



The Mediating Role of Digitalization Efforts in Achieving Sustainable Development Goals Through Financial Inclusion of Rural Banks in CALABARZON, Philippines

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Abstract

Financial inclusion is a vital driver of inclusive economic growth and poverty alleviation, especially in rural and underserved communities. In the Philippines, rural banks play a crucial role in providing financial services to these areas. However, many face challenges in digitalizing operations and expanding outreach, limiting their impact on achieving the Sustainable Development Goals (SDGs). This study examines how rural banks' financial inclusion efforts contribute to SDG achievement and explores digitalization efforts as a mediating factor in this relationship. Employing a descriptive research design, primary data were collected through a validated questionnaire from 60 rural bank respondents in CALABARZON. Quantitative analysis measured constructs of financial inclusion, digitalization efforts, and SDG achievement. Mediation analysis via Partial Least Squares Structural Equation Modeling (PLS-SEM) tested the mediating role of digitalization on the influence of financial inclusion on the achievement of SDGs. Results revealed that digitalization efforts significantly enhance rural banks' contribution to financial inclusion and SDG achievement by improving service delivery and access to deposit and loan products. However, infrastructural and capacity constraints remain barriers to digital adoption. The study highlights the critical role of rural banks' digital innovation in advancing inclusive growth, poverty reduction, and sustainable economic development in the Philippines. The findings emphasize the need for supportive policies and regulations to boost rural banks' digital capabilities. Promoting digital transformation in rural banks can accelerate financial inclusion, supporting the country's developmental ambitions as outlined in the Philippine Development Plan and SDG framework. Key recommendations include capacity building, infrastructure investment, and effective governance to foster sustainable rural financial services innovation.

Keywords: digitalization efforts, financial inclusion, Sustainable Development Goals (SDGs), rural banks, CALABARZON, Philippines



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INTRODUCTION

The United Nations (UN) Sustainable Development Goals (SDGs) offer a comprehensive structure for tackling the most pressing global issues. These SDGs are formulated to end poverty, safeguard the environment, and ensure inclusivity. These goals deal with a wide range of subjects, one of which is fostering economic progress and alleviating social problems for the greater good. Substantial investments are needed to achieve inclusive economic growth; more so that sustainable development aims to prevent resource depletion and provide for long-term resources for future generations (Danladi et al., 2023). Additionally, providing equal

opportunities and resources for people who belong to the marginalized sector poses a challenge to inclusive economic growth.

The Philippines, one of Southeast Asia's fastest-expanding economies, has succeeded in substantially reducing poverty and raising the standard of living for its people (World Bank, 2023; Philippine Statistics Authority, 2022). However, the pandemic caused a significant setback to the nation's development trajectory by triggering an economic downturn, increasing unemployment and poverty, and exacerbating already severe inequality. Despite record-high inflation rates in the first half of 2023, the nation is on a solid recovery path owing to its strong economic foundations. Providing sustainable

economic development, decent work and innovation is one of the strategic priorities of the Philippines' long-term development vision, as outlined in AmBisyon Natin 2040 and the Philippine Development Plan (PDP) 2023-2028 with the objective that by 2028, all individuals will benefit from a more integrated, innovative, inclusive, and sustainable economy that provides opportunities for decent work and livelihood (UN Philippines Annual Report, 2023).

While often overlooked in the global financial landscape, rural banks (RBs) play a crucial role in fostering economic development and achieving several SDGs (Das, 2021; UN Philippines Annual Report, 2023). One of these goals is to foster decent work and economic growth, while the other goal is poverty alleviation, as RBs can help individuals and communities escape poverty, as these financial institutions serve as links for underserved and unserved communities, providing essential financial services and contributing to financial inclusion (FIN). FIN, defined as ensuring access to a wide range of financial services at affordable costs, is a cornerstone of sustainable development. (World Bank Group, 2022) Research from ASEAN countries shows that FIN literature has a significant effect on promoting economic growth (Nizam et al., 2020).

RBs were chosen as the focal institutions of this study because of their crucial role in providing financial services to underserved and marginalized rural populations. Unlike larger commercial banks, RBs have a more direct relationship with local communities and are instrumental in promoting FIN, poverty alleviation, and inclusive economic growth, which align closely with the SDGs.

