

Georeferencing of Savings Banks and their Role in Financial Inclusion in the Salinas Canton

Jacqueline del Rocio Bacilio Bejeguén*, Rita Pierina Villamar Tumbaco

Universidad Estatal Península de Santa Elena, Santa Elena, Ecuador

Abstract

Georeferencing is a fundamental practice to identify the location of a certain element through coordinates and technological tools such as Google Maps and Arcgis, the precise location allows people to know and analyze socioeconomic factors in the context of the savings banks of the Salinas canton, describing a problem such as the scarcity of information, a situation that limits the development in the quality of life of citizens, financial decision-making, the lack of reaction in emerging situations, the lack of opportunities due to limited access to technology, inefficiency in long-term planning, lack of savings habits and therefore the absence of financial education. The objective of this study was to georeference the savings banks in two parishes of Salinas as well as to analyze the role in financial inclusion of the Salinas canton, a descriptive methodology was used with a qualitative and quantitative approach applying interviews, surveys, and a working table with representatives and experts, for the processing Power BI and Google maps were applied. 19 savings banks were georeferenced, and their regulatory context was analyzed concerning the well-being of their members and the adaptability of financial services, contributing to greater inclusion

Keywords

Saving banks, Georeferencing, Socioeconomics, Financial Education.

1. Introduction

Georeferencing, according to the author González [1] is the process that allows the precise location of objects, this location can currently be done using technologies such as GPS, Google Maps, and Google Earth, among other software. From the point of view of [2], geospatial analysis examines the relationship between geographic location and saving behavior. Their findings revealed that factors such as proximity to financial institutions, access to transportation, and socioeconomic conditions significantly influenced saving patterns within different regions. This study highlights the importance of considering geographic factors when designing and implementing financial education programs.

There are several authors such as Marco (2018) who study financial institutions and characterize them as for-profit institutions that act as intermediaries to link savers who need to invest and obtain profits, while Marcelino et al. [3] mention that savings banks are unregulated systems that allow people to save and generate profit to meet their financial needs without major requirements. These groups of between 15 and 40 members and coordinated by a committee carry out activities such as savings and loans, promoting education and a culture of savings; The difference between these concepts is visualized in the legal structure considering that banks are for-profit corporations and savings banks operate cooperative non-profit companies.

In Ecuador, savings banks are regulated by the Superintendence of Popular and Solidarity Economy, Financial and Economic Analysis Unit, and the Ministry of Economic and Social Inclusion, so the intersection of geographic information and the identification of socioeconomic factors visualizes a combined vision of the financial panorama. As government-led regulatory institutions attempt to control the proliferation of credit unions and mutual savings associations, understanding the spatial location and socioeconomic implications of these institutions becomes crucial Altamirano et al. [4].

ICAIW 2024: Workshops at the 7th International Conference on Applied Informatics 2024, October 24–26, 2024, Viña del Mar, Chile

*Corresponding author.

✉ jbacilio@upse.edu.ec (J. d. R. Bacilio Bejeguén); rita.villamartumbaco@upse.edu.ec (R. P. Villamar Tumbaco)

🆔 0000-0002-7071-1129 (J. d. R. Bacilio Bejeguén); 0000-0003-1626-9963 (R. P. Villamar Tumbaco)



© 2024 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

According to Pereira [5] savings banks have become a financial alternative for those who do not have access to banks, generally through the credit bureau, while, as González and Peñaherrera [6] state, savings banks provide informal financial services that are accessible to the needs of the population.

In this case, the author Stephen Zamore [7], the adoption of Geographic Information Systems has influenced the operational efficiency of savings.

Informal financial cooperation strategies have emerged globally to strengthen the resilience of low-income communities through mutual support. A key example is the Rotating Savings, where members agree to collectively save by contributing regularly [8].

According to Gaterud [8], there are only two savings banks left in Spain due to the financial crisis of 2008, generating a high loss of confidence on the part of citizens, in view of which savings banks were forced to restructure, the government established new regulatory measures that required savings banks to comply with standards about capitalization and liquidity. Gallego-Losada [9] mentions, that this can be achieved by increasing access to financial services and products for vulnerable populations that have historically been excluded from such opportunities. The goal is to offer these services at an affordable cost, promoting greater economic participation and stability.

At the level of Latin America, Periche et al. [10] state that the punctuality of payments is a fundamental factor in analyzing the performance of savings banks, this unpunctuality is caused by the following reasons: the scarcity of financial education, time, unnecessary expenses, illnesses, among other economic factors that are related to unemployment, the crisis and the Covid-19 pandemic, causing debtors to lose their purchasing power causing over-indebtedness. According to Ghosh [11], the pandemic has disrupted both the social and economic spheres, causing significant impacts across all industries and stakeholders. As we move from COVID-19 stability to post-covid recovery, sectors must adopt thoughtful approaches to rebuild a sustainable economy and society. Financial inclusion has emerged as a key enabler in this process, highlighting the need for universal access to financial services.

