



Digital Welfare Delivery and Exclusion: Patterns of Access, Trust and Administrative Burden among Low-Income Households

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Abstract

Digitalisation of welfare delivery has increased the use of bank accounts, mobile payments and electronic transfer systems in social protection. However, low income households can still face exclusion due to lack of digital access and poor institutional trust and administrative complexity. This research explores trends in access to digital welfare, financial inclusion, and trust exclusion and administrative burden among economically disadvantaged groups. It includes a quantitative and comparative research design to measure the change in account ownership, participation in digital payments, receipt of government transfers, and barriers to financial access, particularly for the poorest 40 per cent of the population. Descriptive statistics, income-group comparisons, correlation analysis and regression techniques are used to detect major patterns and relationships. The results indicate that the use of accounts and digital payments on smartphones and in the internet have grown over time, albeit at low levels relative to their ability to use the same service. Overall poor groups lag behind rich groups, particularly in terms of digital transactions and online account access. The top three barriers cited were cost, documentation issues, and distance from financial institutions and lack of trust. There was a general tendency for increased administrative burden to be correlated with decreased financial access, but this correlation was not strong. The study establishes that digital welfare systems can enhance the effectiveness of social protection, but includes will be contingent on cost effective services, streamlined procedure, trustworthy grievance mechanisms, assisted entry and the availability of alternative providers in the offline world.

Keywords: Digital welfare, Financial inclusion, Administrative burden, Trust, Low-income households

1. Introduction

The digitalisation of the administration of welfare has revolutionised how governments reach welfare recipients, distribute welfare payments and track social-protection programmes. Digital accounts, mobile payments and electronic identity systems can help to streamline payment delays, lower transaction costs and increase access to formal financial services. The Global Findex framework shows that account-holding and use of digital payments have grown significantly across developing economies, but there are still significant gaps between income groups (Demirgüç-Kunt et al., 2022). The findings from India also indicate that the payment of government-to-person transfers into formal accounts can increase the use of accounts and participation in digital payments (Gelb et al., 2022).

New financial-inclusion programs also suggest the next phase of digitalization needs to go beyond enabling account opening to regular, meaningful and secure usage (Klapper et al., 2021). Even with these opportunities, digital welfare delivery can also lead to increased exclusions. Low-income families may also lack access to financial institutions, internet access and digital skills, as well as mobile phone access. The literature on digital financial inclusion indicates that affordability, infrastructure, and literacy and cybersecurity are still significant barriers to meaningful financial inclusion (Malladi et al., 2021). Women's access to digital services is also limited by gender disparities in mobile ownership and usage (Jeffrie et al., 2023). Evidence from Harare also reveals that inequalities in social and economic access and use of information and communication technologies (ICTs) contribute to inequalities in access and use of information and communication technologies (ICTs). Digital connectivity thus needs to be seen as a fundamental enabling factor to realize broader social and development goals (Clark et al., 2022). Digital exclusion isn't just about infrastructure. Some citizens can benefit from automated welfare systems, while others with non-standardised welfare situations struggle to access welfare services because of the system (Larsson, 2021).

The study on the Rythu Bharosa scheme shows how inaccurate data and classification processes, as well as the absence of correction opportunities, can lead to injustice in the digitally managed welfare programs (Masiero & Buddha, 2021). In this new idea of the digital welfare state, attention is drawn to the relationship between technology and institutional power, as well as to social inequality (Van Toorn et al., 2024). It also points to the fact that, in addition to efficiency, digital welfare systems should be assessed based on citizenship, rights and lived experience (Wilcock & van Toorn, 2026). The experiences can be understood within the framework of administrative burden. Digital procedures may place applicants on an educational burden, compliance burden, as well as psychological burden, because they will need to be aware of the eligibility conditions, bring documents, and operate unfamiliar interfaces (Peeters, 2023). The literature on the provision of digital services provides evidence that poorly designed systems can shift the burden of administration from a public agency to citizens (Hegemann & Ritz, 2026). Lack of accessible design, assisted channels and appropriate institutional support of public services are especially harmful to vulnerable groups (Liu et al., 2025).

