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Beyond financial inclusion: understanding the global risks and consequences of formal account inactivity

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Beyond Financial Inclusion: Understanding the Global Risks and Consequences of Formal Account Inactivity

Peterson K. Ozili

Abstract

This article explores financial inclusion and the increase in formal account inactivity. It examines the formal account inactivity problem, how it delays the benefits of financial inclusion, the risks posed by formal account inactivity and solutions to reduce formal account inactivity. It was argued that countries with a high level of financial inclusion, in terms of formal account ownership, will reap the benefits that accompany financial inclusion which includes poverty reduction, stimulating entrepreneurship, increased financial security, reduced economic inequality, improved wellbeing and increased economic growth. However, these benefits may not be realized if there is an increasing number of inactive formal accounts.

Keywords: financial inclusion, inactive formal accounts, account inactivity, digital financial inclusion, mobile money account, bank account, risk, dormant account

JEL codes: G21, G28.

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1. Introduction

A formal account refers to a bank account or a mobile money account, while formal account inactivity refers to a bank account or mobile money account that has not recorded a customer-initiated deposit or withdrawal transaction for a period of 12 to 24 months (World Bank, 2021). Formal account inactivity is a systemic global problem that is gaining the attention of national governments and global institutions like the World Bank. Formal account inactivity is a systemic global problem because efforts to increase the level of financial inclusion around the world, through accelerated formal account ownership in developed and developing countries, have been met with a growing reluctance to use those formal accounts frequently after owning the accounts.

Data from the World Bank global Findex database confirms the global nature of the formal account inactivity problem (World Bank, 2021). It reveals that, in 2021, several countries and regions had a high incidence of inactive formal accounts. The percentage of inactive formal accounts out of total formal account ownership reached 35% in India, 28% in Ethiopia, 27% in Comoros, 26% in Nepal, 21% in Lebanon, 20% in Iraq and 18% in both Sri Lanka, Morocco and Chad in 2021. This suggests that the formal account inactivity problem is widespread, systemic and is more severe in developing countries due to distrust in financial institutions, low perceived need, low financial literacy levels, lack of interest, personal choice, and other reasons. At the regional level, the percentage of inactive formal accounts out of total formal account ownership reached 32% in South Asia, 24% in lower middle-income countries, 10% in the Arab world and 13% in both developing countries and middle-income countries while it stood at 10% in the world average (World Bank, 2021), suggesting that the formal account inactivity problem is more prevalent in developing regions. A consequence of formal account inactivity is that the expected benefits to gain from using formal accounts frequently may not be realised.

Given the significant number of inactive formal accounts in some parts of the world, there is limited knowledge about the nature of the formal account inactivity problem, the causes, drivers and risks associated with inactive formal accounts in the literature. A reason for the limited knowledge in the literature about formal account inactivity is due to the excessive focus on increasing the number of people who own a formal account (Wang and Zhang, 2025),

while paying no attention to whether the newly opened formal accounts are being used frequently by the accountholder.

A question that policymakers and academics struggle hard to answer is: should we be concerned that people's formal accounts are largely inactive? The initial answer to this question is 'no'. We should not be concerned about people refusing to use their formal accounts frequently because they have the right and freedom to decide that they no longer want to use their formal account. However, a closer look at the inactive formal accounts data in comparison with formal account ownership data (in table 1) shows a worrisome trend that should be of concern to both policymakers and academics. The data shows that as more formal accounts are opened, many of the formal accounts are likely to become inactive. This phenomenon is less prevalent in developed countries but is more prevalent in developing, low-income and middle-income countries, which have low levels of financial inclusion compared to developed countries.

This study argues that formal accounts remaining inactive is a serious issue that needs to be addressed. If people do not use their formal accounts frequently to receive digital payments, make digital payments, access online loans, purchase insurance, and save, they would lose out on the improved welfare benefits that accompany ownership and usage of a formal account. Financial service providers and the government will also lose economic benefits if many formal accounts remain inactive. Therefore, policymakers and academics should be interested in understanding the causes of formal account inactivity, the risks posed by formal account inactivity, and the possible remedies.

In this article, I will (i) show the magnitude of the formal account inactivity problem using historical contexts, (ii) use some theoretical paradigms to describe the causes of formal account inactivity, (iii) explain the risks posed by formal account inactivity, and (iv) offer recommendations that would help to address the formal account inactivity problem. After reading the article, it is hoped that the reader will be convinced that formal account inactivity is a problem, and it can prevent people from enjoying the positive welfare benefits that accompany financial inclusion.

The discussion in this article contributes to the literature that examines the factors that make it difficult for financial inclusion to achieve its intended benefits, but which have not examined

the formal account inactivity problem as a factor hindering financial inclusion from yielding its expected welfare benefits. This study provides insights into the formal account inactivity problem which has received very little attention in the academic and policy literatures. Many scholars and policymakers believe that financial inclusion through formal account ownership should lead to improved welfare for the population (Shen et al, 2026**;** Ozili, 2026). Yet they fail to understand that many formal accounts may remain inactive, and this can be a setback for financial inclusion. The study also contributes to the knowledge management literature that explores the relationship between knowledge management, risk management and sustainable management. It uses formal account inactivity data to stimulate intellectual curiosity aimed at improving knowledge and understanding of the formal account inactivity problem, the risks and the solutions to reduce the formal account inactivity problem in contemporary societies.

The rest of the article is organized as follows. Section 2 presents some historical contexts for understanding formal account inactivity. Section 3 presents some theoretical perspectives on the causes of formal account inactivity. Section 4 discusses how formal account inactivity delays the benefits of financial inclusion. Section 5 presents the risks posed by formal account inactivity. Section 6 explores some solutions to reduce formal account inactivity. Section 7 presents the practical, research, policy and theoretical implications of formal account inactivity. Section 8 presents the conclusion of the study.

Table 1. Regional comparison of formal account ownership and inactive formal accounts

Regions	Percentage of people with a formal account of any type, including financial institution account and mobile money account (% age 15+)	Percentage of people with inactive formal account (% with a formal account, age 15+)
East Asia & Pacific	83%	3%
Europe & Central Asia	90%	1%
Latin America & Caribbean	74%	6%
Middle East & North Africa	53%	7%
North America	95%	0%
Sub-Saharan Africa	55%	5%
High income: OECD	97%	1%
Arab world	40%	10%
Euro area	99%	1%
High income	96%	1%
Low income	39%	7%
Lower middle income	62%	24%
Upper middle income	84%	3%
Middle income	72%	13%
Developing	71%	13%
South Asia	68%	32%
World	76%	10%

2. Historical contexts and empirical data

Having introduced the concept of formal account inactivity in section 1, it is important to explore some cases of formal account inactivity in greater detail. This section starts with the case of India and then proceeds to analyse the trends in African countries.

2.1. India's PMJDY financial inclusion scheme and rising formal account inactivity

In 2011, India had a low and unsatisfactory level of financial inclusion, which the Indian government was determined to address. In 2014, the Indian government introduced the Pradhan Mantri Jan Dhan Yojana (PMJDY) financial inclusion scheme. The scheme was designed to provide one basic bank account for every unbanked adult in India (PIB, 2014). The bank accounts under the scheme were named the Jan Dhan Account.

The government attached a lot of incentives to the bank account. Unbanked adults who opened a bank account under the scheme were entitled to a free debit card (i.e., RuPay Debit card). The bank account also had in-built accident insurance up to Rs. 2 lakh, which can only be used digitally to promote digital transactions (PIB, 2014). The bank account holders were also eligible to access an overdraft of up to Rs. 10,000 to cover emergencies (PIB, 2014). These benefits were publicized across India.