Digital technologies have the potential to greatly enhance financial services and reach a larger client base, but they are not generally accepted or easily accessible, particularly in rural areas, according to a study by Ediagbonya and Tioluwai (2023). Furthermore, it is more difficult to guarantee that all facets of the public have equitable access to banking services

because these disparities worsen already-existing FIN disparities. Because traditional banking systems frequently fall short in developing and emerging economies, fintech innovations have thus increasingly positioned themselves as essential tools for advancing FIN.

Examining the dynamic interactions between digitalization, FIN, and inclusive economic growth is crucial in the context of rural banking in the Philippines. In order to promote sustainable development and increase financial access, digital transformation is essential. The beneficial effects of digital financial services on socioeconomic advancement are highlighted by Parvin and Panakaje (2022). However, obstacles like low digital literacy and undeveloped infrastructure continue to make it difficult to fully benefit from digital FIN in rural areas (Ozili, 2024). To guarantee that underserved communities are not left behind in the transition to digital finance, these must be addressed.

The integration of digitalization and FIN into larger economic strategies is closely linked to the pursuit of the SDGs. According to Dikshit and Pandey (2021), closing the gap in technology and finances is essential to inclusive growth. This study centers on exploring how digitalization and FIN intersect within the specific institutional and socio-economic context of Philippine RBs. Even though the existing body of literature highlights the positive impacts of FIN and digital financial services on economic growth, this study bridges the gap on how these variables interact and how they affect the achievement of sustainable development goals (ASDG), particularly in rural areas. This study is significant as it promotes sustainable development, potentially generating optimistic financial outcomes and inclusive economic growth for multi-stakeholders.

Despite growing literature on FIN and digitalization, few studies have empirically examined the mediating role of digitalization in the relationship between FIN and the ASDG, specifically within the Philippine rural banking

sector. This study aims to fill this gap by investigating how digitalization efforts (DEF) mediate the influence of FIN on SDG 1 and SDG 8 in RBs operating in CALABARZON.

At 0.05 level of significance, the following hypotheses were tested:

Ho₁. Financial inclusion does not positively influence the achievement of SDGs.

Ho₂. Financial inclusion does not positively influence the digitalization efforts.

Ho₃. Digitalization efforts do not positively influence the achievement of SDGs.

Ho₄. Digitalization efforts do not mediate the influence of financial inclusion on the achievement of SDGs.

To explore the intricate connections between FIN, DEF, and the ASDG, this study uses a conceptual framework that combines both higher-order and lower-order constructs. By employing this multi-layered approach, the study seeks to provide a more comprehensive and nuanced understanding of these dynamics by capturing the various ways that financial and digital strategies interact to promote sustainable development. FIN serves as the independent variable within the framework and is operationalized through two key lower-order constructs: deposit penetration (DPN) and loan penetration (LPN). DEF functions as the mediating higher-order construct in the model, reflecting the enabling conditions that support the integration of digital technologies in rural banking operations. This construct is represented by three interrelated lower-order dimensions: technological readiness (TER), regulatory support (RES), and partnerships and collaboration (PAC).

Finally, the ASDGs is positioned as the dependent higher-order construct. Within this study, specific attention is given to SDG 1 (Poverty Alleviation (POA)) and SDG 8 (Decent Work and Economic Growth (DWE)), which are treated as lower-order constructs or

measurable dimensions of the broader ASDG. These goals have been selected for their direct relevance to FIN and economic participation, particularly in rural settings. The concept is grounded on the theories of innovation diffusion, FIN, and the UN SDG framework. Moreso, the interconnectedness of these variables is anchored on the Network Theory.

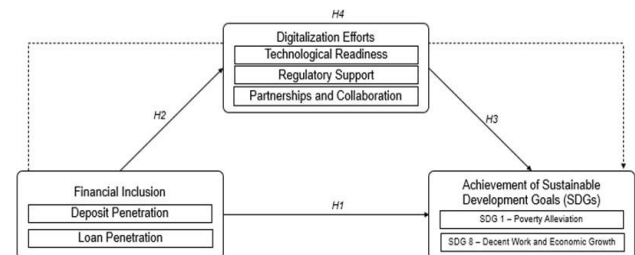


Figure 1
Research Paradigm

LITERATURE REVIEW

Below is a collection of literatures, existing or prior studies and theories associated with the realm of the study.