At the national level, researchers Ruiz and Jácome [12], define the popular and solidarity economic sector as the set of forms of economic-social organization in which its members, collectively or individually, develop processes of production, exchange, marketing, financing, and consumption of goods and services.

Investigating the location of savings banks and socioeconomic factors can have significant implications for community development and the individual well-being of the inhabitants of the Salinas canton, given that socioeconomic factors play a crucial role in the development and well-being of the population, economic vulnerability is widespread in the country due to the structure of income and the environment in which people live [13].

COSEDE [14] mentions that the popular and solidarity economy is related to savings banks, since both have the mission of promoting a more inclusive and collaborative approach in the financial field. The SSE (The Social and Solidarity Economy) is based on the principles of cooperativism and solidarity, seeking to provide access to financial services for the population that is excluded from the banking system Savings banks are community associations, which have the same principles of offering their members the opportunity to save and at the same time access loans more quickly, with few requirements. The SSE and the savings banks share the same objective of empowering people and the community to promote inclusive and fair economic participation.

Under the 2030 Agenda, this research contributes to the following sustainable development goals:

In the same way, it contributes to the National Plan, to the current Territorial Planning and Development Plan.

2. Material and methods

The methodology of the research is descriptive of the savings banks, the profitability, number of participants, regulatory compliance and referring to socioeconomic factors, the dimensions of financial inclusion, geographical description, and economic and social variables were analyzed with a mixed approach with qualitative and quantitative data through opinions in working groups, surveys and

Table 1
Objectives of the 2030 Agenda

Objective	Goals	Indicators
Objective 11. Making cities and human settlements inclusive, safe, resilient, and sustainable.	11.1 By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and improve slums.	11.1.1 Proportion of the urban population living in slums, informal settlements, or inadequate housing.
Objective 16. Promote peaceful and inclusive societies for sustainable development, facilitate access to justice for all, and build effective and inclusive, and accountable institutions at all levels.	16.6 Build effective, transparent, and accountable institutions at all levels. 16.10 Ensure public access to information and protect fundamental freedoms, by national laws and agreements.	16.6.2 Proportion of the population that is satisfied with their latest experience of the utilities. 16.10.2 Number of countries adopting and implementing constitutional guarantees, legal or regulatory requirements for public access to information.

interviews, the data were processed through the SPSS, Google Maps and Power Bi platforms, to identify the factors that affect these savings banks in the urban sector of the Salinas canton, specifically in the Carlos Espinoza Larrea and Santa Rosa parishes. geographical economic and social variables with a mixed approach with qualitative and quantitative data through opinions in worktables, surveys, and interviews, the data were processed through the SPSS platforms, Google Maps, and Power BI, to identify the factors that affect these savings banks in the urban sector of the Salinas canton, specifically in the parishes of Carlos Espinoza Larrea and Santa Rosa.

The surveys were applied to the members of the savings banks, allowing them to identify areas in which they can improve the management and operation of the savings banks, while in the interviews addressed to the presidents of the savings banks, they provided relevant information on the management and evolution of savings, profitability and access to these savings banks; in the working tables were carried out with representatives of the Ministry of Economic and Social Inclusion, the coordinator of Savinco, the representative of the presidents of the savings banks and as part of the academic career of Business Administration of the Peninsula State University of Santa Elena where programs of each of these institutions were known and coded data regarding the savings banks were provided, all this information is valuable for investors, regulators and the general public.

At the national level, Savinco has 1,166 savings banks of which there are 26,753 members, since, having contributed to economic development, it encourages savers to promote financial education to analyze how they can allocate their saved money either in education, health, entrepreneurship, or also to grow their businesses for the benefit of each member promoting financial inclusion for entrepreneurs to improve their quality of life.

According to the author Financial inclusion, López Sánchez [15] is essential for reducing poverty and promoting inclusive economic growth. This study explores factors influencing credit default risk among microcredit borrowers in Ecuadorian savings groups, finding that seniority, savings, group size, and gender affect repayment risk, with males being more prone to defaults than females. The findings, though specific to the sample, offer practical insights for reducing default rates and provide a basis for further academic research using data from the Savinco mobile app.

In the local context in Santa Elena, there are a total of 914 savings banks; This highlights the importance of the community's interest in ensuring its economic stability to meet its needs. In Salinas, a total of 139 savings groups are registered across different localities within the Salinas canton. This is broken down as follows: Anconcito has a total of 52 savings groups, which are fundamental for the community to deposit their savings and access essential financial services. Muey is another locality in the Salinas canton where 47 savings groups play an important role in promoting and investing savings.