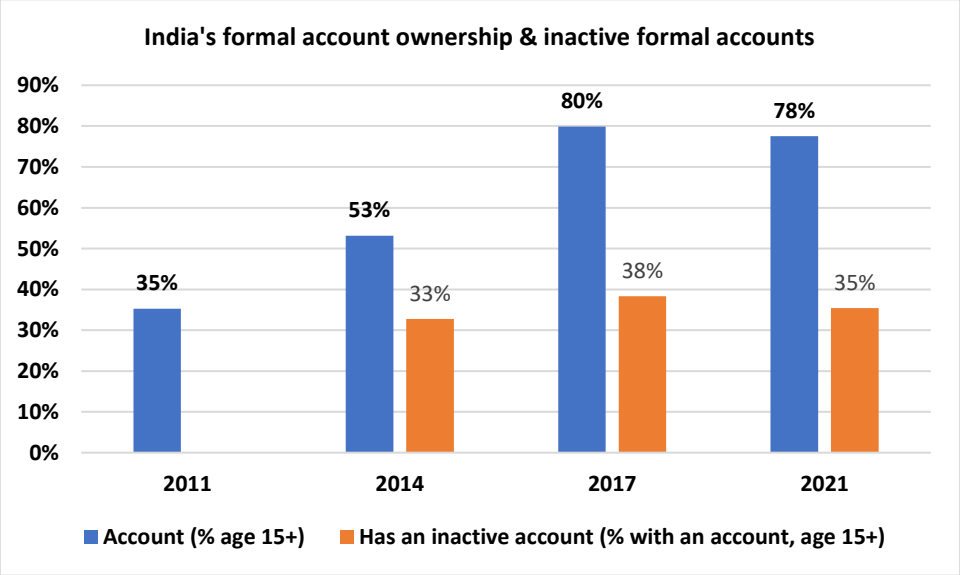
The government introduced these freebies as incentives for unbanked adults to own a bank account. The freebies or incentives were so good that Indian citizens could not resist them. They loved it. Every unbanked adult rushed to find a financial service provider that was participating in the PMJDY scheme so that they could get a bank account to access the freebies. As a result, the number of Jan Dhan accounts increased rapidly. A record 5,248,906 bank accounts were opened in 24 hours on the 28 August 2014 (PIB, 2014). This was remarkable!

Nine years later in December 2023, the Indian government announced that 20 percent of the PMJDY accounts in India had become inactive compared to 40% of the accounts that were inactive in 2017. This was inferred from the data which the government received from the banks that warehoused the PMJDY accounts. The reported causes of formal account inactivity under the PMJDY scheme were the long distance to a bank or financial institution,

convenience issues, lack of trust in banks, and the preference for informal savings among rural people, among others.

The Indian case study showed that despite the significant increase in the level of financial inclusion through formal account ownership, many newly banked adults only used their bank accounts to withdraw government benefits attached to the accounts. After that, they abandoned the accounts till the accounts became inactive or dormant. This experience in India is corroborated by the World Bank's Global Findex data which showed that although formal account ownership of any type in India increased over the years from 35% in 2011 to a remarkable 78% in 2021, the number of inactive accounts in India remained high, reaching 35% in 2021 (see figure 1). The implication is that a rising percentage of inactive accounts does not look good for financial inclusion in India. What happened in India, after the introduction of the PMJDY financial inclusion scheme in 2014, is a stark reminder that it is meaningless to push people to own formal accounts (e.g., a bank account) that they will not use frequently. And if they do not use the formal account, it will become inactive.

Figure 1. India's formal account ownership & inactive formal accounts

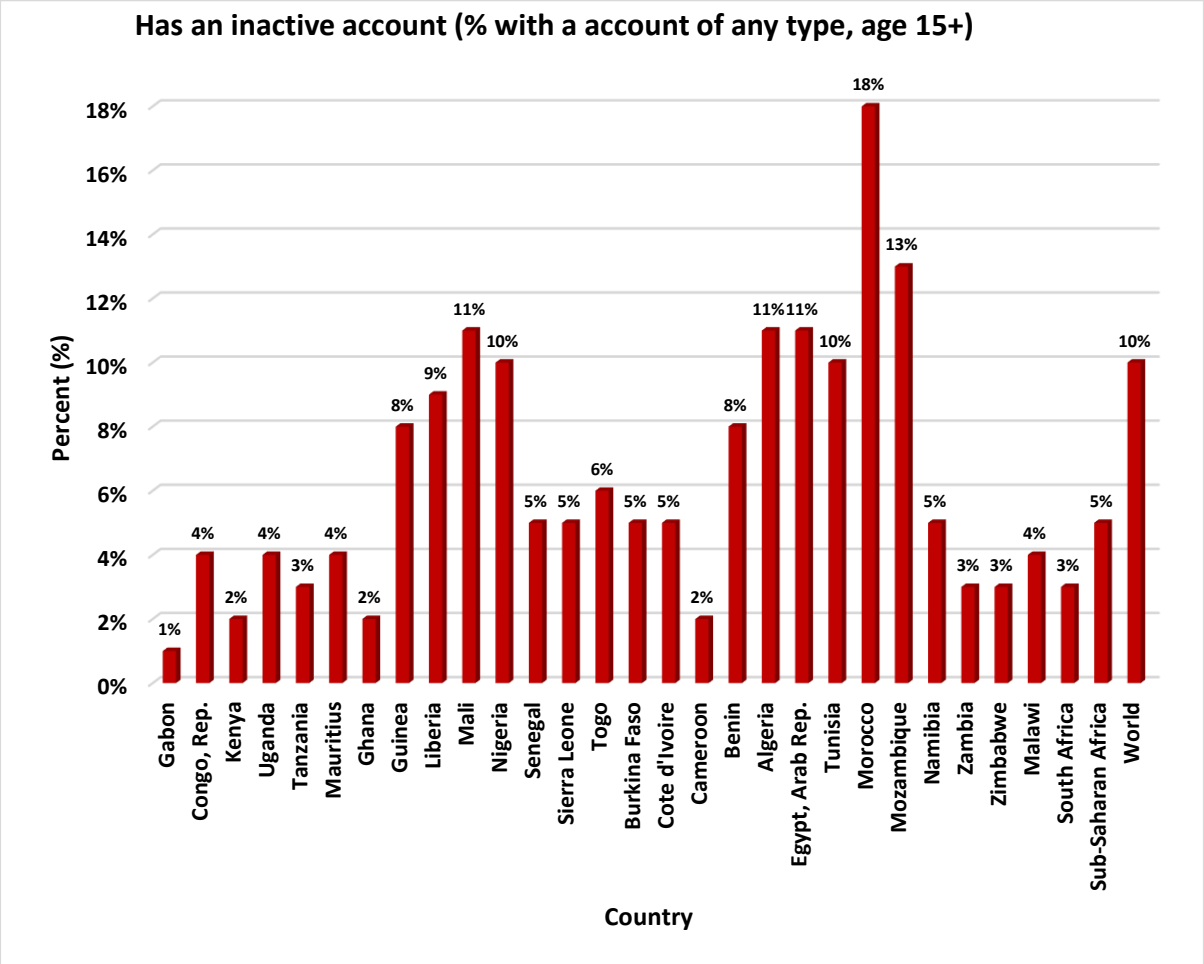


Source: World Bank 2021 Global Findex data

2.2. Trend of rising formal account inactivity in Africa

Some African countries also experienced the formal account inactivity problem. However, the inactive formal account problem in African countries is not as severe as that of India. The reason is that most African governments do not give newly banked adults any significant incentive or free deposit for owning a bank account for the first time. Statistics from the 2021 Global Findex data show that North African countries (e.g., Morocco, Egypt, Algeria and Tunisia) experience severe formal account inactivity compared to other African countries (see figure 2). In the subsequent sub-sections, the formal account inactivity rates of each African country are compared with the sub-Saharan Africa regional average.

