table 3 shows the sociodemographic factors influencing the probability of being poor. Area is significant (p=0.000), indicating that living in an urban area reduces the probability of poverty (Exp(B)=0.322). Gender shows a marginal tendency (p=0.075), suggesting that being male may be associated with a lower probability of poverty. Regarding the Financial Inclusion Index, the coefficients show significance (p=0.000) and B=-0.589, confirming the negative relationship indicating that greater financial inclusion reduces the probability of being poor. This finding aligns with the study by Álvarez et al. (2022), who applied a spatial econometric model and identified an inverse association between financial inclusion and poverty, along with territorial inequality in financial inclusion across different provinces, which corresponds to this study's findings regarding urban-rural gaps.

Table 4

Model summary 2

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	403,164[a]	,201	,268

Table 5

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	17.018	8	.030

Note. Source: Authors' own elaboration based on survey data.

Tables 4 and 5 present the Hosmer-Lemeshow tests and the binary logistic model summary for measuring the impact of financial inclusion on poverty, incorporating educational level as an additional variable while retaining the previous ones. The simultaneous chi-square coefficient, with statistical significance (17.018; p=0.736), indicates that the model fits the observed data well. The model summary shows a high -2 log likelihood value. The Cox and Snell R square, at 0.201, deviates from zero, and the Nagelkerke R square coefficient for the model is 0.268, considering that the maximum value is one (1). The model is therefore considered valid.

Table 6

Coefficient comparison between estimated models 1 and 2

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	IF Index	-.493	.121	16.468	1	.000	.611	.482	.775
	Age	-.020	.009	4.847	1	.028	.981	.964	.998
	Gender (1)	-.546	.246	4.907	1	.027	.579	.357	.939
	Area (1)	-.965	.253	14.514	1	.000	.381	.232	.626
	Educational Level			10.201	4	.037			
	Educational Level (1)	2.026	.939	4.658	1	.031	7.587	1.205	47.783
	Educational Level (2)	1.453	.728	3.979	1	.046	4.274	1.026	17.811
	Educational Level (3)	.910	.698	1.700	1	.192	2.485	.633	9.761
	Educational Level (4)	.389	.741	.276	1	.599	1.476	.346	6.305
	Constant	1.415	.825	2.940	1	.086	4.116		

Table 6 presents the second logistic model, which incorporates educational level while retaining area, gender, age, and the financial inclusion index. The latter variable continues to show a significant effect (p = 0.000), confirming that greater financial inclusion reduces the probability of poverty. Age shows a significant effect (p = 0.028). Gender also demonstrates significance (p = 0.027), indicating that being male is associated with a lower probability of poverty. Similarly, residing in an urban area reduces the probability of poverty (p = 0.000).

Regarding educational level, the set of categories is significant (p = 0.037); levels 1 and 2, corresponding to primary and secondary education, stand out with Exp(B) values of 7.587 and 4.274, respectively. Overall, the model indicates that gender, area, educational level, and the financial inclusion index are determinants of the probability of being poor or non-poor.

Similarly, the report "*Financial Inclusion in Ecuador: Progress 2024*" notes that educational level is among the primary determinants of financial product comprehension and usage, and consequently of financial inclusion and poverty reduction.

Table 7

Model summary 3

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	376,893[a]	,252	,337

Table 8

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	11,944	8	,154

Note. Source: Authors' own elaboration based on survey data.

Tables 7 and 8 present the Hosmer-Lemeshow tests and the binary logistic model summary for measuring the impact of financial inclusion on poverty, incorporating type of employment as an additional variable while retaining the previous ones. The simultaneous chi-square coefficient, with statistical significance (11.944; p=0.154), indicates that the model fits the observed data well. The model summary shows a high -2 log likelihood

value. The Cox and Snell R square, at 0.252, deviates from zero, and the Nagelkerke R square coefficient for the model is 0.337, considering that the maximum value is one (1). The model is therefore considered valid.

Table 9

Coefficient comparison between estimated models 1, 2, and 3

		B	Std. Error	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	IF Index	-.368	.128	8.277	1	.004	.692	.538	.889
	Age	-.019	.009	4.138	1	.042	.982	.964	.999
	Gender (1)	-.479	.261	3.373	1	.066	.619	.371	1.033
	Area (1)	-.829	.273	9.199	1	.002	.437	.256	.746
	Educational Level			9.433	4	.051			
	Educational Level (1)	1.924	.951	4.092	1	.043	6.847	1.062	44.162
	Educational Level (2)	1.395	.744	3.516	1	.061	4.034	.939	17.332
	Educational Level (3)	.796	.708	1.262	1	.261	2.216	.553	8.878
	Educational Level (4)	.308	.752	.168	1	.682	1.361	.312	5.944
	Type of Employment			21.029	3	.000			
	Type of Employment (1)	1.569	.447	12.313	1	.000	4.801	1.999	11.532
	Type of Employment (2)	-.227	.371	.375	1	.541	.797	.385	1.649
	Type of Employment (3)	.378	.373	1.023	1	.312	1.459	.702	3.034
	Constant	.846	.908	.869	1	.351	2.331		

Table 9 presents the third logistic model, which incorporates type of employment while retaining financial inclusion, age, gender, area, and educational level. The financial inclusion index continues to show a significant effect (p = 0.004), confirming that greater inclusion reduces the probability of poverty. In contrast, age and gender do not reach statistical significance.

Urban area maintains its significant effect (p = 0.002), with urban residence reducing the probability of poverty; this variable shows p = 0.000. For educational level, only the primary education category is significant (p = 0.043). Regarding type of employment, level 1 (formal employment) stands out with Exp(B)=4.801, confirming that formal employment reduces the probability of poverty. The other levels (informal employment and self-employment) do not show statistical significance.

Overall, the model indicates that area, educational level, financial inclusion index, and formal employment are determinants of the probability of being poor or non-poor. Demirgüç et al. (2017) note that type of employment is a relevant factor in the likelihood of being financially included, as formal employment increases the probability of access to and use of financial products.

Conclusions

Financial inclusion is a tool promoted by international organizations for several years, aimed at ensuring that individuals worldwide have opportunities for access, use, and understanding of financial services, thereby contributing to breaking down technological, cultural, and educational barriers that limit full financial inclusion. Breaking these barriers could expand access to diverse markets more efficiently and, in turn, stimulate entrepreneurship, contributing to a nation's gross domestic product (GDP) and, consequently, to increases in per capita GDP and economic well-being.

The analysis shows a statistically significant effect of the financial inclusion index on poverty; that is, being financially included reduces the probability of poverty. Various factors influence these results, including area,

gender, educational level, and type of employment. The different models applied confirm that these factors are relevant to the effect of financial inclusion on poverty.

These findings reinforce the importance of strengthening access to financial services in rural areas, expanding credit availability for women, and promoting formal employment opportunities across the population. Although age did not show statistical significance in most models, ensuring access to and understanding of financial services across all demographic groups remains important, as this will help close existing gaps in both financial services access and poverty reduction. Such progress will foster the creation of more enterprises and greater circular monetary flow, reflected in the country's economic growth rates and the population's economic well-being.

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