Each savings group consists of a minimum of 15 and a maximum of 40 members, of which 80% are women entrepreneurs. These women have proven to be a fundamental pillar for the economic

development of the local community. The high percentage of female participation indicates that they are breaking barriers and taking on significant roles in financial decision-making, which demonstrates a positive impact on their households and the community.

In this regard, Salinas is the field of study in which 29 savings groups were identified; these groups are pillars for the economic development of the canton, providing opportunities to manage finances and promote savings. These savings groups play an important role in the economic life of the local community, as they allow citizens to access basic financial services, receive loans with ease and flexibility, and foster a culture of savings, thereby contributing to sustainable economic development for a better quality of life.

The instruments were validated by specialists, and a pilot test was conducted to assess the reliability of the instruments using the SPSS program. The Cronbach’s alpha coefficient was calculated and resulted in 0.990 from 20 items.

Table 2
Cronbach’s Alpha

Cronbach’s Alpha	N of elements
,990	20

As tools, Google Forms was used for the application of the instruments, Google Maps for georeferencing, and Power BI to create customized dashboards and generate maps with their corresponding coordinates.

3. Results

From the databases provided by Savinco [16], the following information was obtained for analysis.

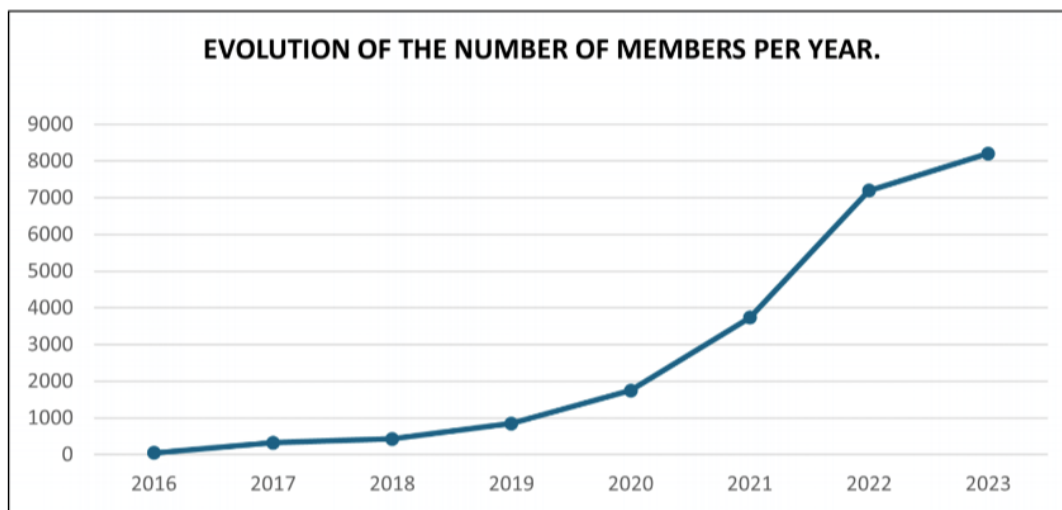


Figure 1: Evolution of the Number of Members per Year

It is evident that since the year 2016, when Savinco started in the province of Santa Elena, there has been a significant increase in savings groups, as well as an increase in social capital, up to the year 2023.

Regarding money management, 68% manage in cash while 32% have their values banked.

As of 2023, loan amounts have increased more for females than for males.

Based on the data obtained from the surveys, a diagnosis was made identifying the following strengths and weaknesses.