Figure 2. Percentage of adults with an inactive account (% with an account of any type)

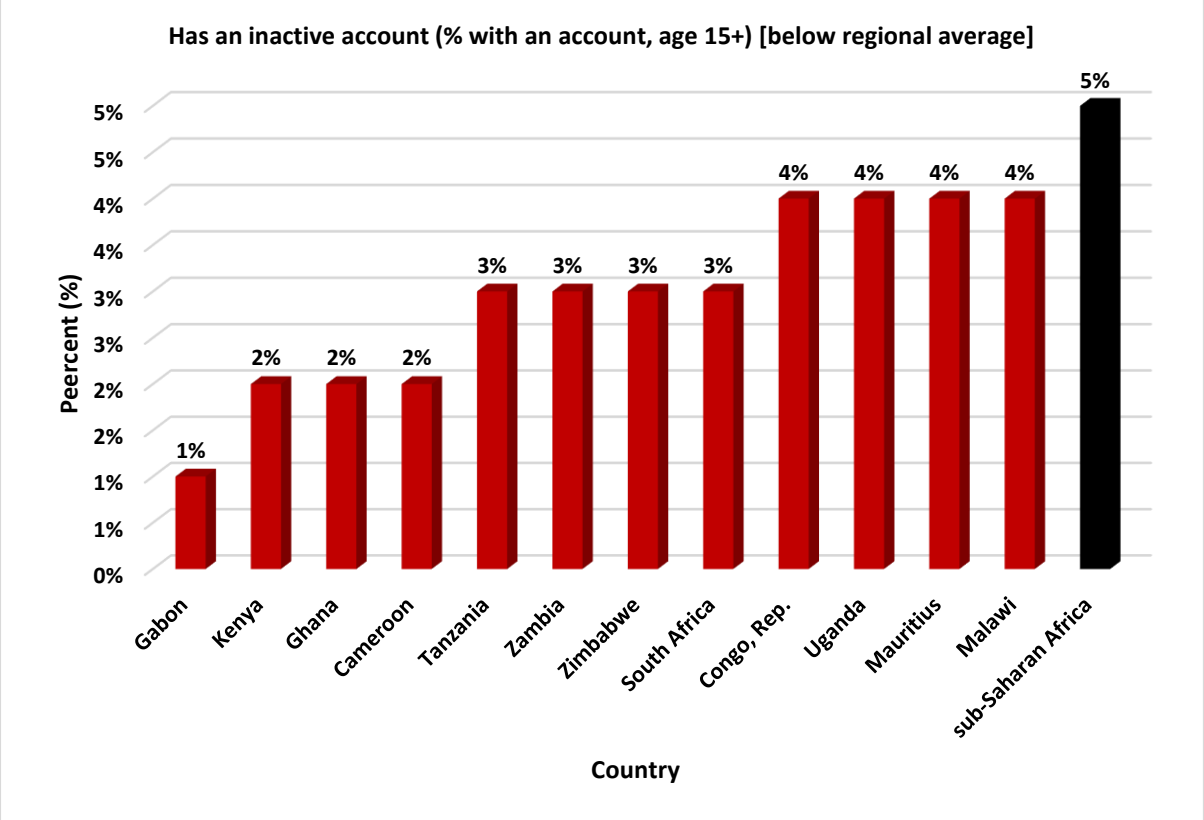


Source: World Bank 2021 Global Findex data

2.2.1. African countries with formal account inactivity below the regional average

The African countries whose percentage of inactive formal accounts is below the regional average are considered to have a minor formal account inactivity problem. Relying on the 2021 Global Findex data in figure 3, African countries with inactive formal accounts below the sub-Saharan Africa average of 5% are South Africa (3%), Malawi (4%), Zimbabwe (3%), Zambia (3%), Cameroun (2%), Ghana (2%), Mauritius (4%), Tanzania (3%), Uganda (4%), Kenya (2%), Congo Republic (4%) and Gabon (1%). Among these 12 countries, 4 countries are in Southern Africa, 4 countries are in East Africa, 2 are in West Africa and 2 are in Central Africa while none of the countries is in North Africa. However, the African country with the lowest percentage of people with inactive formal accounts is Gabon, which is a Central African country. This indicates that, although North African countries have the highest percentage of inactive formal accounts, a low percentage of inactive formal accounts can be seen in some parts of West Africa, Southern Africa, East Africa and Central Africa.

Figure 3. Percentage of adults with an inactive account and below the regional average

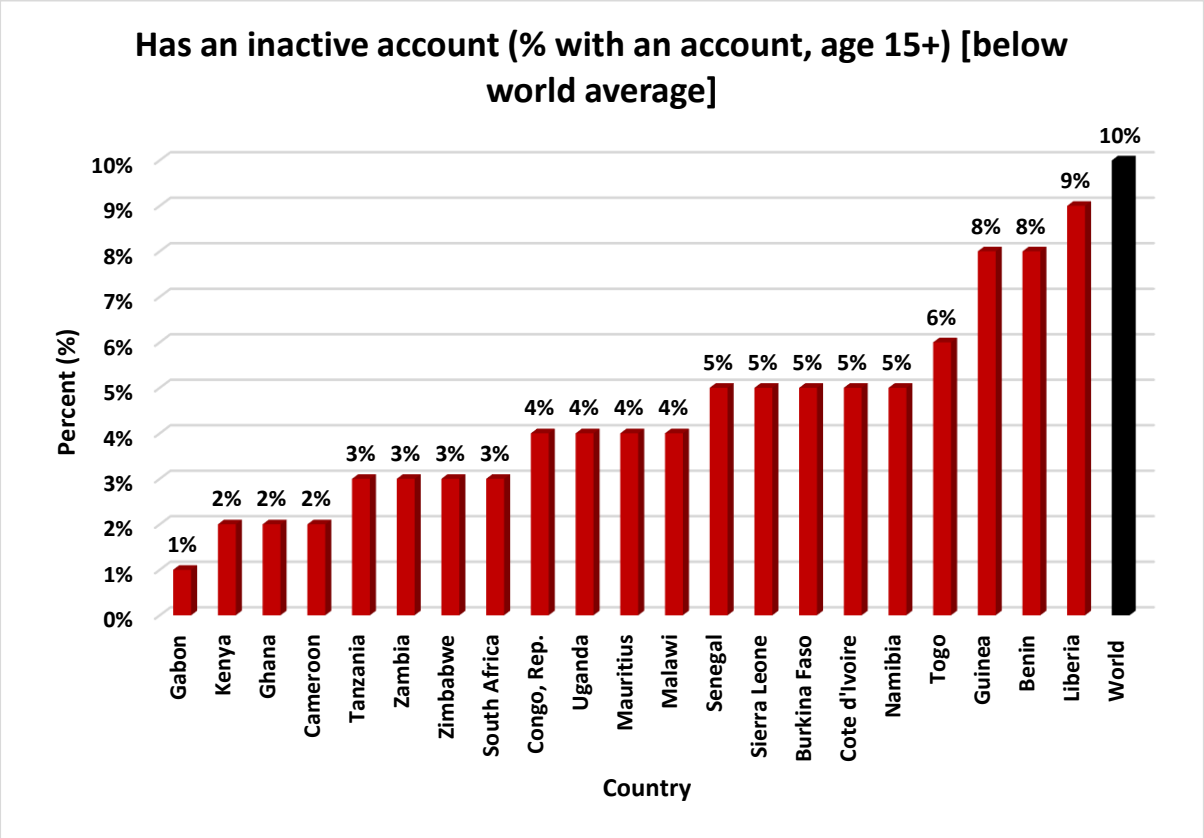


Source: World Bank 2021 Global Findex data

2.2.2. African countries with formal account inactivity below the world average

The African countries whose percentage of inactive formal accounts is below the world average of 10% are also considered to have a less severe formal account inactivity problem. Relying on the 2021 Global Findex data in figure 4, 21 African countries particularly, Gabon, Republic of Congo, Kenya, Uganda, Tanzania, Mauritius, Ghana, Guinea, Liberia, Senegal, Sierra Leone, Togo, Burkina Faso, Cote d'Ivoire, Cameroon, Benin, Namibia, Zambia, Zimbabwe, Malawi and South Africa have inactive formal accounts which are below the world average of 10%. Among the 21 African countries, 10 countries are in West Africa, 5 countries are in East Africa, 4 countries are in Southern Africa, 2 countries are in Central Africa while none of the countries is in North Africa. Overall, the statistics show that formal account inactivity is less severe in West, East, Central and Southern African countries.