Trust is also crucial because, if citizens are concerned that data may be misused, the institution will charge them for processing, they might not have the means to pay the charges or they might be treated unfairly, they may avoid its use. Transparency, responsiveness, user-centred service design (Peña-López, 2020) are the essential elements of successful digital government. Institutional capacity is also crucial to prevent that digital reforms exacerbate governance vulnerabilities (Putri et al., 2026). Data intensive e-government reform also demands competent citizens and public officials to have skills to interpret and apply digital information (Steiner-Khamsi, 2026). The broader social-protection literature highlights a need for inclusive delivery systems for achieving universal coverage. Financing, coverage and implementation challenges still exist in African social-protection systems (Batchabi, 2022).

The integration of digital transformation and resilience into the global agenda on social protection is becoming more interconnected, today, as in the future, with climate action and equitable access (Gama, 2024). Inclusive institutions and decent social protection (Dreval et al., 2025) are important to ILO's work to promote the Sustainable Development Goals. International telecommunications policy also acknowledges the need for affordable and reliable connectivity for national development (Giovannetti et al., 2025). The relevance of the International Telecommunication Union (ITU) is still intact because of its role in coordinating global communication standards and access (Canton, 2021). Some UN digital-government initiatives also highlight the importance of technology modernisation for sustainable and inclusive development (Department of Economic, 2024). This could, however, put extra strain on public-service systems and digital infrastructure (DESA, 2020), on a broader demographic and urban transitions.

This study seeks to understand how and why low-income populations are digitally excluded and burdened with administrative issues. It includes data on financial access, financial barriers, government transfers, and variations at the country level in financial accounts. The goals are to track access over time, compare the poorest 40 per cent with other groups, understand key administration and trust issues and determine if increased burden is linked to decreased digital welfare inclusion.

2. Methodology

2.1 Research Design

The research design is quantitative and comparative in this study to explore digital welfare delivery and exclusion of low-income households. The research is based on the access to government payments, formal financial accounts, mobile money and digital payment services. It also explores the factors of trust and administrative burden as barriers to the use of digitally provided welfare services. The poorest 40 per cent is regarded as the primary low income group and comparisons are drawn with higher income groups to identify inequalities in access. Digital welfare access is defined as the right to receive welfare payments via a bank account, financial institution, mobile phone or other digital medium. Digital exclusion is the lack or low use of these services. Exclusion, as a result of trust, is defined as failure to utilize formal financial institutions due to a lack of trust in them. Administrative burden is about issues like high service charges, distances to financial service providers and missing documents.

2.2 Data Source and Study Sample

The study relies on Global Financial Inclusion (Global Findex) data (The World Bank, 2019), which offers country-level data on account ownership, digital payments, mobile money, government transfer and barriers to financial inclusion. The study sample consists of countries where information on government payments, account ownership, digital transactions and barriers to access is available. Special attention is given to indicators for the poorest 40 per cent of the adult population. Data with missing information for the primary variables are not included in that analysis but all other data that is available are kept for descriptive and comparative purposes.

2.3 Measurement of Variables

The main dependent variable is digital welfare access. It is estimated by the percentage of adults that receive government payments via an account, mobile phone or financial institution. To measure ongoing reliance on non-digital welfare services, the percentage of adults who receive welfare payments exclusively in cash is used. Digital inclusion is expressed as ownership, mobile-money account ownership, using mobile phones or the internet to access an account and participation in digital payments. Digital exclusion is defined by the lack of an account, the limited use of digital payments and the lack of digital payment account activity. Adults who report that they don't have an account due to lack of trust in financial institutions is the measure for trust-related exclusion. The indicators for administrative burden are related to lack of documentation and high costs and the distance between financial institutions. These indicators are then aggregated to form an administrative burden indicator, with a higher score indicating higher barriers to financial services. Income inequality in access is measured by comparing the bottom 40 per cent and top 60 per cent of the income distribution. The size of the access gap is represented by the difference between these two groups. The larger the difference, the higher the inequality in access to digital and financial services.

2.4 Data Analysis

The analysis starts with descriptive statistics like percentages, averages, minimum values, maximum values and standard deviations. These measures represent a general pattern of digital welfare access and financial inclusion, trust and administrative burden. Then it is analysed using comparative analysis to look at the difference between the poorest 40 per cent and the richest 60 per cent. Comparisons are also performed throughout regions, nation income groups and survey years. This will allow to determine if there has been an improvement in digital welfare access over time and if there is any disadvantage for low income groups. A correlation analysis is performed to explore the relationship between access to digital welfare, trust and administrative burden. A regression analysis is also used to estimate the relationship between trust-related exclusion and administrative burden and their relationship to a reduction in access to digital welfare, after controlling for other factors, including account ownership and mobile or internet use. To enhance the reliability of the results of the regression, robust standard errors are used. Available-case analysis is used for missing values, and the 5 per cent level is used to test the significance of the statistics. The results are offered as general patterns and associations and as an illustration of the average experience rather than evidence of the experience of specific households or causal relationships.