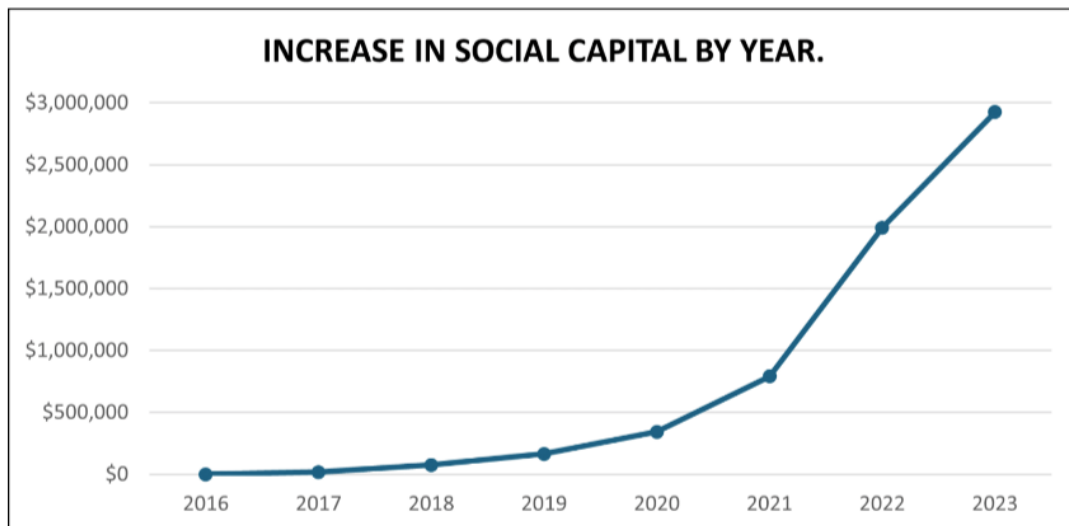


Figure 2: Increase in Social Capital by Year

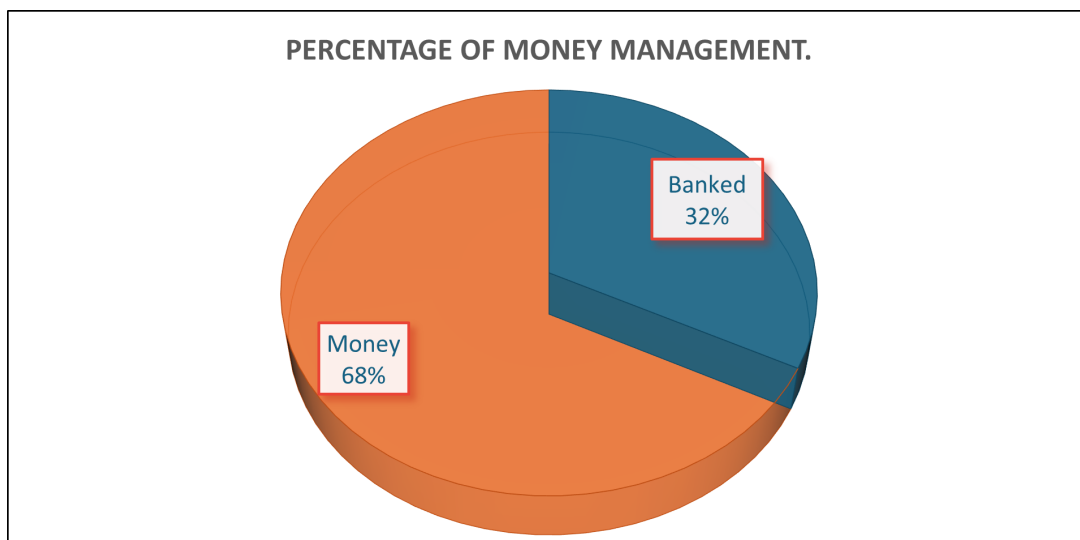


Figure 3: Percentage of Money Management.

A mapping of the savings boxes in the two parishes of Salinas was carried out, which were coded to ensure their security considering the increasing citizen insecurity.

Georeferencing was carried out for the 19 savings boxes in the parishes of Carlos Espinoza Larrea and Santa Rosa in the Salinas canton. This provides a detailed and contextualized view of the geographical distribution, aiming to involve financial, academic, and social institutions in strategic decision-making for the local financial sector. This allows for a more precise understanding of accessibility to savings boxes for the economically active population.

4. Discussion

In the scientific article "Georeferencing in Service of Health: An Experience from Community Assets" by [17], it is stated that digital and physical mapping are essential to strengthen evaluation processes, helping to understand and effectively manage the various factors affecting financial institutions in the Carlos Espinoza Larrea and Santa Rosa parishes, thereby improving their capacity for strategic