Figure 4. Percentage of adults with an inactive account and below world average

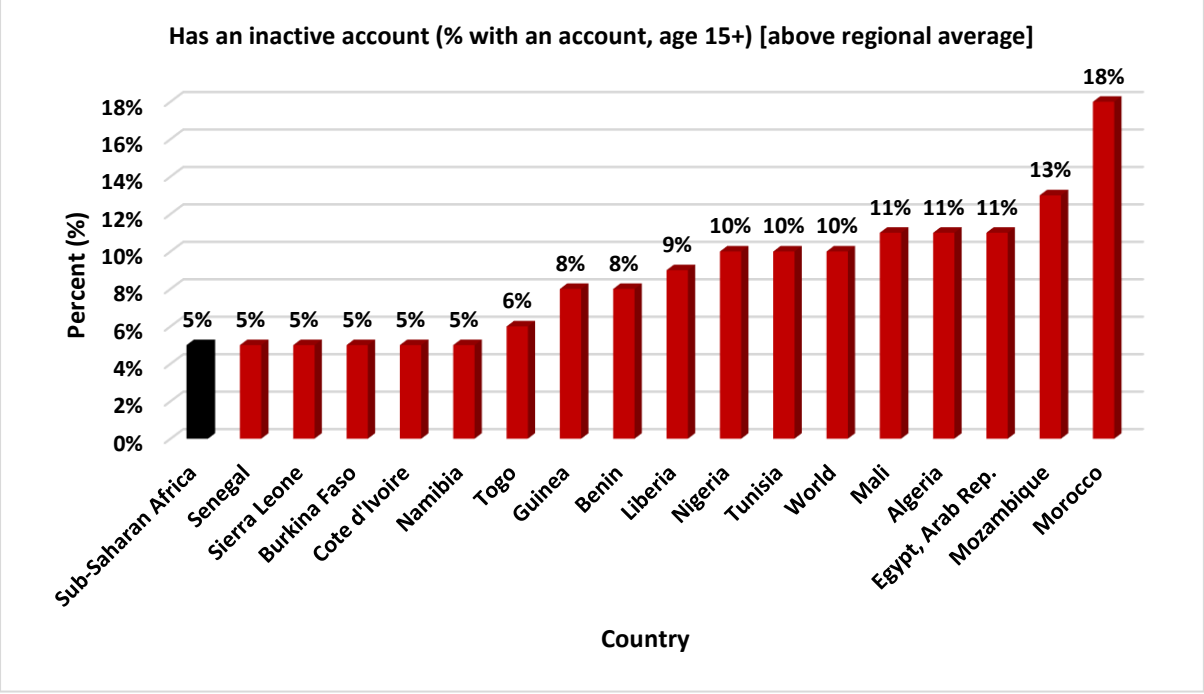


Source: World Bank 2021 Global Findex data

2.2.3. African countries with formal account inactivity above the regional average

The African countries whose percentage of inactive formal accounts is above the regional average are considered to have a severe formal account inactivity problem. Relying on the 2021 Global Findex data, African countries whose percentage of inactive formal accounts exceeded the sub-Saharan Africa average of 5% are Morocco (18%), Mozambique (13%), Egypt (11%), Algeria (11%), Tunisia (10%), Benin (8%), Togo (6%), Nigeria (10%), Mali (11%), Liberia (9%) and Guinea (8%) (see figure 5). Among the 11 countries, 6 countries are in West Africa, 4 countries are in North Africa, and one country is in Southern Africa. However, the African countries with the highest percentage of people with inactive formal accounts are mostly in North Africa, such as Morocco, Tunisia and Egypt. This indicates that at least 20% of African countries experience severe formal account inactivity since only 11 of 54 African countries reported having inactive formal accounts exceeding the sub-Saharan Africa average of 5%.

Figure 5. Percentage of adults with an inactive account and above the regional average

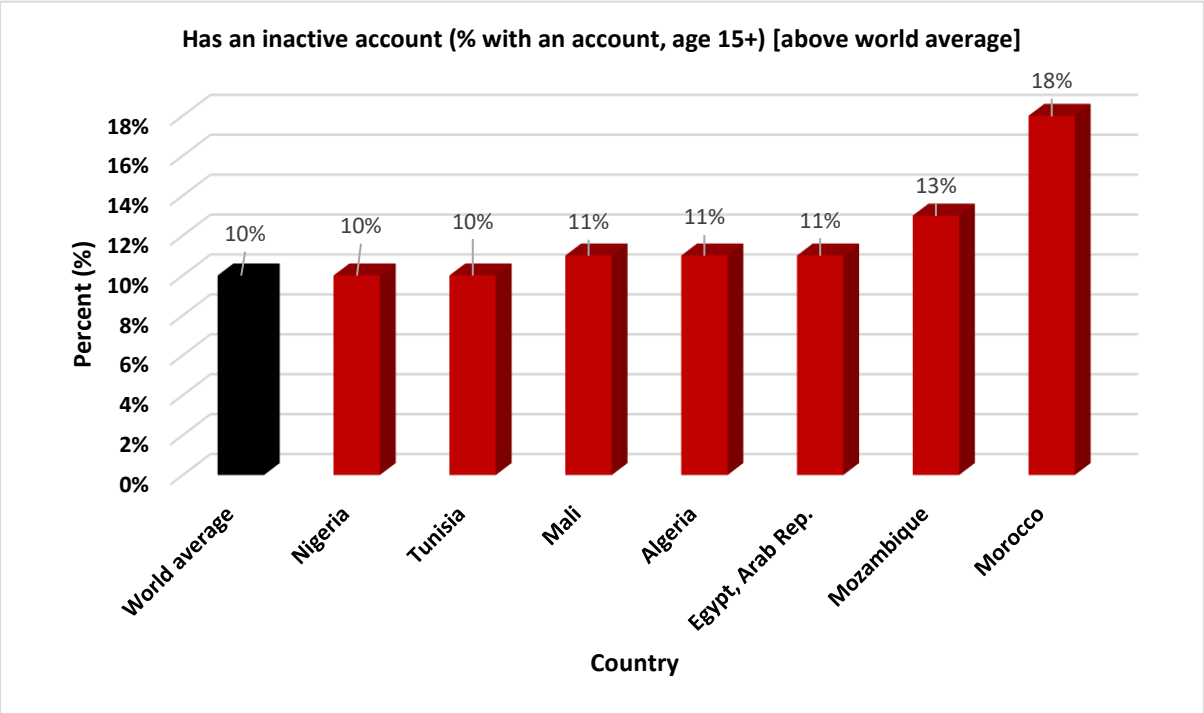


Source: World Bank 2021 Global Findex data

2.2.4. African countries with formal account inactivity above the world average

The African countries whose percentage of inactive formal accounts is above the world average of 10% are considered to have a severe formal account inactivity problem. Relying on the 2021 Global Findex data, Morocco (18%), Mozambique (13%), Egypt (11%) and Algeria (11%) have formal account inactivity exceeding the world average of 10%. Among the 4 countries, 3 countries are in North Africa, and one country is in Southern Africa (see figure 6). Overall, the statistics show that formal account inactivity is severe in North African countries.