3. Results

3.1 Digital Access among Low-Income Groups

The results indicate a gradual improvement for adults in the poorest 40 per cent of the income distribution in terms of access to formal financial services. Average account ownership increased from 38.45 per cent in 2011 to 47.86 per cent in 2014 and 53.59 per cent in 2017. This is about 15 percentage points higher than during the study period. This was followed by an increase in the number of people who used digital payments. The percentage of low income adults using or receiving digital payments increased from 35.54 per cent in 2014 to

45.76 per cent in 2017. Although the overall rate of receipt of government payment by the poorest 40 per cent remained stable at 18.3, it rose from 22.37 per cent to 28.29 per cent in the same period. In 2017, just 19.33 per cent of low income adults were able to access an account using a mobile phone or the internet. This means that the number of people who own accounts grew at a faster rate than the number who use digital accounts. As observed in Figure 1, the adoption of banking accounts among the poorest 40 per cent was consistently growing from 2011 to 2017, and so was the participation in digital payments. Mobile and Internet account use, however, was significantly less than account ownership. Table 1 indicates that average account ownership rose from 38.45% in 2011 to 53.59% in 2017. The percentage of households that participated in digital payments and that received government payments also rose, to 45.76% and 28.29%, respectively in 2017.

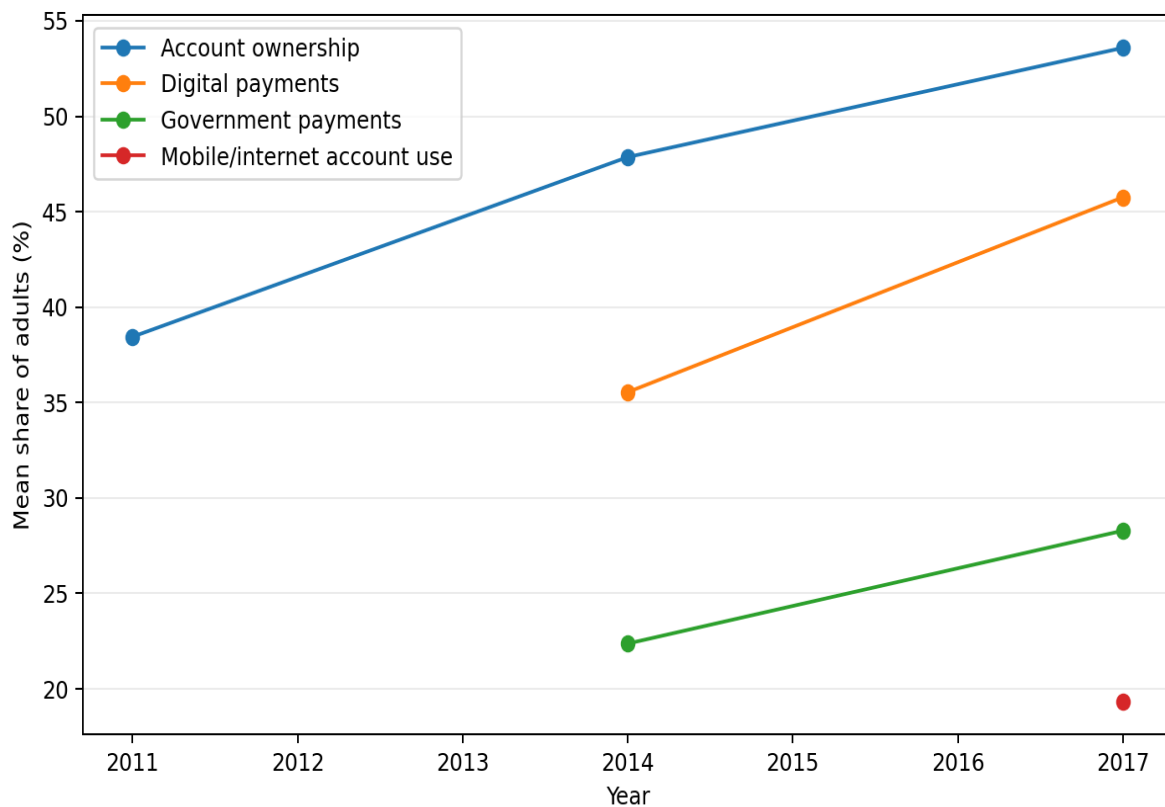


Figure 1. Access Indicators among the Poorest 40 Per Cent

Table 1. Average access indicators among the poorest 40 per cent

Indicator	2011 (%)	2014 (%)	2017 (%)
