

Advancing Digital Payments for Businesses: Insights from Censal Microdata

SUMMARY

Advancing digital payments for firms is crucial for business performance and financial inclusion. To systematically understand the adoption and usage of digital payments among firms, Ghana Statistical Service (GSS) and ReFinD Research Initiative implemented a nationwide census of businesses through the 2024 Integrated Business Establishment Survey (IBES).

Results show that less than half (37%) of businesses accept or use digital payments, with businesses in the agricultural sector having the lowest rate of adoption or usage. Despite merchant account payments driving greater business growth, most firms using digital payments rely on “costly” personal mobile money accounts. Larger firms tend to diversify their adoption and usage of digital payments, whilst smaller firms use the costlier payment methods.

Moreover, female managers significantly boost revenue and merchant account adoption and usage. Digital payments adoption and usage is highly uneven, concentrated in Greater Accra and regional capitals. Key barriers to adoption and usage include knowledge gaps, fraud concerns, and perceived uncertain returns.

Advancing digital payments for firms would require an enhancement of cybersecurity measures in the digital finance systems, the introduction of incentives for female-led businesses, the expansion of digital payments infrastructure beyond regional capitals, and the improvement of digital literacy among business owners, managers and workers. Pursuing these requires meaningful partnerships between academic researchers and actors in the digital payments marketplace including service providers, businesses, regulators, and practitioners.



Source: Freepik

BACKGROUND:
The Landscape of Firms and Digital Payments in Ghana

The adoption and usage of digital payments -- defined to include all non-cash payments including personal mobile money, merchant payments, QR code, POS device, card payments, platforms and mobile/internet banking (Annan, Cheung and Giné, 2024; Annan et al., 2025) --is critical in improving the performance of firms, advancing financial inclusion and fostering development. Despite the potential benefits of digital payments in terms of business growth and revenue increment, little work has been done at scale to deepen our understanding of the trends, determinants and constraints of adoption and usage.

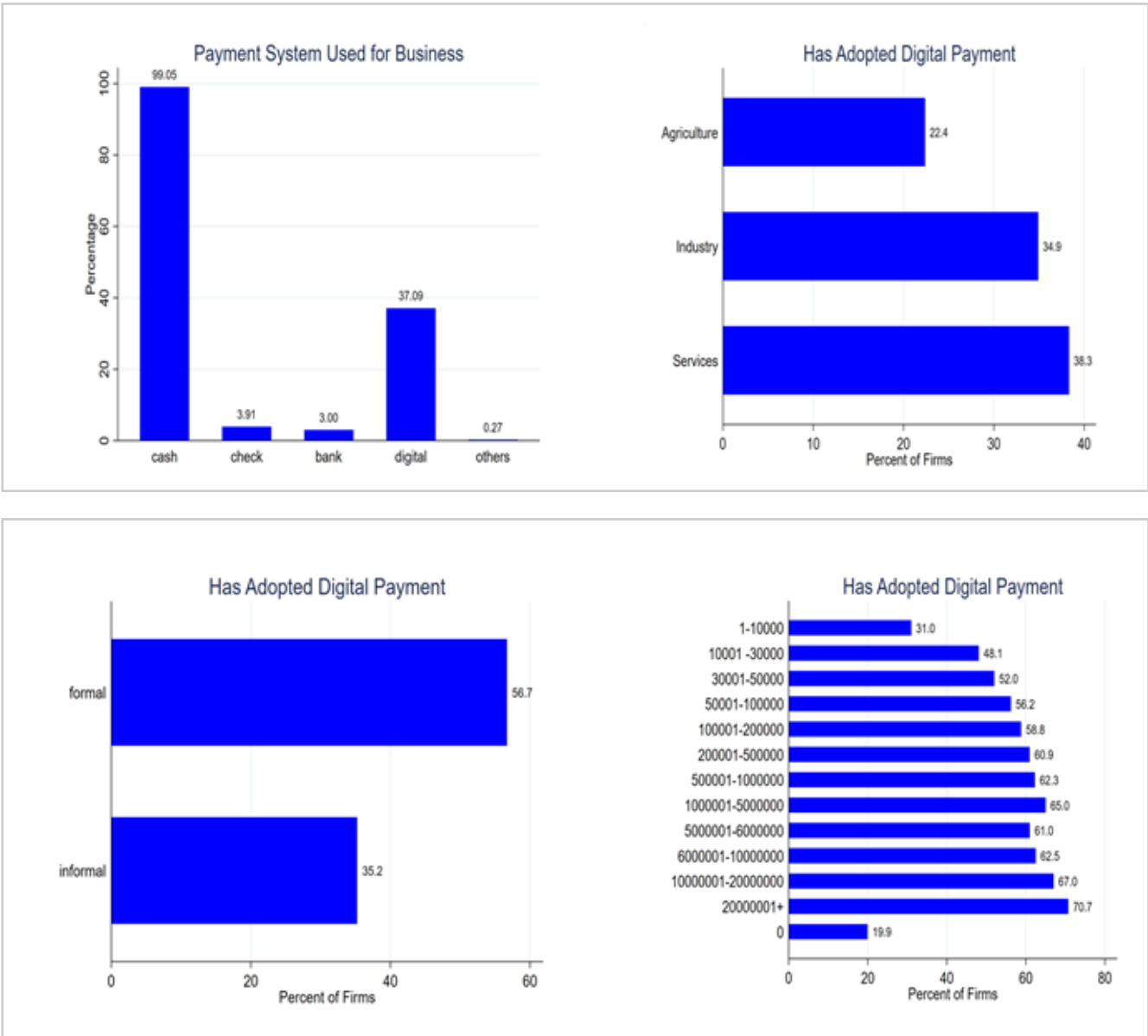
In a unique partnership between Ghana Statistical Service (GSS) and ReFinD Research Initiative, we field a module on digital payments by firms in Ghana’s 2024 IBES, an economic census that collected data on all firms. This allows us to examine the anatomy