Rural Banks. RBs are financial institutions duly organized and established under and by virtue of Republic Act No. 7353 (1992) or the Rural Banks Act of 1992. The Philippine government acknowledges the necessity to uphold comprehensive rural development and their economies by providing basic monetary services to the rural populace, achieving fair dissemination of opportunities and income, maintaining an increase in the supply of goods and services created by the people, and growing the productivity as a way to nurturing the nation's quality of life, especially the less privileged. Towards these ends, the State drives and supports the institution of the rural banking industry, intended to form readily available and accessible credit within the rural areas on equitable terms.

Impact of Digitalization in Rural Banks. To stay competitive and achieve long-term sustainability, RBs need to adopt digital technologies. According to Kitsios et al. (2021), digital transformation allows banks to lower operating costs by shrinking their physical

branches while simultaneously expanding their customer base and creating new avenues for service delivery. This change not only improves efficiency but also contributes to RBs' long-term survival. Likewise, Kolodiziev et al. (2021) emphasize how digital transformation plays a strategic role in maintaining banks' competitiveness. Banks can support long-term growth by implementing cutting-edge digital tools that will strengthen their market position and align their operations with changing industry standards.

Financial Inclusion in Rural Banks. A thorough grasp of FIN programs in rural regions necessitates giving careful thought to a number of interconnected elements that affect program efficacy. In their 2020 study of the factors influencing FIN in rural India, Kaur and Kapuria found that access to scheduled commercial banks, household consumption patterns, and educational attainment were important facilitators, especially for households headed by women. Similarly, in order to guarantee that FIN programs successfully reach and benefit low-income populations, Maulana and Nuryakin (2021) emphasized the significance of a strong communication infrastructure, an expanded network of rural financial institutions, and inclusive loan accessibility. According to Danquah et al. (2021), having better access to reasonably priced financial services enables people to better manage risks, accumulate assets, encourage the growth of microenterprises, and increase their ability to generate income, all of which contribute to poverty alleviation. Neves et al. (2020) examined the relationship between income inequality and rural credit availability in Brazil, highlighting the importance of education and rural extension services in enhancing the redistributive effect of credit initiatives.

Previous Applications of SDGs in Research. The evaluation of the long-term effects of FIN initiatives has also benefited greatly from longitudinal studies that use SDG frameworks. In a ten-year study of rural financial innovation in China, Wang et al. (2023) showed that sustained fintech engagement was linked to a

decrease in poverty, an increase in entrepreneurial activity, and advancements in several SDGs. In developing nations, where short-term analyses may overlook subtle but important changes, their study emphasizes the value of long-term empirical research in capturing the long-term impacts of digital finance.

Banking Industry and Its Role in the Achievement of SDGs. The banking industry has a pivotal role in achieving UN SDGs 1 and 8 through initiatives that promote financial literacy, support microfinance, invest in sustainable projects, facilitate SME financing, and enhance employment opportunities. By adopting these strategies, banks not only fulfill their corporate social responsibility but also position themselves as key players in fostering sustainable economic growth and reducing global poverty. Research has shown that digital FIN promotes inclusive economic growth, enhances financial service accessibility, and successfully lowers financial exclusion in rural areas (Li et al., 2022).

METHODS

Design. This research used a descriptive research design to test the relationship between independent, dependent, and mediating variables. The outcomes of this type of research can in no way be utilized as a conclusive answer or to refute a hypothesis, but if the limitations are determined, they can still be a valuable tool in many aspects of scientific research. Furthermore, the study employed a mediation model to examine how DEF act as a mediating variable that influences the effect of FIN on the ASDG by RBs. This mediation framework enabled the researcher to test not only the direct relationships between FIN and SDGs but also how DEF potentially enhance or modify this effect.

Population and Sampling. The respondents of the study were 60 Bangko Sentral ng Pilipinas (BSP)-regulated RBs in CALABARZON, Philippines. The study adopted a modified census approach, transitioning from full

enumeration to a near-complete census, strategically refined to prioritize data quality. This adjustment sought to strike an optimal balance between comprehensive institutional coverage and the integrity of the collected data.