Figure 6. Percentage of adults with an inactive account and above world average



Source: World Bank 2021 Global Findex data

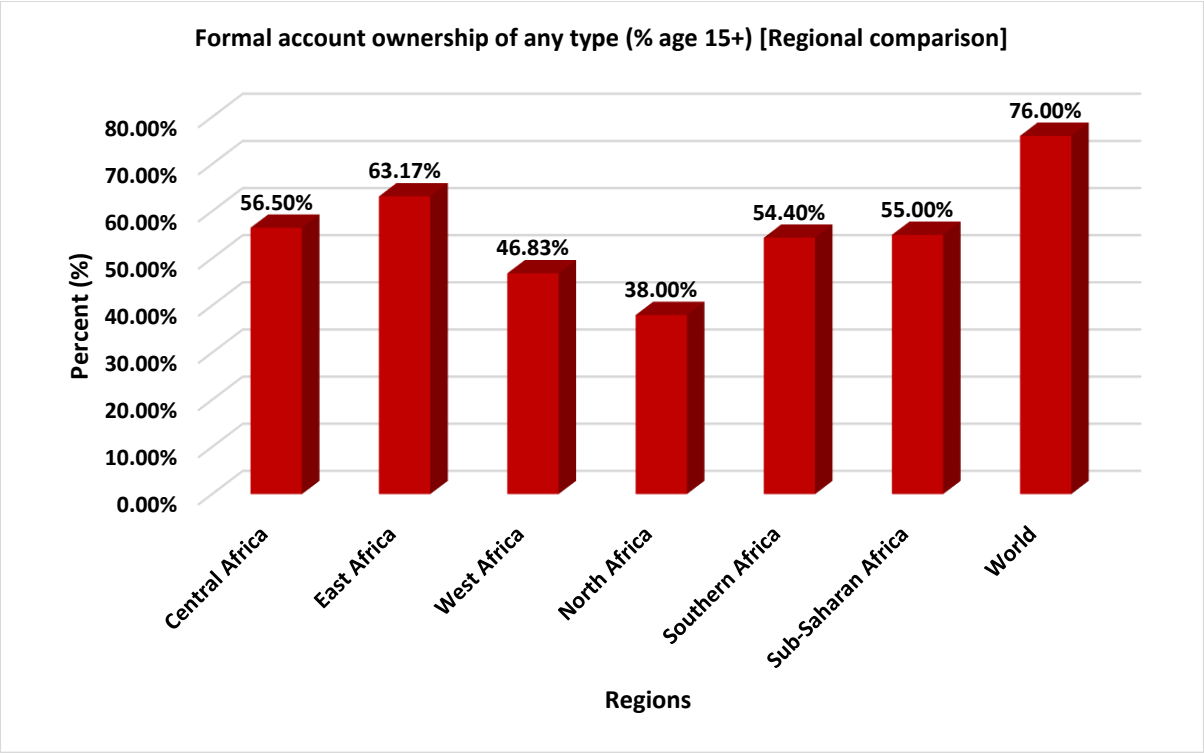
2.2.5. Regional comparison of formal account ownership and formal account inactivity

Global Findex 2021 data shows that formal account ownership is low in sub-Saharan Africa (55%) compared to the World average (76%). At the sub-regional level, it was found that formal account ownership in Central Africa (56.5%), Southern Africa (54.4%), West Africa (46.8%), East Africa (63.1%) and North Africa (38%) was below the world average (76%) in 2021. This indicates that the level of formal account ownership of any type in all African countries is below the world average. Interestingly, the level of formal account ownership in East Africa (63.17%) and Central Africa (56.5%) exceeded the sub-Saharan Africa average

(55%) while the level of formal account ownership in Southern Africa (54.4%), West Africa (46.83%) and North Africa (38%) was below the sub-Saharan Africa average (55%) in 2021. The implication is that the level of financial inclusion, in terms of formal account ownership, is higher in Central Africa and Eastern Africa than in West Africa, Southern Africa and North Africa.

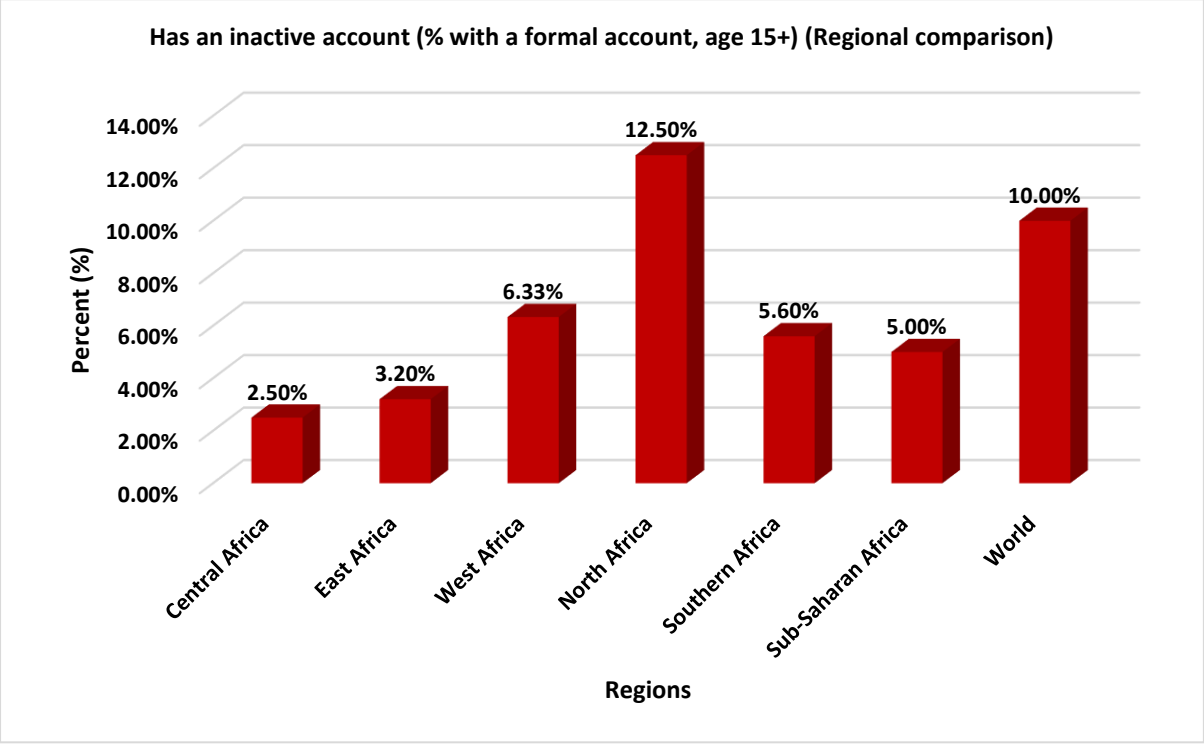
Furthermore, inactive formal accounts are compared with the sub-Saharan Africa average and the World average. Relying on the 2021 Global Findex data, the percentage of inactive formal accounts is low in sub-Saharan Africa (5%) compared to the World average (10%). At the sub-regional level, it was found that the percentage of inactive formal accounts in Central Africa (2.5%) and East Africa (3.2%) was below the sub-Saharan Africa average. In addition, the percentage of inactive formal accounts in Southern Africa (5.6%), West Africa (6.33%), Central Africa (2.5%), East Africa (3.2%) were below the world average (see figure 7). In contrast, the percentage of inactive formal accounts in West Africa (6.33%) and Southern Africa (5.6%) exceeded the sub-Saharan Africa average. Also, the percentage of inactive formal accounts in North Africa (12.5%) was above the world average (see figure 8). The implication is that the level of financial inclusion is higher in East and Central Africa compared to other African regions, while formal account inactivity is higher in North Africa compared to other African regions.

Figure 7. Formal account ownership of any type: comparing sub-Sahara Africa and the World



Source: World Bank 2021 Global Findex data

Figure 8. Formal account inactivity: comparing sub-Sahara Africa and the World



Source: World Bank 2021 Global Findex data

3. Theories on the causes of formal account inactivity

Existing economic theories point to four major causes of formal account inactivity, namely, (i) the accountholder or the user, (ii) institutions, (iii) market participants and (iv) government intervention.

The technology acceptance model, proposed by Fred Davis in Davis (1989), states that the willingness of an individual to adopt an innovation depends on the perceived usefulness and ease of use of the innovation to the individual and the user's intention to use the innovation (Davis, 1989). This theory points to the individual as a cause of formal account inactivity. Under this theory, formal account ownership is the main innovation that enables financial inclusion to take place, and people will not use the innovation (in this case, their formal accounts) if they believe or perceive that the innovation is not easy to use and will not be useful to them. The implication of the theory for this study is that those who already own a formal account may not use their formal account frequently if they believe that the formal account is not useful to them and is not easy to use.