Account ownership	38.45	47.86	53.59
Made or received digital payments	—	35.54	45.76
Used mobile phone or internet to access an account	—	—	19.33
Received government payments	—	22.37	28.29

3.2 Income-Based Inequality in Digital Access

Large disparities were noted between the bottom 40 per cent and top 60 per cent. On average, in 2017, the gap between the percentage of accounts held by adults and the percentage not held by adults was 12.97 percentage points. The gap between low-income adults and financial-services availability in participation in digital financial transactions was 13.31 percentage points. Account use on mobile and on the Internet was the highest among countries. The richest 60 per cent on average were 10.38 per cent more likely to obtain an account via mobile phone or the Internet. It was more than 34 percentage points higher in some countries. This was significantly lower when considering the income differential in receipt of government payments (1.09 percentage points). This is natural since government benefits and transfers are often directed to the poorer part of the society. In several countries, it was therefore found that the proportion of people receiving government payments was higher for the poorest 40 per cent than it was for the richest 60 per cent. Figure 2 reveals the steepest income-based disparities in being part of digital payments and having an account. The deficit in welfare payment receipt was much less, implying more even distribution of welfare payment receipts across income groups. For digital payments, the richest 60 per cent saw an average of 13.31 percentage points higher, and for account ownership, 12.97 percentage points higher, as shown in Table 2. The difference in terms of government payments was just 1.09 percentage points.