Instrumentation. The study employed a self-constructed survey questionnaire to gather data. Items were carefully reviewed by the research adviser and underwent content validation by banking and financial institution practitioners and experienced researchers, all of whom possess doctorate degrees. These experts assessed the instrument for clarity, relevance, and construct representation, ensuring its appropriateness for the targeted respondents and research objectives. The first part focused on the RBs' profile while the second part consists of constructs of FIN, DEF and ASDG. A 5-point Likert Scale was used for the RBs' assessment of the said variables. For reference on the scale, please see Table 1 below. The reliability of the research instrument was assessed using established statistical measures. Internal consistency was examined through both Cronbach's Alpha (CA) and Composite Reliability (CR), ensuring a robust evaluation of the tool's consistency. CA values exceeded the acceptable threshold of 0.70, indicating that the items within each scale consistently measure the intended constructs. Complementing this, CR provided a more precise reliability estimate, especially suitable for structural equation modeling, as recommended by Henseler et al. (2017). Collectively, these results confirm that the instrument demonstrates strong internal consistency and reliably captures the latent constructs under investigation.

Table 1
Likert Scale used in the survey instrument

Rating	Mean Range	Verbal Interpretation
5	4.21-5.00	Strongly Agree
4	3.41-4.20	Agree
3	2.61-3.40	Moderately Agree
2	1.81-2.60	Disagree
1	1.00-1.80	Strongly Disagree

Data Gathering. The primary data was collected through survey questionnaires that were distributed to BSP-registered CALABARZON-based RBs. Physical documents were sent to their respective offices through courier, while the researcher also facilitated the sending of electronic mails requesting the RB's participation in this research, where a Google form and QR code directing to the survey were attached for convenience. The researcher sought the endorsement of the RBAP and her colleagues in Land Bank of the Philippines Southern Luzon Lending Group Provincial Lending Centers that handle accounts of RBs with approved credit lines. Both of these endorsements facilitated access to respondents and increased the response rate. The study targeted the Presidents or Compliance Officers of each RB with at least one year of tenure. These positions have direct supervisory responsibilities and comprehensive access to the bank's operational, financial, and regulatory information. Since their answers are based on operations and institutional practices rather than subjective opinions, their institutional authority greatly lowers the possibility of subjective bias. Ethical measures were observed to protect the sanctity of data gathered from the respondents.

Data Analysis. In this study, PLS-SEM using WarpPLS 8.0 software was employed to investigate the interrelationships among FIN, the DEF, and the ASDG by RBs in the CALABARZON region of the Philippines. Descriptive statistical tools such as Percentage and Frequency and Weighted Mean were also used.

RESULTS

Table 2
Hypothesis Testing

	β	Mean	Standard Deviation	T statistics	P values	Decision
Direct effects						
FIN → ASDG	0.450	0.442	0.116	3.865	0.000	Reject H ₀
FIN → DEF	0.784	0.792	0.047	16.700	0.000	Reject H ₀
DEF → ASDG	0.485	0.497	0.111	4.377	0.000	Reject H ₀
Indirect effects						
FIN → DEF → ASDG	0.381	0.394	0.095	3.995	0.000	Reject H ₀

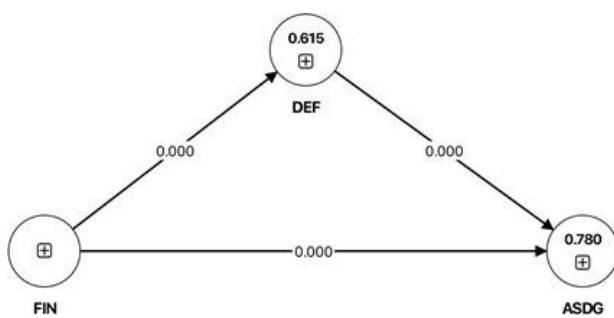


Figure 2
Structural Model

Direct Effects

Influence of Financial Inclusion on the Achievement of Sustainable Development Goals. The results showed that FIN exerts a significant direct effect on the ASDG with a $\beta = 0.450$, $T = 3.865$, and $p = 0.000$. This statistically significant result allows for the rejection of the null hypothesis (H_{01}).

These results align with established literature emphasizing the role of financial services in reducing inequalities and enhancing socio-economic opportunities (Demirguç-Kunt et al., 2019; Sarma & Pais, 2019; Ozili, 2020). FIN initiatives, particularly when aimed at low-income, marginalized, and rural populations, empower individuals by facilitating access to productive resources, savings mechanisms, credit, and microinsurance. As RBs expand these services, they support income generation, resilience-building, and community development (Estrella et al., 2017; Santos & Lagrada, 2019). Cruz and Reyes (2022) further demonstrate that such inclusive practices have helped smallholder farmers invest in technologies that improve productivity, thereby translating inclusive finance into tangible SDG gains.