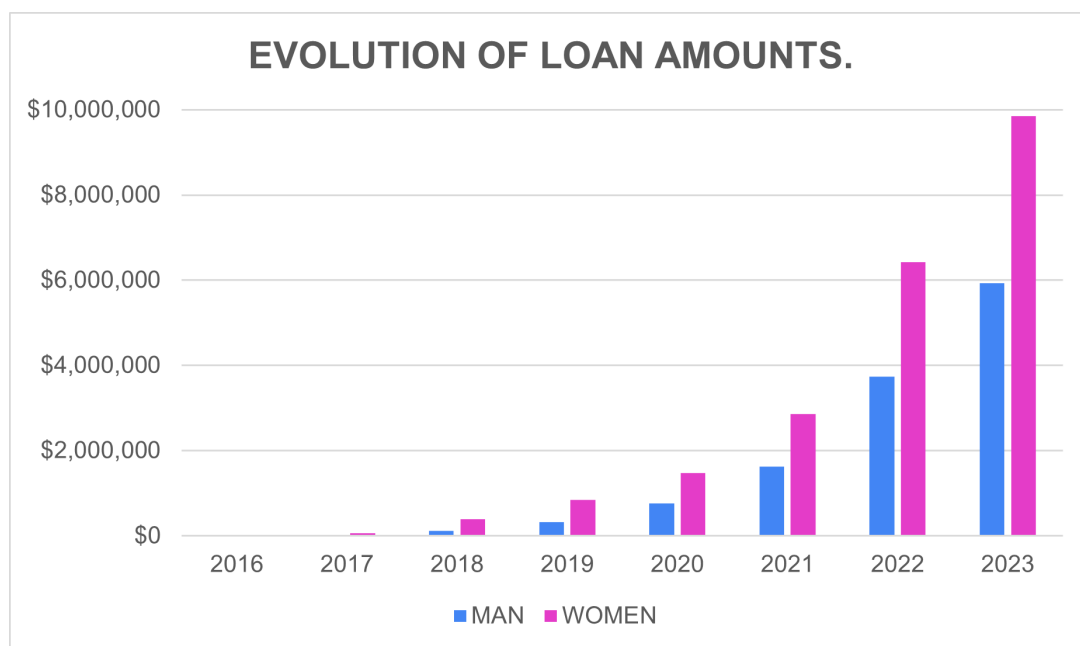


Figure 4: Evolution of Loan Amounts.

Table 3
Strengths and Weaknesses in Savings Boxes

Detail	Strengths	Weaknesses
Earnings	-	94.1% of savers allocate less than 5% of their profits to the savings box.
Profits	84.6% use their profits for education, home improvements, and other expenses.	-
Economic Development	91.1% acknowledge that savings boxes have contributed to their economic development.	-
Satisfaction with Savings Boxes	85.3% are satisfied with the services they provide.	-
Compliance with Regulations and Laws	-	61.7% are unaware of compliance with financial regulations and laws.
Participation in Training Programs	79.4% of members participate in training sessions.	-
Participation to Improve Economic and Social Situation	85.9% believe that initiatives should be promoted to improve the economic situation.	-
Increase in Savings	78.8% believe that a portion of their profits should be allocated to their savings.	-
Government Difficulties	-	74.1% recognize that government entities hinder social and economic development.
Accessible Requirements	87.1% believe that they are accessible.	-
Perspectives	91.8% highlight that they contribute to financial inclusion.	-

decision-making and risk mitigation.

The author Aguirre et al. [18], reveals georeferencing as a strategic initiative that goes beyond the physical location of establishments; it optimizes accessibility, allowing services to be strategically