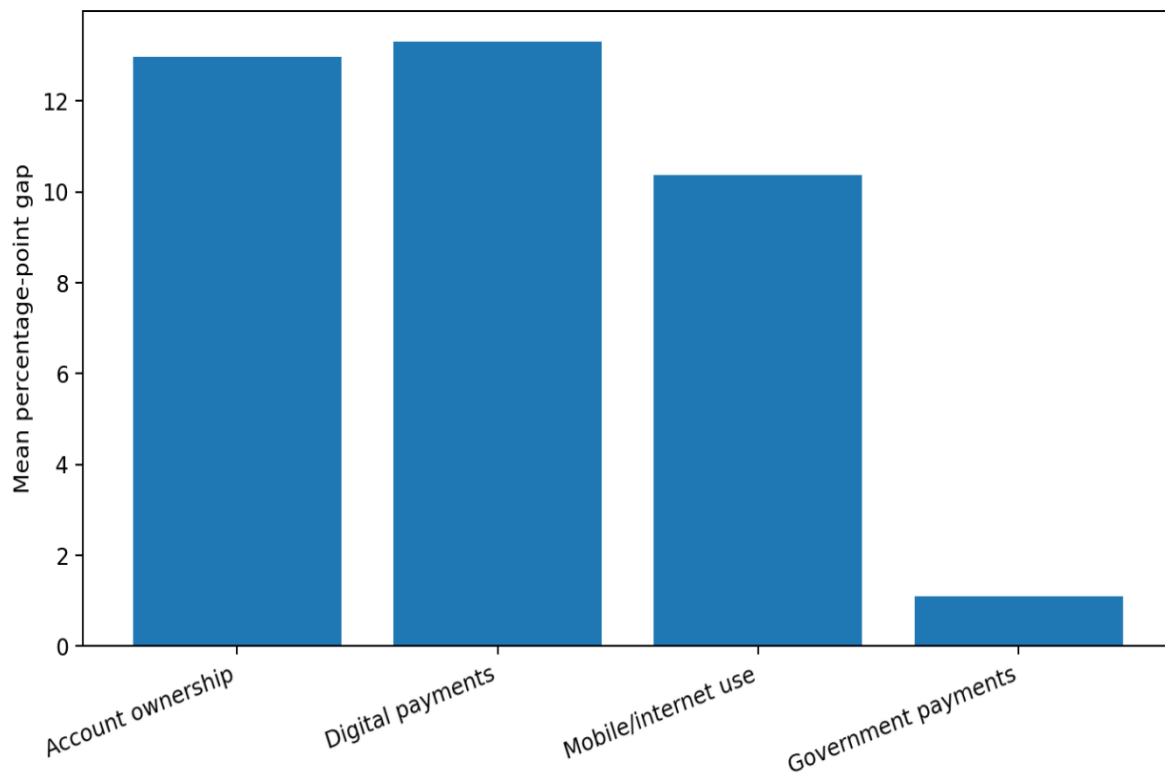


Figure 2. Income-Based Access Gaps

Table 2. Income-based access gaps in 2017

Indicator	Countries	Mean gap	Median gap	Maximum gap
Account ownership	144	12.97	12.84	33.16
Digital-payment participation	144	13.31	13.46	33.55
Mobile or internet account use	144	10.38	9.33	34.20
Receipt of government payments	144	1.09	2.10	18.45

3.3 Trust and Administrative Barriers

The results reveal that administrative and financial obstacles remained as an obstacle to formal accounts. Financial institution service costs were the most common barrier among adults who do not have a financial institution account. 30.43 per cent on average of adults without bank accounts said that financial services were too costly. 22.50 per cent of unbanked adults reported that they lacked documentation they needed. This implies that the lack of identification needs and the formality of the procedures may exclude certain segments of the population which are economically vulnerable from financial access. Although financial services have spread into the digital world, 20.47 per cent of respondents reported distance from financial institutions. An average of 19.31 per cent of unbanked adults reported a lack of trust. Although trust was not the biggest obstacle, its prevalence indicates that increased infrastructure and account availability may not lead to acceptance. Individuals can choose not to use formal or digital systems if they are worried about reliability, security, unexpected fees or institutional treatment. As seen in Figure 3, high cost is the most commonly cited obstacle to account ownership, followed closely by the lack of documentation, distance from financial institutions and lack of trust. As shown in Table 3, 30.43% of unbanked adults found financial services to be too costly. Twenty-two point 50% were hampered by documentation issues, 20.47% by distance and 19.31% by lack of trust.