However, while this path is significant, its effect size is relatively lower than other relationships in the model, particularly compared to the FIN $\rightarrow$ DEF path. This indicates that although FIN has an important direct impact on SDGs, its influence becomes more pronounced and optimized when supported by DEF, as discussed in subsequent sections.

Influence of Financial Inclusion on Digitalization Efforts. The strongest direct path in the structural model is from FIN to DEF, with a $\beta = 0.784$, $T = 16.700$, and $p = 0.000$. This very high coefficient reflects the powerful role of FIN as a primary driver of digital transformation in RBs. Thus, the null hypothesis is rejected (H_{02}).

As institutions expand their FIN mandates, they are compelled to adopt digital solutions that improve service delivery, efficiency, and accessibility, particularly to underserved, remote, or socio-economically disadvantaged areas. This relationship is further supported by an R^2 value of 0.615 for DEF, indicating that 61.5% of the variance in DEF is explained by FIN. This contradicts any prior assumptions that DEF is underdeveloped or inconsistent across RBs. On the contrary, the empirical results show that DEF is actively shaped and strengthened by inclusive finance strategies.

The findings are consistent with literature asserting that inclusive finance demands digital innovation (Hasan et al., 2024; Kishor et al., 2024). Galang and Dela Cruz (2018) emphasized that mobile banking, e-wallets, and agent banking models serve as critical tools for overcoming rural constraints such as geographical dispersion and low infrastructure density. Navarro and Lim (2020) also underlined that investing in digital infrastructure is not just a functional necessity but also a strategic imperative as RBs reach underserved populations.

Crucially, the shift to digitalization is a proactive institutional development strategy rather than just a reaction to outside forces. According to Ramirez and Santos (2022), RBs are better equipped to offer specialized services when digital tools are tailored to local socioeconomic circumstances, such as restricted internet access or low digital literacy. This strategy improves long-term viability and FIN. When taken as a whole, these results highlight how financial FIN can spur digital innovation in rural banking environments.

Influence of Digitalization Efforts towards the Achievement of Sustainable Development Goals. The path from DEF to ASDG is also strong and statistically significant, with $\beta = 0.485$, $T = 4.377$, and $p = 0.000$, emphasizing the critical role of digital transformation in achieving SDG-related outcomes. Consequently, the null hypothesis is rejected (H_{03}).

The efficiency, transparency, and reach of financial services are improved as RBs embrace digital technologies, which range from online payments and automated savings to digital loan disbursement and mobile banking platforms. In rural areas, where traditional banking infrastructure is frequently scarce or nonexistent, these advancements are particularly noteworthy (Úbeda et al., 2024; Shen et al., 2018).

By providing easily accessible resources for money management, emergency credit, and long-term financial resilience, digital financial services enable RBs to reach previously unreached populations. According to Martinez and Reyes (2019), RBs have been able to expand their reach and fortify their role in rural development by overcoming logistical and geographic obstacles with the aid of mobile banking.

Additionally, the delivery of customized financial products that take into account the erratic income patterns of smallholder farmers and informal workers is made possible by digital transformation. Such innovations not only simplify banking operations but also support more general objectives of inclusive economic growth, as noted by Kitsios et al. (2021). These tools enable clients to interact with financial services more successfully when combined with capacity-building programs and digital literacy initiatives (Villanueva & Cruz, 2021).

Importantly, digitalization also makes it possible to make better decisions by using data analytics, which helps banks monitor results, evaluate risk, and adjust services to meet customer needs. This data-driven strategy

improves operational sustainability and advances important SDGs, especially those that focus on lowering inequality, fostering economic empowerment, and developing inclusive infrastructure.

Indirect Effects

The Mediation Effect of Digitalization Efforts towards Financial Inclusion and the Achievement of Sustainable Development Goals. The results indicated a statistically significant indirect effect of FIN on ASDG through DEF, with a $\beta = 0.381$, $T = 3.995$, and $p = 0.000$. This confirms that DEF significantly mediates the relationship between FIN and ASDG, leading to the rejection of the null hypothesis (H_{04}).