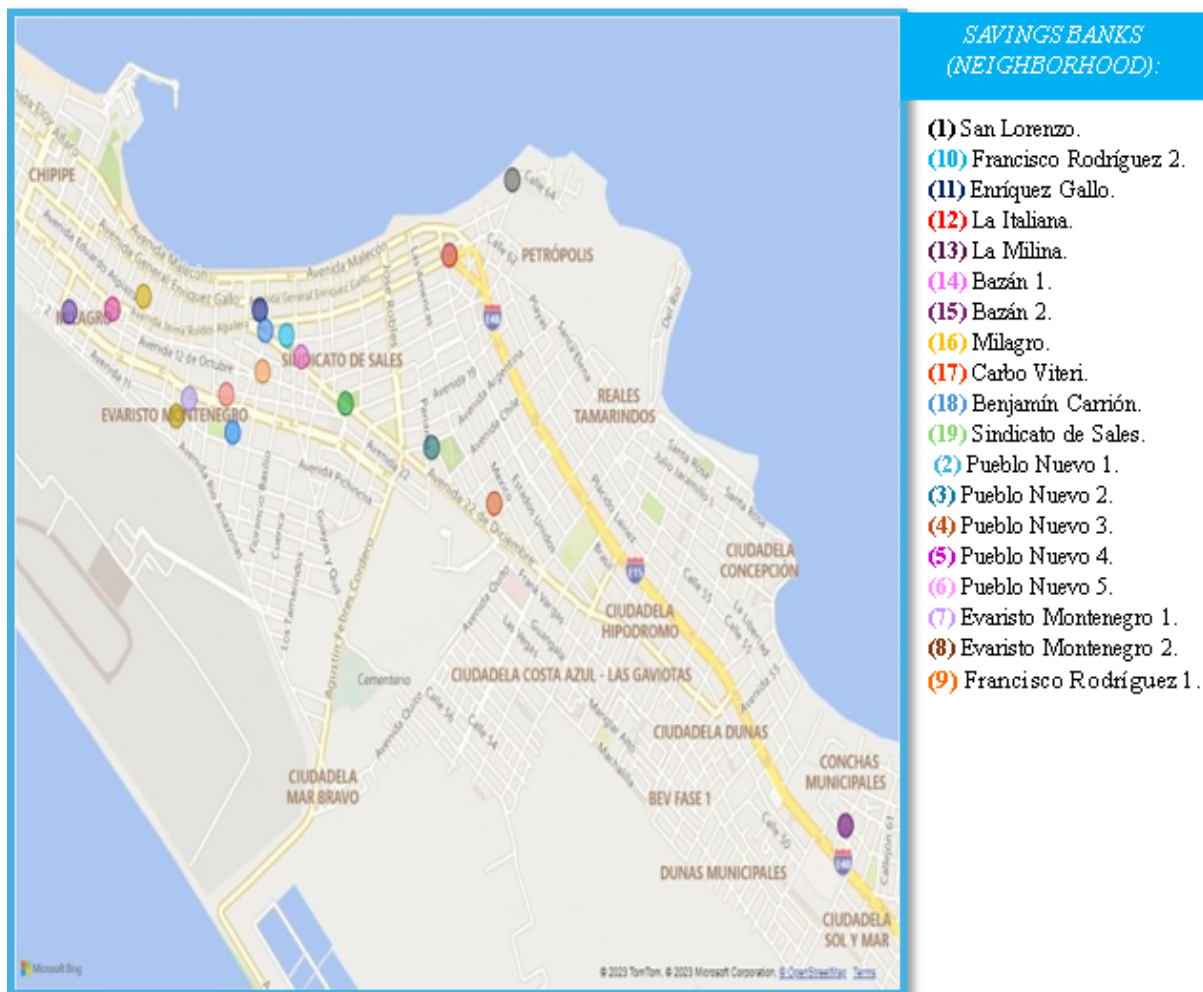


Figure 5: Evolution of Loan Amounts

adapted to the specific needs of each parish. This contributes to greater effectiveness in attracting new savers and strengthening relationships with the existing community.

In this context, georeferencing the savings boxes becomes a valuable tool for strengthening the culture of saving and investment, managing local demand, optimizing the supply of financial services, providing accessibility, and promoting financial stability. The researchers [19], found that these programs were effective in improving financial knowledge and promoting savings habits among rural residents. However, the effectiveness of these programs was contingent upon factors such as the quality of the training, the availability of suitable financial products, and the level of support provided to participants.

The author Lopez et al. [20], points out that georeferencing population data contributes to the planning and evaluation of policies by incorporating economic and geographical approaches for more effective planning. A study by Minz et al. [21] found significant geographic disparities in financial literacy levels and saving behaviors between urban and rural populations. Individuals residing in urban areas exhibited higher levels of financial knowledge and were more likely to engage in saving practices compared to their rural counterparts. This disparity can be attributed to factors such as greater access to financial services, educational opportunities, and economic stability in urban areas.

This work reveals that, in terms of regulatory compliance, about half of the respondents express doubts or disagreement regarding whether the savings box complies with financial regulations and laws. On the other hand, satisfaction with the services of the savings box is high, at 85.3%, and participation in financial training programs is notable, with 79.4% in the past year. Hishamudin [22] argues that digital platforms have become crucial tools in financial education, enhancing the dissemination of knowledge

and helping individuals make well-informed financial decisions. This approach empowers users by providing them with accessible and relevant financial information.

Interviews with the presidents of the savings boxes reveal that most of them run their own businesses, demonstrating an interest in strengthening their economic activities. The diversity of savings periods, ranging from 6 months to 5 years, highlights the flexibility of the boxes to adapt to the needs of their members. Factors influencing the decision to save include the ease of obtaining credit and the opportunity to invest in beneficial projects. The importance of financial education is emphasized, along with the existence of voluntary insurance and strategies to ensure regulatory compliance. Despite economic challenges, the presidents expressed satisfaction with the growth and profitability of the savings boxes, thereby meeting initial expectations and promoting the well-being of their members through unity and camaraderie.

Following the principle of solidarity established in Article 85 of the Constitution, savings boxes have played a fundamental role by providing services that not only focus on individual well-being but also contribute to the good living of society. These institutions, by focusing on the formulation, execution, evaluation, and control of policies and services that guarantee constitutionally recognized rights, have worked tirelessly to provide the community with a service of financial security. Through the promotion of saving and responsible investment, savings boxes not only ensure the economic stability of savers but also foster trust in the financial system, as surveys indicate that 91.8% of respondents agree that savings boxes contribute to financial inclusion.

Article 283 of the Constitution of the Republic of Ecuador establishes a framework for the economic system, defining it as social and solidary, to guarantee good living through a balanced relationship between society, the State, and the market. In this context, the connection between the actions of the presidents of the savings boxes and constitutional principles is manifested by emphasizing punctuality in payments as a fundamental commitment. By facilitating easy and quick access, these leaders not only promote member participation in the economic system but also contribute to improving conditions for good living.

Furthermore, the orientation of savings boxes towards offering credit-centered services aligns with the diversity of forms of economic organization. The ease and accessibility of obtaining loans, as indicated by the interviewed presidents, reflects an active commitment to financial inclusion and meeting the community's needs. In this way, the actions of the savings boxes not only align with constitutional principles but also contribute to strengthening the popular and solidarity economy as a valid form of economic organization in the country.

According to Avdeenko [23], Cultural norms and values play a significant role in shaping individuals' attitudes toward money and saving. For instance, in some cultures, saving is seen as a virtue, while in others, spending may be more emphasized. Understanding these cultural nuances is essential for designing effective financial education programs that resonate with diverse populations.