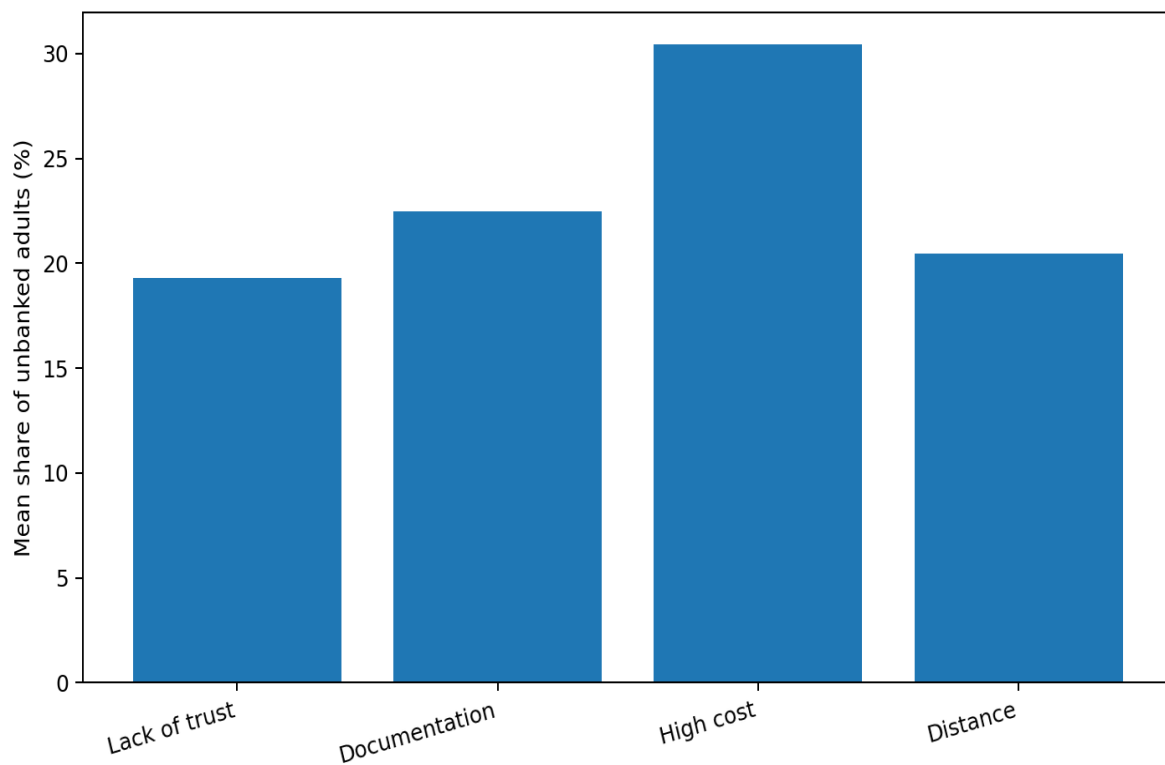


Figure 3. Barriers to Account Ownership

Table 3. Barriers to account ownership in 2017

Reported barrier	Countries	Mean (%)	Median (%)	Standard deviation
Financial services are too expensive	112	30.43	28.26	14.30
Lack of necessary documentation	112	22.50	22.50	10.45
Financial institutions are too far away	112	20.47	20.31	10.85
Lack of trust in financial institutions	112	19.31	17.82	10.45

3.4 Regional Patterns and Relationship between Burden and Access

Access to welfare payments varied significantly by region for digital welfare. The average low-income account-ownership rate in Europe and Central Asia is 71.28 per cent, compared with Sub-Saharan Africa which had a rate of 32.12 per cent and South Asia a rate of 42.28 per cent in 2017. The same goes with the participation in digital-payments, which ranged from 66.05 per cent in Europe and Central Asia to 20.30 per cent in South Asia. South Asia had a very low average of only 5.13 per cent of its accounts operated from a mobile or internet. The use of mobile phones was also low in Latin America and the Caribbean at 7.08 per cent. The results show that there is a disconnect in the extent of digital engagement as the number of accounts grew. According to the measure of administrative burden, the region with the highest average administrative burden was Latin America and the Caribbean (29.80 per cent). It was followed by Sub-Saharan Africa at 24.65 per cent and East Asia and the Pacific at 22.30 per cent. The Middle East and North Africa and Europe and Central Asia had the lowest regional averages. The administrative burden-poorest 40 per cent account ownership correlation is negative as shown in Figure 4. A weak relationship was found for countries with higher administrative burden having lower rates of low-income account ownership. There are significant variations in access to digital welfare across regions as outlined in Table 4. North America had the highest percentages of account ownership and rates of digital use, while Sub-Saharan Africa and South Asia had significantly lower rates of access. The highest administrative burden was in Latin America and the Caribbean.

Table 4. Regional patterns of access and administrative burden in 2017

Region	Account ownership among poorest 40%	Digital payments among poorest 40%	Mobile or internet account use	Government payments	Administrative burden
East Asia and Pacific	65.52	54.08	21.86	32.33	22.30
Europe and Central Asia	71.28	66.05	28.16	44.25	19.61

Latin America and Caribbean	40.17	31.50	7.08	22.37	29.80
Middle East and North Africa	50.95	41.47	13.18	23.67	18.71
North America	92.50	89.42	60.85	50.74	—
South Asia	42.28	20.30	5.13	11.68	20.71
Sub-Saharan Africa	32.12	25.86	15.86	11.49	24.65