The mediating function of DEF turns out to be both important and strategic, far from being a supplementary technique. It illustrates how integrating digital transformation into the process significantly increases FIN's impact on the SDGs. (Bayram et al., 2022; Duvendack & Mader, 2020; Mhlanga & Mpofu, 2023). This integrated pathway places digital tools as key enablers that facilitate the expansion of inclusive financial services, lower transaction costs, and align financial products with the unique needs of rural communities.

According to Navarro and Tan (2018), FIN initiatives frequently face structural barriers in rural areas, such as a lack of banking infrastructure, logistical challenges, and low financial literacy. Digital solutions like e-wallets, mobile apps, and agent banking provide good substitutes in response. In addition to removing physical barriers to access, these tools improve timeliness and dependability, especially for microbusiness owners and smallholder farmers (Morales & Sanchez, 2020).

The digital ecosystem is further strengthened by partnerships between RBs, fintech companies, and governmental organizations. These collaborations are essential for sustainably scaling digital innovations,

supporting DEF's role as a mediator that expands the scope and depth of FIN in rural areas (Dela Cruz & Bautista, 2019). The structural model's results support this dynamic. Although FIN directly advances the SDGs, a strong digital infrastructure is necessary to fully realize its developmental potential. This is in line with an increasing amount of research that supports integrated approaches that combine digital transformation and inclusive finance in order to maximize impact (Altahtamouni, 2022; Saftiana & Jie, 2023).

When combined, the model highlights how FIN, DEF, and the SDGs are interconnected and reinforce one another in the context of rural banking. The strongest direct relationship, out of all those tested, was found between FIN and DEF, demonstrating the role of inclusive finance as a driving force behind digital innovation. This implies that RBs are forced to adopt and improve digital platforms to meet changing demands more effectively and fairly as they expand their reach to underserved segments.

The path from DEF to the ASDG also exhibited a robust direct effect. This suggests that digitized financial services do not merely serve operational efficiency but actively contribute to the broader developmental agenda. Through increased accessibility and responsiveness, digital platforms empower clients economically and socially, thereby reinforcing RBs' capacity to support POA and DWE.

Crucially, the mediation analysis revealed that the indirect effect from FIN to ASDG through DEF is both statistically significant and practically meaningful. This validates the mediating role of DEF as a strategic channel through which the developmental potential of inclusive finance is significantly amplified. While the mediation is partial, given the persistence of a significant direct effect, it remains substantial, indicating that digitalization is not the sole pathway but a critical one that enhances impact.

These empirical findings offer robust support for policy and institutional strategies that

integrate FIN and digital transformation. Specifically, they advocate for a digitalized approach to inclusive banking that ensures RBs are well-positioned to drive sustainable and equitable development in alignment with the SDGs.

DISCUSSION

This study aimed to assess the influence of FIN on the ASDGs 1 and 8 by RBs in CALABARZON, Philippines, as mediated by their DEF. The researcher used the descriptive method of research and utilized a structured questionnaire to gather relevant data. The researcher was able to gather a total of 60 valid responses. The gathered data were subjected to an assumed level of significance of 0.05. With the help of the statistician, these data were statistically treated with various tools such as Frequency and Percentage Distribution, Weighted Mean, and PLS SEM.

While based on the results above, the researcher has concluded that FIN has a significant and positive impact on the ASDG, particularly by empowering marginalized communities through access to financial services. Supported by both empirical data and Philippine-based studies, RBs play a vital role in driving POA, DWE, and community resilience. Their localized, adaptive strategies uniquely position them to advance SDGs effectively, highlighting the need for policies that strengthen and expand FIN initiatives within the rural banking sector.

The strong and significant effect of FIN on DEF affirms that expanding access to financial services actively drives digital transformation within RBs. RBs are adopting fintech solutions that increase accessibility, operational efficiency, and affordability in response to the changing needs of underserved populations. This connection is supported by local research, which highlights that digital innovation in rural banking is a strategic response to FIN demands rather than just a technical advancement. This emphasizes how crucial it is to have integrated policy frameworks that coordinate DEF and FIN

in order to promote inclusive, community-driven development.