Article 90 of the Regulations to the Organic Law of Popular and Solidarity Economy establishes the characteristics and scope of associative or solidarity entities, savings boxes, and communal banks. In this framework, it is highlighted that these organizations belong to the Popular and Solidarity Financial Sector and must operate exclusively in the areas where they are established, financing themselves with their resources or those from programs linked to the development of their members. There is a direct connection with the provisions of the regulations. The presidents of the savings boxes emphasize the importance of members adhering to the regulations and norms established by each savings box, highlighting the responsibility and commitment in payments to avoid penalties on savings. This requirement aligns with the need to ensure the financial stability and sustainability of these entities, as suggested by the regulations.

Additionally, the mention of voluntary insurance as a guarantee for members aligns with the principle of financial autonomy, as savings boxes seek internal mechanisms to support operations and protect members' savings. The proposal of low-interest loans and participation in profits also reflects the solidarity and participatory nature of the sector, promoted by legislation.

5. Conclusions

Nineteen savings boxes were georeferenced in the parishes of Carlos Espinoza Larrea and Santa Rosa in the Salinas canton. This georeferencing process was meticulously conducted using specific identification codes for security reasons, ensuring the privacy and protection of sensitive data. The georeferencing allowed for the detailed tracking of the evolution in the number of savings boxes, the annual growth in membership, capital accumulation, and loan distribution, as well as the operational mechanisms and resource management of these financial entities. The collected data became fundamental to strategic planning, enabling more effective oversight and management of the savings boxes' activities, and helping stakeholders to make informed decisions that support financial growth and security within the community.

The adoption of advanced technological tools, such as Google Maps and Power BI, played a crucial role in ensuring the integrity, confidentiality, and efficient organization of the collected data. These platforms not only facilitated the visualization and mapping of the savings boxes' geographical distribution but also contributed to the overall trust in the management of sensitive information. By offering clear, real-time insights into the financial landscape of the region, these tools established a precedent for best practices in future georeferencing initiatives, allowing for greater transparency and accuracy in data reporting. The combination of these technologies also enhanced the capacity for data-driven decision-making, making it easier to identify trends, risks, and opportunities within the local financial ecosystem.

In this analysis, key variables were identified and examined, allowing for a comprehensive understanding of the dynamics that drive the operations of the savings boxes. The study highlighted the pivotal role of savings as a foundational factor in these systems, as well as the critical importance of financial inclusion and regulation in fostering long-term sustainability. Patterns in savings behavior, such as the amounts saved and the perceptions of savers regarding the benefits and challenges of these financial tools, were identified, providing crucial insights for policymakers and financial institutions alike.

These findings are essential for informed decision-making at both the local and regional levels. By offering a clear view of the population's economic participation, the analysis lays the groundwork for the development of strategies aimed at promoting sustainable economic growth and financial inclusion within the Salinas canton. It further underscores the need for continued investment in technology and regulatory frameworks that support the effective operation of savings boxes, ensuring they can continue to serve as vital pillars of community development and economic resilience.

6. Recomendations

Regulatory bodies should establish a robust system for continuous monitoring and updating of critical information, enabling more informed decision-making and facilitating the inclusion of broader, more impactful benefits. By maintaining up-to-date data on the evolving economic and social landscape, regulators can ensure that savings groups and financial institutions are better equipped to adapt to emerging challenges and opportunities. This proactive approach not only benefits the regulatory system but also provides recipients of financial services with the necessary tools and resources to foster entrepreneurship and innovation. As a result, individuals are empowered to enhance their economic independence, leading to improvements in the quality of life for both their collaborators and the wider community in a relatively short time.

Furthermore, exploring collaboration opportunities with academic institutions and private sector companies could significantly enhance the resources available for strengthening financial education. Such partnerships would provide valuable insights, tools, and expertise, allowing beneficiaries to develop a deeper understanding of financial systems and opportunities. These alliances should also help raise awareness about current regulations and foster a more dynamic learning environment, ensuring that individuals and organizations can better adapt to and comply with financial regulations. The shared

knowledge generated from these collaborations would support the creation of innovative solutions to regulatory challenges, contributing to a more efficient and inclusive financial sector.

Additionally, the adoption of advanced, customized technological tools should be seriously considered to perform comprehensive analyses of the economic, social, and legal factors that influence financial inclusion. These technological solutions could enable more precise assessments of the issues facing local savings groups and other financial entities, providing detailed insights into the unique needs and circumstances of the community. By leveraging cutting-edge data analytics and artificial intelligence, regulators and policymakers can design more effective public policies tailored to the specific challenges of the parishes of Carlos Espinoza Larrea and Santa Rosa in the Salinas canton. This proposal aims to strengthen public policy initiatives, ensuring that they have a positive, sustainable impact on the population, fostering greater economic resilience, and driving long-term development in these regions.