The institutional school of thought points to informal and formal institutions as the cause of formal account inactivity. The institutional theory of financial inclusion in Ozili (2023) argues that the actions of informal and formal institutions influence people's attitude towards financial institutions. These institutions create and establish cultural norms, traditional belief systems, rules, regulations and policies that influence people's perception about financial institutions and the financial products and services they offer (Ozili, 2023). If existing formal and informal institutions lead people to have negative perceptions about financial institutions and the financial services they offer, it can lead to a reduction in patronage of financial institutions and lead to formal account inactivity.

The Keynesian school of thought in Keynesian economic theory points to market participants as a cause of inefficiency or crisis in markets and the economy (Keynes, 1936; Gordon, 1990; Coddington, 2013; Jahan et al, 2014). It argues that the capitalist and competitive activities of market participants destabilize the economy. As a result, the economy tends to drift away from its full equilibrium point if left on its own (Keynes, 1936). When this happens, a crisis will likely occur. Therefore, to avoid a crisis, markets should not be allowed to run on their own without government intervention. Rather, the government should always intervene in

markets and in the economy through monetary, fiscal and regulatory policies (Keynes, 1936). The relevance of the Keynesian school of thought to formal account inactivity is that it puts the blame on market participants (e.g., financial service providers) as the cause of formal account inactivity. It emphasizes that financial service providers greatly influence the cost of financial access and the cost of account usage to align with their profitability motives. Such cost adjustments may be disadvantageous to accountholders. When this happens, accountholders who are averse to high cost may decide to stop using their formal accounts for a prolonged period which would render such formal accounts inactive.

The classical school of thought in classical economic theory points to government intervention as the cause of inefficiency or crisis in markets and the economy (Greenwald and Stiglitz, 1987; Sowell, 2006). It argues that markets and the economy are self-correcting. This means that markets and the economy can resolve inefficiencies and crises on their own and there is no need for any form of government intervention (Greenwald and Stiglitz, 1987). Therefore, the government should not intervene in markets or in the economy; rather, market participants should resolve their problems using existing market correction mechanisms (Sowell, 2006). This theoretical perspective is corroborated by some financial inclusion studies that criticize government intervention in financial inclusion (e.g., Ozili, 2020). This study single out government policies as a cause of formal account inactivity. Ozili (2020) argued that government policies usually compel financial service providers to increase the level of financial inclusion. Due to such policies, financial service providers go as far as enticing unbanked adults to own a formal account that they do not really need. Since they do not need the formal account, they will rarely use it. Also, once unbanked adults open a new formal account and extract any government benefits attached to the formal account (such as free cash deposit to first-time account owners), they will likely abandon the formal account, leading to formal account inactivity. In addition to this, the government may introduce macroeconomic policies which are not conducive to financial inclusion. These policies can discourage accountholders from using their formal accounts. For instance, a government that wants to increase financial inclusion while also trying to control high inflation may decide that it is more important to increase interest rates to control inflation. But increasing interest rates will lead banks and fintech providers to increase market lending rates and possibly increase transaction fees on specific financial products and services. Accountholders may respond by

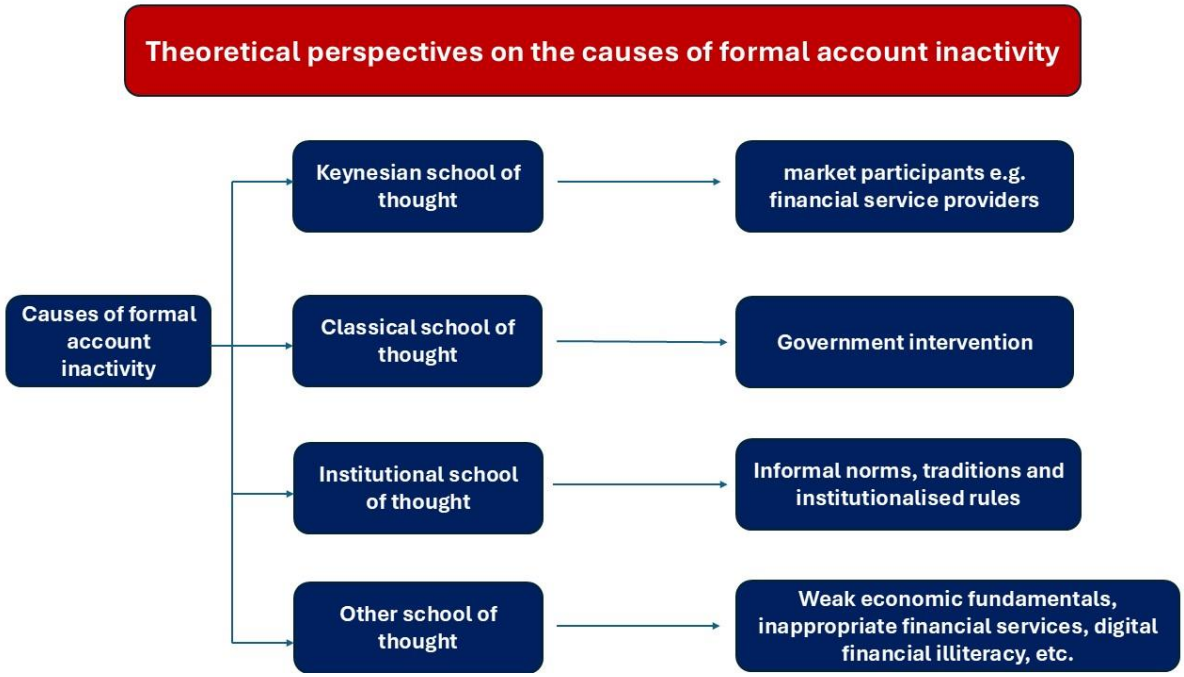
refusing to make any further transactions with banks or fintech apps, preferring to migrate to cash transactions to avoid the exorbitant bank charges and high interest rates that accompany a high inflation environment. This action by accountholders would give rise to inactive formal accounts.

Another less common view is that formal account inactivity may be caused by weak economic fundamentals arising in the business cycle such as high inflation, high unemployment and negative GDP growth. When there is an economic downturn, there will be fewer economic opportunities that people can take advantage of to improve their welfare (Ozili, 2024). Fewer economic opportunities mean that people will perform fewer transactions, while others may not use their formal accounts during the economic downturn period. This will give rise to higher inactive formal accounts (Ozili, 2024). More importantly, if formal accountholders receive private information about an impending economic downturn, they will anticipate financial difficulties in the economy and in the financial sector. They will withdraw their funds from their formal accounts and resort to cash-based transactions during the period of the economic downturn. As a result, their formal accounts will remain inactive for the period of the economic downturn. According to this view, formal account inactivity is caused by people's expectation about the state of the economy. Other factors that can cause formal account inactivity include (i) the emergence of decentralized finance innovations that enable people to make financial transactions without needing a bank account or a mobile money account, (ii) forgetting one's formal account details after opening multiple formal accounts, (iii) digital and financial illiteracy which means that some adults do not know how to use a digital banking products or fintech apps, (iv) the death of accountholders, (v) relocation of accountholders to another location or country where the previously-held formal accounts are no longer useful or needed, (vi) lack of trust in banks, (vii) the financial services offered by financial service providers are unsatisfactory to accountholders, (viii) lack of tailored financial services, and lastly, (ix) bank and fintech apps interfaces are not user-friendly and they do not have instructions that can guide accountholders on how to use their formal accounts (MSC, 2023).

To sum up, the technology acceptance model suggests that the cause of formal account inactivity is the reduced utility or usefulness of the formal accounts to individuals. The institutional school of thought suggests that the actions of informal and formal institutions

are the cause of formal account inactivity. The Keynesian school of thought suggests that market participants are the cause of formal account inactivity. The classical school of thought suggests that government intervention is a major cause of formal account inactivity. Another school of thought is that formal account inactivity is caused by people's expectation about the state of the economy (see figure 9).