of digital payments adoption and usage among businesses. We combine descriptive and spatial analysis, including machine learning techniques to describe businesses and identify the most important factors associated with digital payments adoption and usage, while controlling for regional and firm-level characteristics.

KEY FINDINGS:
Facts about Payments and Firms

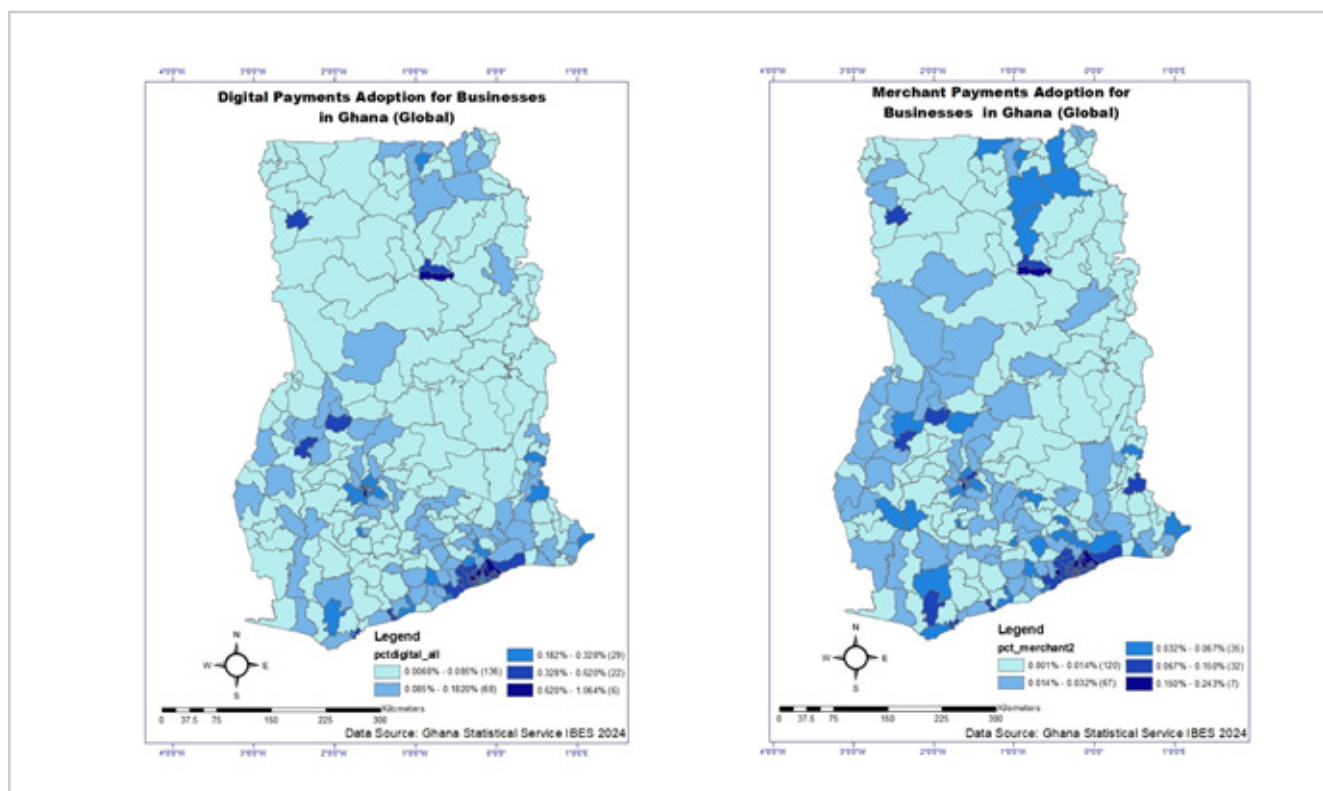
Evidence from IBES 2024 indicates that although digital payment systems are the most prevalent non-cash payment method among the 1.9 million businesses in Ghana, 37% of businesses have adopted digital payment systems. This adoption is concentrated in the service sector, with significantly lower uptake in agriculture (see Figure 1). Further, we noted higher adoption among formal, larger firms, and those with higher revenues.