References

- [1] J. González, La importancia de la georreferenciación y la geolocalización para las empresas, *Indice: Revista de Estadística y Sociedad* (2020) 25–27.
- [2] M. Birkin, G. Clarke, Gis, geodemographics, and spatial modeling in the uk financial service industry, *Journal of housing research* 9 (1998) 87–111.
- [3] M. Marcelino-Aranda, D. Muñoz Marcelino, G. S. Fregoso Jasso, Caja de ahorro informal, una opción de autoapoyo económico en sectores de bajos recursos, *Nova scientia* 12 (2020) 0–0.
- [4] G. E. P. Altamirano, M. G. B. Valladares, T. N. B. Gavilanes, A. F. H. Sarango, A. d. I. Á. C. Pérez, et al., Modelo de riesgo operativo y prevención de lavado de activos para instituciones financieras, *Prometeo Conocimiento Científico* 3 (2023) e25–e25.
- [5] J. D. Pereira Ordoñez, Análisis del funcionamiento económico financiero y social de las cajas de ahorro y crédito comunitarias del gobierno autónomo descentralizado de la provincia de pichincha en la parroquia san antonio de pichincha del norte de quito, en el marco de la economía popular y solidaria., 2018.
- [6] A. L. González, J. P. Melo, Cooperativas de ahorro y crédito en ecuador: el desafío de ser cooperativas, *REVESCO: revista de estudios cooperativos* (2021) 76–92.
- [7] S. Zamore, L. A. Beisland, R. Mersland, Geographic diversification and credit risk in microfinance, *Journal of Banking & Finance* 109 (2019) 105665.
- [8] A. F. Zambrano, L. F. Giraldo, M. T. Perdomo, I. D. Hernández, J. M. Godoy, Rotating savings and credit associations: A scoping review, *World Development Sustainability* 3 (2023) 100081.
- [9] M.-J. Gallego-Losada, Digital financial inclusion. visualizing the academic literature, 2023.
- [10] G. S. P. Delgado, E. V. R. Farroñan, A. W. C. Falcon, La morosidad ante un confinamiento del covid-19 en la caja rural de ahorro y crédito raíz, Perú, *Investigación Valdizana* 14 (2020) 206–212.
- [11] M. Ghosh, Financial inclusion studies bibliometric analysis: Projecting a sustainable future, *Sustainable Futures* (2024) 100160.
- [12] H. Jácome Estrella, M. J. Ruiz Rivera, El sector económico popular y solidario en ecuador, diagnóstico y modelo de supervisión, 2013.
- [13] F. A. Arellano, N. Camara, D. Mejia, Vulnerabilidad financiera y comportamiento del consumidor: el papel de la salud financiera, Technical Report, BBVA Bank, Economic Research Department, 2019.
- [14] COSEDE, Ley orgánica de la economía popular y solidaria, 2018.
- [15] P. Lopez-Sanchez, E. Urquia-Grande, C. Del Campo, A. L. Cancer, Delving into the determinants of default risk in savings groups: empirical evidence from ecuador, *The European Journal of Development Research* 34 (2022) 2625.
- [16] SAVINCO, Obtenido de savinco, 2023. <https://www.savinco.org/>.
- [17] D. P. Betancurth Loaiza, C. Vélez Álvarez, N. Sánchez Palacio, La georreferenciación al servicio de la salud, una experiencia desde los activos comunitarios., *Ánfora* 30 (2023).

- [18] D. A. Muñoz, Metodología para la georreferenciación de elementos emisores y su implementación a través de un sig, *Tiempo y espacio* (2008) 24–46.
- [19] S. Maity, Rawls' difference principle, self-help group, financial inclusion and social cohesion—lore or actuality? experience of central assam, *Humanities and Social Sciences Communications* 11 (2024) 1–13.
- [20] M. E. L. Vizcaíno, C. L. I. Patiño, M. E. C. Ocampo, Propuesta metodológica para la georreferenciación de la población y primeras aplicaciones en galicia, *Revista de estudios regionales* (2020) 17–43.
- [21] N. K. Minz, P. Bhardwaj, D. Chaudhary, Financial inclusion: Unlocking economic growth and social equity, in: *Emerging Perspectives on Financial Well-Being*, IGI Global, 2024, pp. 175–191.
- [22] M. Z. Hishamudin, N. S. Kamarudin, N. A. Hadi, A. Ahmad, Intention to use digital platforms for islamic financial education in malaysia: Structural equation model, *Journal of Advanced Research in Applied Sciences and Engineering Technology* 49 (2025) 298–311.
- [23] A. Avdeenko, A. Bohne, M. Frölich, Linking savings behavior, confidence and individual feedback: A field experiment in ethiopia, *Journal of Economic Behavior & Organization* 167 (2019) 122–151.