The significant positive impact of DEF on ASDG underscores technology's central role in reshaping RBs into more inclusive and effective financial intermediaries. DEF promotes local economic resilience, increases financial empowerment, and speeds up progress on important SDGs like POA and DWE by increasing access, reducing service delivery costs, and implementing digital platforms that are appropriate for rural areas. These findings support the idea that the Philippine rural banking industry's inclusive and sustainable growth is facilitated by digital transformation. The significant mediating role of DEF between FIN and ASDG confirms that the developmental potential of FIN is fully realized when accompanied by digital transformation. Within the rural banking landscape, DEF addresses both infrastructural limitations and socio-economic barriers, enabling RBs to provide more accessible, efficient, and responsive financial services to marginalized communities. This synergy amplifies FIN's contribution to poverty reduction, economic inclusion, and resilience. Thus, sustainable development in rural areas hinges not only on expanding financial access but on integrating digital innovation to unlock its full potential.

Based on the above conclusions, the researcher recommends that CALABARZON RBs may tap BSP-supported grants and government programs from the Department of Information and Communication Technology and Department of Trade and Industry to co-finance upgrades in core banking technologies such as cloud-based systems, digital terminals, and server infrastructure. Forming public-private partnerships is encouraged to consolidate resources and expertise, promoting cost-effective and context-appropriate modernization. The BSP is likewise enjoined to support the accreditation and delivery of digital skills and IT governance training, ensuring designated IT focal persons in each bank undergo at least two trainings annually. Collaborations with local universities may also

be pursued to facilitate technical training and internships, bolstering digital transformation efforts with additional expertise and manpower.

The BSP may serve a pivotal role in establishing and facilitating a Regional Regulatory Support Cluster (RRSC) composed of compliance officers and digital transformation leads from at least five CALABARZON RBs. Meeting bi-monthly through virtual platforms, the RRSC will interpret regulatory guidelines, share compliance strategies, and provide consolidated feedback to the BSP, thereby enhancing regulatory responsiveness. This peer-based mechanism, under BSP's guidance, is expected to reduce compliance delays by 25% and foster a culture of trust and innovation. Semi-annual policy briefs from the cluster will support policy refinement and contribute to a more enabling environment for digital inclusion, informed by public-private sector collaboration.

CALABARZON RBs may establish at least five formal partnership agreements annually through Digital Inclusion Partnership Compacts, supported by the BSP's FIN agenda, local universities, and private-sector entities in fintech, social enterprise, or community development. These collaborations will co-develop culturally relevant digital financial literacy campaigns and pilot accessible savings and loan products for marginalized communities. Universities may contribute by mobilizing faculty and students for outreach and training, while private partners provide digital platform expertise. The BSP may offer technical assistance and funding guidance. Quarterly monitoring will evaluate engagement and behavioral outcomes, aiming for a 30% increase in digital financial literacy among target populations within one year.

The BSP may support the development of standardized training modules and regulatory guidance to enable simplified yet secure digital onboarding processes. Through public-private partnerships involving fintech firms, local governments, and universities, the necessary infrastructure, outreach personnel, and facilitators can be mobilized to assist at least

70% of new FIN clients, approximately 350 individuals per RB annually, in accessing digital platforms such as e-wallets or SMS-based services. Engaging university students and faculty as trainers will strengthen implementation capacity and foster community trust. This coordinated effort targets a 20% increase in digital service usage and improved access to savings and credit, in alignment with SDGs within one year.

CALABARZON RBs may adopt a digital impact tracking platform co-developed with BSP guidance, private technology partners, and academic institutions. Local universities may support data analysis, impact evaluation design, and staff training on digital data tools. The platform will facilitate real-time monitoring of key indicators such as income changes, job creation, and loan utilization, with mobile functionality adapted for low-connectivity areas. The BSP may provide quarterly training workshops to build bank staff capacity in data management and evaluation. This public-private-academic collaboration will promote affordability, usability, and data security, while biannual reporting will enhance transparency, support evidence-based decision-making, and demonstrate measurable contributions to the SDGs, addressing current gaps in monitoring and reporting.

Finally, future researchers may pursue longitudinal studies to assess the long-term impacts of digital financial services on poverty reduction, employment generation, and economic resilience. Expanding the scope beyond SDGs 1 and 8 to include goals such as quality education, gender equality, and reduced inequalities is encouraged to present a more comprehensive view of RBs' developmental roles. Comparative studies across regions and banking contexts may reveal best practices, contextual challenges, and scalable solutions. Additionally, examining barriers to digital infrastructure and affordable technologies in rural areas will provide critical insights. Such research will offer valuable evidence to inform policy, strengthen institutional strategies, and

advance integrated approaches to FIN and sustainable development.

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