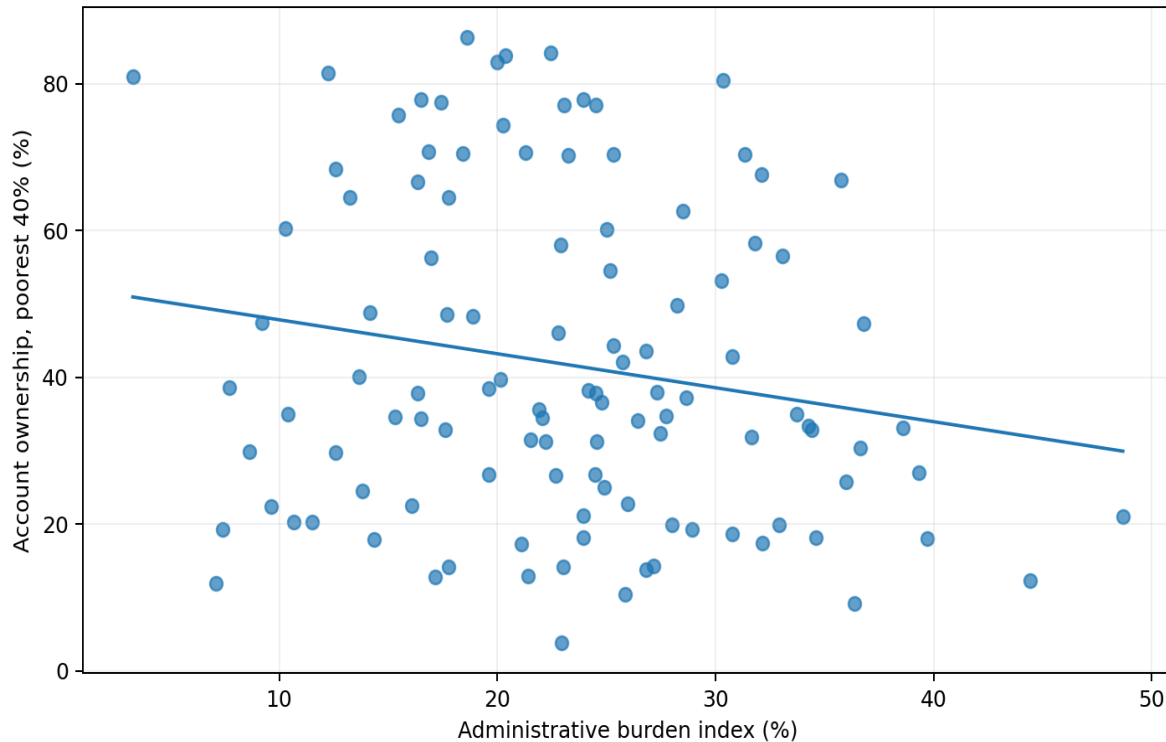


Figure 4. Administrative Burden and Low-Income Account Access

There was a negative link between administrative burden and account ownership for the poorest 40 per cent. The correlation coefficient was -0.18 across 112 countries, suggesting that a greater burden was generally correlated with lower low-income account ownership. The relationship was, however, weak, such that administrative burdens do not account for differences in access. Others structural factors such as national income, telecommunications systems, development of financial sector, welfare systems and government capacity can also affect access. The results should, therefore, be seen as country-level associations, and not as a direct effect of the administrative barriers on individual households having remained outside.

4. Discussion

The findings show that financial access for the poorest 40 per cent of the population actually worsened during the study period, though the number of accounts owned by the poorest did increase. This finding reinforces the idea that financial inclusion should be gauged not just by account ownership, but also by their ability to use accounts of their own volition to receive, withdraw and manage payments (Demirgüç-Kunt et al., 2022). The rise in payments received from the government also captures the "reach" of government-to-person transfers to low-income beneficiaries into formal financial systems (Gelb et al., 2022).

The relatively low adoption rates of mobile phones and the internet for account access indicate that the shift to digital participation from account ownership has not been fully realized (Malladi et al., 2021). This inequality between the top 60 per cent and the bottom 40 per cent of the population, over the long term, shows that the digital welfare system is embedded in existing socioeconomic inequalities. Adults with higher levels of wealth are more likely to own devices, have access to connectivity and skills to use digital services. These patterns align with evidence of the strong association between digital connection and broader development outcomes and social opportunities (Clark et al., 2022). This income divide can also overlap with gender, with women with low incomes often lacking independent access to mobile phones and digital services (Jeffrie et al., 2023). Analogous evidence from urban Africa indicates that gender, income and education influence the benefit from information and communication technologies (ICTs) (Zindi et al., 2025).

Regional variation also highlights the link between national infrastructure and institutional capacity and digital

welfare inclusion. Account use on mobile and Internet devices provides an indicator of connectivity and financial networks, and digitally mature public services, which has been observed to be higher in developed regions. The development of telecommunications is thus still considered to be an important structural condition for inclusive digital delivery (Giovannetti et al., 2025). The role of international communication institutions as a coordinating function is also relevant, as the access to them is dependent on cheap networks, the existence of a common standard and the implementation capacity of the participating countries (Canton, 2021). The results of the cost, documentation and distance indicate that digitalisation does not take the place of traditional administrative barriers. Rather, these barriers can be disseminated in virtual spaces.