Figure 9. Theoretical perspectives on the causes of formal account inactivity



Source: Author

4. Formal account inactivity delays the benefits of financial inclusion

The literature shows evidence that financial inclusion has positive benefits such as poverty reduction, greater entrepreneurship, financial security, improved health and wellbeing and positive economic growth (Osuma, 2025; Wei et al, 2025; Le Quoc, 2025). However, these benefits can only be realized if people who own formal accounts (i.e., a bank account or mobile money account) use their account frequently to make payments, receive payments, save, purchase insurance, obtain loan, or take a mortgage (Hong et al, 2025; Ozili, 2025). However, if they do not utilize their formal accounts frequently, the expected benefits of financial inclusion will not be realized, and their wellbeing may not improve. For example, if poor banked adults do not use their formal accounts to obtain a loan, they may not be able

to raise funds to acquire assets that could generate income towards wealth building and to rise above poverty (Ozili, 2026). If small business owners and entrepreneurs do not use their formal account, they may not be able to access formal credit to start a small business, earn income and provide for themselves and their households. If banked adults do not use their formal accounts to save, invest in assets and plan for emergencies, they won't feel financially secure during periods of heightened uncertainty. If low-income banked adults do not use their formal accounts to access the same type of financial products and services which middle-class and rich banked adults have access to, it will widen economic inequality in society. And the list goes on and on. The above examples demonstrate how formal account inactivity prevents the benefits of financial inclusion from being realised both at an individual level and for the economy.

5. The risks posed by prolonged formal account inactivity

There is an extensive literature on the risks of financial exclusion (see, e.g. Shaban, 2025; Koku, 2015; Adami, 2024). However, there is no discussion about the risks posed by prolonged formal account inactivity. Formal account inactivity poses major risks, which are discussed below.

5.1. Personal risk

The personal risk includes the cost of re-activating the formal account once it becomes dormant. Another personal risk is the loss of personal finance transparency. This is because using a formal account to manage one's personal finance leaves an audit trail that helps the accountholder to track account inflows and outflows and improve personal financial management. However, when the formal account becomes inactive, the accountholder will no longer be able to audit their personal financial transactions in a transparent manner. Another personal risk is the loss of valuable economic opportunities. Inactive users may miss out on valuable economic or business opportunities that depend on owning a bank account or a mobile money account. There is also the risk of increased reliance on informal, exploitative financial service providers. Owners of inactive accounts may increase patronage of informal providers which can burden vulnerable populations.

5.2. Fiscal risk

Formal account inactivity also poses fiscal risk to the government. This includes the loss of tax revenue to the government when the population's formal accounts become largely inactive. This fiscal risk arises because as formal accounts become inactive, financial service providers would lose the transaction fee on the inactive formal accounts. It will decrease their non-interest income and overall profit and decrease the amount of tax paid by financial institutions to the tax authorities.

5.3. Social risk

Formal account inactivity also poses social risk, which arises when people with inactive formal accounts rely on cash-based transactions or on the formal accounts of other people. The consequence of relying on cash-based transactions is that the individual is exposed to theft and other risks in the informal economy. They are also exposed to a greater risk of receiving counterfeit bank notes in the informal sector. The consequence of relying on the formal accounts of other people is that it could expose the individual to exploitation through exorbitant transaction charges for using the formal account of another individual. It can also lead to loss of privacy as the other party would learn about other people's financial activity and such information could be used maliciously to cause harm.

5.4. Operational risk

Prolonged formal account inactivity also poses operational risk to financial service providers. It leads financial service providers to increase spending on advertising and awareness campaigns to sensitize and educate customers about the benefits of using their formal accounts frequently and inform them about the financial products and services they can access through their formal accounts. Such advertising expense is an additional operating expense to financial service providers, which can adversely impact their profit.

5.5. Economic risk

Prolonged formal account inactivity also poses economic risk. It can lower national economic growth due to reduced financial sector participation. It also leads to an increase in the volume of cash transactions, which is inflationary from a monetary policy standpoint. It also expands the informal economy if a large number of people abandon their formal accounts because

they prefer cash transactions. Furthermore, it can lead to the failure of small financial institutions if more than 80 percent of the formal accounts of their customers become inactive for a prolonged period. Finally, formal account inactivity can reduce financial sector contribution to gross domestic product.

5.6. Operational, systemic and cybersecurity risks

Additional risk relates to higher operational and systemic risks. This includes insolvency threats for fintech providers because a large number of inactive accounts will decrease financial flows to fintech providers, leading to low revenue and bankruptcy. Inactive formal accounts are also more susceptible to fraud and cybersecurity vulnerabilities since inactive accounts are more likely to rely on outdated credentials and are more easily compromised by cybercriminals. These risks suggest that formal account inactivity not only affects the accountholder, but it also affects other individuals, firms, the government, and the nation.

5.7. Risk to digital societies

Digital societies are societies that rely heavily on connectivity through the internet and information and communication technologies to increase social interaction among people, build relationships, influence social norms, and create new forms of social organization (Smit et al, 2025; Mossberger et al, 2007; Mosco, 2017). In digital societies, ownership of a mobile money account or a fintech account gives people the ability to interact with the digital marketplace to make payments for utilities, groceries, and taxes. Despite owning a digital bank account or a mobile money account, there is the risk that some mobile money accounts will become inactive and lead to the loss of digital data on consumer spending patterns that could provide insights to financial service providers on the appropriate financial product recommendations to offer to customers. Two, some accountholders may leave their formal accounts inactive when they wish to go off-the-grid in a digital society. This may occur when people have criminal intentions or when they no longer want to share their digital information to reduce their digital footprint and avoid being traced or monitored by the government or other entities (Muhammad et al, 2023). Formal account inactivity also affects digital societies by reducing the avenues for digital taxation which is essential for the growth and development of digital societies. When people keep their formal accounts inactive by choosing to no longer use them to make digital payments for goods and services, it leads to a

loss of tax revenue to the government. The higher the number of inactive formal accounts, the lower the tax revenue to the government from financial transactions and the lower the ability of the government to increase spending to develop the digital society.

6. Solutions to reduce prolonged formal account inactivity

Can formal account inactivity be prevented? The answer is no. Formal account inactivity cannot be prevented because formal account inactivity is caused by multiple economic and non-economic factors which are beyond the control of formal accountholders. The economic factors include (i) weak economic fundamentals, (ii) wide variation in financial access and usage costs imposed by financial service providers, (iii) long distance to physical financial access points, such as automated teller machines and bank branches which are located far away from where people live, (iv) digital illiteracy, (v) financial illiteracy, and (vi) the emergence of new decentralized finance innovations that enable transactions without needing a formal account such as cryptocurrency and stablecoin products. The non-economic factors include (i) the death of accountholders, (ii) migration or relocation of accountholders to another location or country where previously-owned formal accounts are no longer useful or needed, (iii) lack of trust in banks, (iv) poorly designed financial services and products offered by financial service providers, and (v) the negative perceptions people have about regulatory institutions and the financial services and products offered by financial institutions (Ozili, 2023). Although formal account inactivity cannot be prevented, it can be reduced significantly if policymakers, financial service providers and international institutions intervene.

Policymakers can intervene by ensuring that all periodic government welfare benefits, such as periodic cash transfer payments to vulnerable citizens and to those in need of social assistance, are paid into their formal accounts and not in cash (Webb and Vanqa Mgijima, 2024). This will increase beneficiaries' use of formal accounts. Policymakers should also introduce regulations that strongly encourage the use of digital payments for both low-value and high-value transactions in the economy and particularly for rent, mortgage, utility payment, grocery, tuition, medical and other payments. Such a regulation will increase the frequency of formal account usage. Policymakers should also develop a nationwide fiscal

policy for increasing the frequency of use of formal accounts. The policy should require all local taxes, property taxes, community development levy and payments for public services to be paid electronically through a formal account. This policy can encourage people to use their formal accounts more frequently to pay for public services. Policymakers can also introduce digital literacy and financial literacy programs that improve the financial capability and literacy of accountholders and their ability to use their formal accounts to make financial transactions without relying on help from others (Hasan et al, 2021; Ariana et al, 2024). This strategy will address formal account inactivity that arises from people's inability to use a bank app or fintech app to access their formal account. The government should also consider launching a nationwide operation to revive all inactive accounts. This strategy should be targeted at people who opened multiple formal accounts, which have now become inactive because the accountholder cannot remember all the formal accounts they opened in the past. This strategy can help people remember their formal accounts if they have forgotten about them.