Figure 1: Digital Payments Adoption by Firm Characteristics



There are variations in digital payments adoption and usage within and across districts, with higher proportions observed in regional capitals and districts in the Greater Accra region (see Figure 2). Merchant payment adoption and usage remains low across the country and highly clustered in the Greater Accra Region.

Figure 2: Digital and Merchant Payments Adoption across Districts



We observe that the adoption and usage of digital payments is positively associated with business growth, particularly through the use of merchant accounts. Firms that adopt digital payments are more likely to see higher employment, revenue growth, and formalisation, with merchant accounts offering the greatest benefits for business expansion. However, personal mobile money accounts are more widely adopted for business transactions than merchant accounts, even among larger and formal firms, although it is the most expensive option for making digital payments. While micro and small firms are more likely to adopt digital payment using personal mobile money accounts, larger firms diversify payment methods to reduce transaction fees but still predominantly use the more expensive personal accounts over merchant accounts.

The analysis shows that lack of knowledge about how digital payment works, concerns about fraud, and uncertainty regarding the returns or benefits of using digital payment systems are significant barriers to the adoption and usage of digital payments. These issues disproportionately affect informal businesses, agricultural firms, and female-owned enterprises.

Female-owned businesses are significantly smaller and less profitable than male-owned businesses

(see Figure 3). They also see lower revenue benefits of digital adoption compared to male-owned businesses. However, male-owned businesses with female managers generate higher revenue and adopt digital merchant accounts more effectively compared to businesses with only male owners and managers, while businesses with both female owners and managers perform worse. The evidence indicates that the revenue premium associated with female managers is more pronounced in small businesses with 6-30 persons, formally registered firms, and businesses operating in the service sectors, particularly in the Greater Accra and the Eastern region.

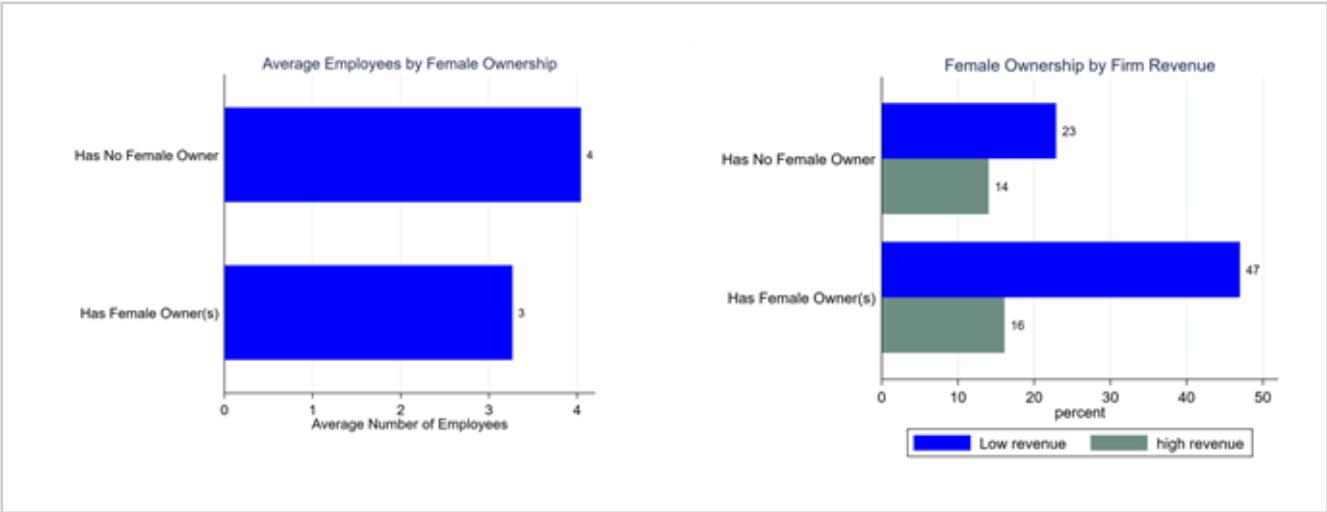
POLICY RECOMMENDATIONS:

Broader Implications for Policy and Practice

Significant digital payments adoption and usage gaps exist across firm sizes, sectors, formality, and location. To address these gaps, policymakers might implement targeted interventions. These include enhancing firms' understanding of adoption and usage benefits, strengthening fraud prevention, and creating incentive structures for business-specific digital payment systems. Enhanced cybersecurity is crucial for building trust. Furthermore, policies

promoting credit access and digital financial tool integration in women-focused business support programs are needed to level the playing field.

Figure 3: Digital Payments Adoption by Gender

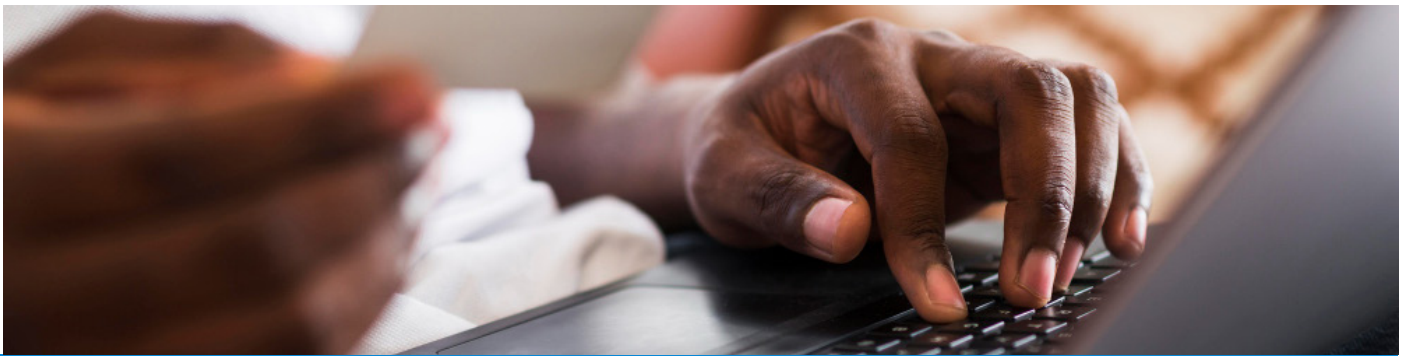


Addressing spatial adoption and usage gaps requires tailored policy interventions and strategic infrastructure development to target commercial activities in low adoption areas. Investments in digital payments infrastructure, mobile connectivity, and digital payments education or campaigns should be tailored to regions and districts with lower adoption rates. Additionally, collaboration between financial institutions, telecom operators, and government agencies can help design region and district-specific solutions that encourage digital payments adoption and usage, ensuring that all businesses, regardless of location, can benefit from financial technology advancements.

REFERENCES

Annan, F., Cheung, C., & Giné, X. (2024). Digital payments. *Oxford Review of Economic Policy*, 40(1), 118-128.

Annan, F., Liu, Z. and Agyen, A. V. (2025). *Firms and Digital Payments: Evidence from Censal Microdata. (ReFinD Policy Paper 2). The Retail Finance Distribution (ReFinD) Research Initiative, Institute of Statistical, Social and Economic Research, University of Ghana.*



Published by:

ReFinD Research Initiative
📍 ISSER, University of Ghana
✉️ refind.isser@ug.edu.gh
🌐 www.refind-isser.ug.edu.gh
🌐 ReFinD_ISSER
🐦 ReFinD_ISSER

About ReFinD

ReFinD is a sub-grants-awarding research initiative that aims to support interventions that will effectively expand the reach and efficiency of agent network operations through public policy and commercial solutions that can plausibly be scaled. It is implemented by the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana, with funding from the Bill & Melinda Gates Foundation, with focus on research based in LMICs in Sub-Saharan Africa, South Asia, and Southeast Asia.