Applicants may still be asked for identity papers, be required to travel for verification, be asked to keep a minimum sum, and be asked for aid from intermediaries. These experiences are related to the concept of digital administrative burden, where citizens have to deal with the costs of understanding and completing technology-based procedures (Peeters, 2023). The review by Hegemann and Ritz (2026) also indicated that digital services can either alleviate or exacerbate burden for different users, depending on their capacity and resources, or their skills. The documentation barriers are particularly significant since welfare is frequently distributed digitally and requires correct identity documentation and databases that can be used interoperably. The Rythu Bharosa programme experience illustrates that classification and data errors can prevent eligible beneficiaries from accessing the program, and could potentially complicate the process of fixing errors (Masiero & Buddha, 2021). If standardised systems are not able to capture complex household needs, automated processes can then generate unequal coverage (Larsson, 2021). This further emphasizes the importance of thinking about digital welfare in terms of rights, fairness and data justice (Van Toorn et al. 2024).

Association between low trust and financial exclusion indicates that financial exclusion is not dependent on infrastructure only. Citizens could be reluctant to utilize digital welfare provision because of concerns about fraud, loss of welfare benefits, surveillance, or grievance redress. Clear rules, information, payment systems and human support can be beneficial for strengthening trust. These are key factors in user-centred digital-government approaches (Peña-López, 2020). Administrative capacity, therefore, must be strengthened through institutional reform, along with technological expansion (Putri et al., 2026). Another skills gap is evidenced by the low rates of mobile and internet use. Digital systems make the assumption that users are able to run devices, comprehend interfaces and interpret electronic messages. This can be problematic for citizens with lower levels of education, or who have not been exposed to digital services before. Hence, e-government reform must address several aspects of digital and data literacy (Steiner-Khamsi, 2026).

Essential benefits must not be denied due to a lack of digital access: public services should continue to have assisted and offline channels. The findings are relevant for social-protection policy as a whole. Enabling digital delivery can complement universal coverage provided systems are affordable, accessible and responsive to vulnerable groups. This is particularly relevant in areas where there is limited coverage of social protection (Batchabi, 2022). The inclusive digital delivery is also essential for strengthening resilient welfare systems that are able to react to climate and economic shocks (Gama, 2024). These priorities fall under the international scope of relating social protection to the Sustainable Development Goals (SDGs) (Dreval et al., 2025).

The results indicate that digital delivery of welfare does not necessarily eliminate exclusion but can increase access. It relies on the ability of governments to tackle income inequalities, documentation issues, cost, distance, trust and digital competence. Digital welfare should be seen as a social and institutional system and its success measured by tangible access, equity and lived experiences of those who benefit.

5. Conclusion

This research was conducted to investigate the patterns of access to digital welfare services, related exclusion and administrative burden of low-income groups. The results reveal that the ownership and use of accounts and the use of digital payments both grew over time, especially for the poorest 40 per cent. But, there was no parallel increase in the use of mobile and online accounts. This indicates that mere access to an account is not enough to ensure digital inclusion. It also showed that there was a significant disparity in outcomes between poor and rich children. The biggest disparities were in terms of account ownership, participation in digital payments, and mobile or internet access. While government payments seemed to be more evenly distributed to poorer groups, many of those who are to benefit from government payments were still faced with barriers that may constrain their capacity to manage and access such payments on their own. The top three obstacles to financial access were: cost, documentation requirements, distance from financial institutions, and lack of trust. The results from this study are consistent with the findings from other research that suggest there are no single causes of digital welfare exclusion. It stems from economic deprivation, lack of infrastructure, difficult administrative processes, lack of digital skills and institutional mistrust. The study concludes that digital welfare systems can achieve greater speed and reach of social protection, but can also reinforce inequalities if access to digital welfare is not addressed. Governments should thus augment the digital delivery with low-cost services, easy-to-use documentation, effective grievance systems, and offline options along with facilitated access. There is also a need to pay more attention to digital literacy, data accuracy and the trust of the users. To evaluate the effectiveness of digital welfare, one should not only consider the number of accounts opened or payments forwarded, but whether the low income households can securely access welfare benefits without excessive administrative burden and independently.

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