Financial service providers can intervene to reduce formal account inactivity by ensuring that bank and fintech app interfaces are user-friendly and have multilingual instructions that guide accountholders on how to use their formal accounts (Nova and González, 2023). Financial service providers should also ensure that the basic financial services that can be accessed through formal accounts are tailored to meet the unique needs of formal accountholders (Nova and González, 2023). Financial service providers should also lower financial access and usage costs to encourage frequent use of formal accounts to perform low-value transactions. Financial service providers should also create awareness among their customers about the variety of financial services they can access and how it can benefit them (Kumar and Pathak, 2022). Such awareness can increase the accountholder's willingness to use recommended financial services, thereby increasing the frequency of formal account usage.

International development institutions and multilateral organizations can intervene to reduce formal account inactivity by providing technical assistance to local policymakers in the design of projects and programs aimed at reducing formal account inactivity. They can provide capacity development training to the policymakers who are responsible for designing formal account access and usage policies and strengthening their implementation capability.

7. Practical, research, policy and theoretical implications

7.1. Practical implications

The practical implication of formal account inactivity is that practitioners, particularly financial service providers, can proactively mitigate the adverse effect of formal account inactivity on their operations by issuing low-cost formal accounts that are tailored to meet users' needs, and which have multi-purpose use rather than single-purpose use. This can help to increase the frequency of use of formal accounts among customers. Financial service providers can also design financial products that have in-built features that encourage repeated usage. At the same time, financial service providers should have systems that send reminders to inactive users to reactivate their inactive formal accounts. They should offer assistance to users who are willing to re-activate their inactive formal accounts to ensure seamless formal account reactivation.

7.2. Research implications

The research implication of formal account inactivity is that the detailed assessment of the risks posed by formal account inactivity in this study presents an opportunity for scholars to use available formal account inactivity data to conduct empirical tests and rigorous analyses of the effect of formal account inactivity on economic growth, tax revenue, individual wellbeing, standard of living and poverty rates. The insight gained from such empirical analyses can improve understanding of the relationship between formal account inactivity and economic outcomes. Such insights can also inform theory development on the causes of formal account inactivity.

7.3. Policy implications

The policy implication of formal account inactivity is that while policymakers are striving to increase the level of financial inclusion, they should be vigilant and pay attention to emerging developments in the financial sector and in the institutional and economic environment that motivate people to reduce the frequency of use of formal accounts. If policymakers can identify these developments early, they can swiftly introduce policies or regulations to mitigate them.

Policymakers should also consider adopting flexible, risk-based and adaptive regulations that decrease entry barriers for new entrants who want to offer tailored and niche-based financial services to individuals whose formal accounts remain inactive because general-purpose financial services are not useful to them anymore. The provision of tailored and niche-based financial services to such individuals can motivate them to re-activate their inactive formal accounts.

Policymakers should also consider implementing capability-based approaches to increase the frequency of use of formal accounts. They can do this by introducing a combination of digital literacy, financial literacy and targeted financial education programs to empower individuals and small businesses with the knowledge, skills, and tools necessary to access and use formal financial services effectively. Proactive policy measures that could be deployed include (i) utilising local retail shops as banking agents to teach local people and offer cash-in/cash-out basic financial services to individuals in rural communities, and (ii) implementing community training workshops and programs to educate adults about the benefits of using formal accounts to perform day-to-day transactions. However, these efforts should be supplemented with strong consumer protection by establishing clear regulation that compel financial service providers to treat users fairly at all times.

7.4. Theoretical implications

The insight gained from the analyses of the risks of formal account inactivity in this study can inform future theory refinement in several ways.

For example, it expands the endogenous growth theory by showing that internal factors within the economy, such as formal account inactivity, can affect economic growth. This study showed that, at the micro-level, individual bias towards formal accounts, limited financial capability, and lack of trust in financial institutions and regulatory bodies can increase formal account inactivity. At the macro-level, formal account inactivity increases fiscal risk (e.g. loss of tax revenue) and decreases economic output when there is too much reliance on cash-based transactions and very little use of formal accounts, which hinders economic growth. The implication is that formal account inactivity is an endogenous/internal factor within the economy that hinders economic growth.

The analysis of formal account inactivity in this study also expands financial intermediation theory and institutional theory. It expands financial intermediation theory by showing that, although financial institutions can efficiently reduce transaction costs and informational asymmetry between lenders and borrowers (Allen and Santomero, 1997; Scholtens and Van Wensveen, 2003), these benefits do not guarantee greater frequency of formal account usage by the population. The study identified other factors that influence individuals' choice to use formal accounts more frequently other than cost efficiency and low informational asymmetry considerations. These factors include lack of perceived usefulness to individuals, low income and high inflation. Therefore, the financial intermediation theory could be expanded or refined to take into account these factors affecting the use of formal accounts.

The analysis of formal account inactivity also reinforces institutional theory of financial inclusion by showing that formal account inactivity is a systemic and structural issue rather than solely an individual choice. The presence of trust deficits in society, institutional exploitation, weak legal enforcement, unfair regulation, lack of rule of law, and discrimination of vulnerable populations provide incentives for people to distrust financial service providers and reduce the frequency of formal account usage (Ozili, 2023).

8. Conclusion

This article examined the formal account inactivity problem and how it hinders the benefits to be derived from financial inclusion. It also identified the causes of formal account inactivity using theoretical insights. It further explored the risks posed by formal account inactivity. The study showed that people may not use their formal accounts frequently after they have joined the formal financial system through formal account ownership. This article presented formal account inactivity as a problem that needs to be addressed so that accountholders can enjoy the expected benefits of financial inclusion. It argued that people should, at the very least, open a formal account that they really need. If they don't need it, they should not open it so that the formal account does not become inactive since formal account inactivity is both risky and costly to the accountholder.

The study also showed that formal account inactivity cannot be completely prevented. It can only be reduced. It was argued that policymakers can reduce formal account inactivity by (i)

ensuring that periodic government welfare benefits are paid into the formal accounts of beneficiaries, (ii) introducing regulations that encourage the use of digital payments for both low-value and high-value transactions in the economy, (iii) developing a nationwide fiscal policy for increasing the use of formal accounts, (iv) introducing digital literacy and financial literacy programs to improve the financial capability of accountholders, and (v) launching a nationwide operation to revive all inactive formal accounts. Financial service providers can also assist in reducing formal account inactivity by (i) ensuring that bank and fintech app interfaces are user-friendly, (ii) offering tailored financial services to meet the unique needs of formal accountholders, (iii) lowering financial access and usage costs, and (iv) creating awareness among customers about the variety of financial services they can access and how it can benefit them.

Finally, the lessons learned from the case of India showed the severity of the formal account inactivity problem. This should be a reminder to policymakers and academics that achieving a high level of financial inclusion with a corresponding high level of formal account inactivity is disappointing and undesirable. Going forward, the right thing to do is to stop focusing solely on increasing the number of new formal accounts as a financial inclusion strategy. Rather, we should also focus on getting those who already own inactive formal accounts to re-activate their formal accounts and use them more frequently in their daily lives to receive or make payments. I think this is the right way to go. I do not think that the constant push to increase the level of financial inclusion by increasing the number of newly opened formal accounts in a country is a good strategy when the number of inactive formal accounts is also growing rapidly. This is because it bears the same risk as putting water into a leaking bottle. Ignoring the leakage means that the bottle may never get full.

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