GSMA



Mobile money

How digital payments have impacted economic growth

GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

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GSMA Mobile Money

The GSMA Mobile Money programme works to accelerate the development of the mobile money ecosystem for the underserved.

For more information, please contact us:

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BILL & MELINDA GATES foundation

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Contents

Introduction:
Searching for mobile money's impact beyond financial inclusion 05

Evidence for mobile money's positive impact on GDP 08

Quantifying the macroeconomic impact of mobile money 11

Conclusion:
How policy can drive mobile money adoption and economic growth 15

Appendix 18

Figure List

Figure 1	Registered mobile money accounts by region, 2013–2022 Number of registered acconts (millions)	06
Figure 2	The potential impact of mobile money on socio-economic outcomes	07
Figure 3	Simulated impact of mobile money on GDP in mobile money countries, 2013–2022	12
Figure 4	Simulated impact of mobile money adoption, ecosystem transactions and higher transaction values on GDP in mobile money countries, 2022	13
Figure 5	Simulated contribution of mobile money to GDP, in absolute and percentage terms, at the end of 2022 by region	15

Introduction: Searching for mobile money's impact beyond financial inclusion



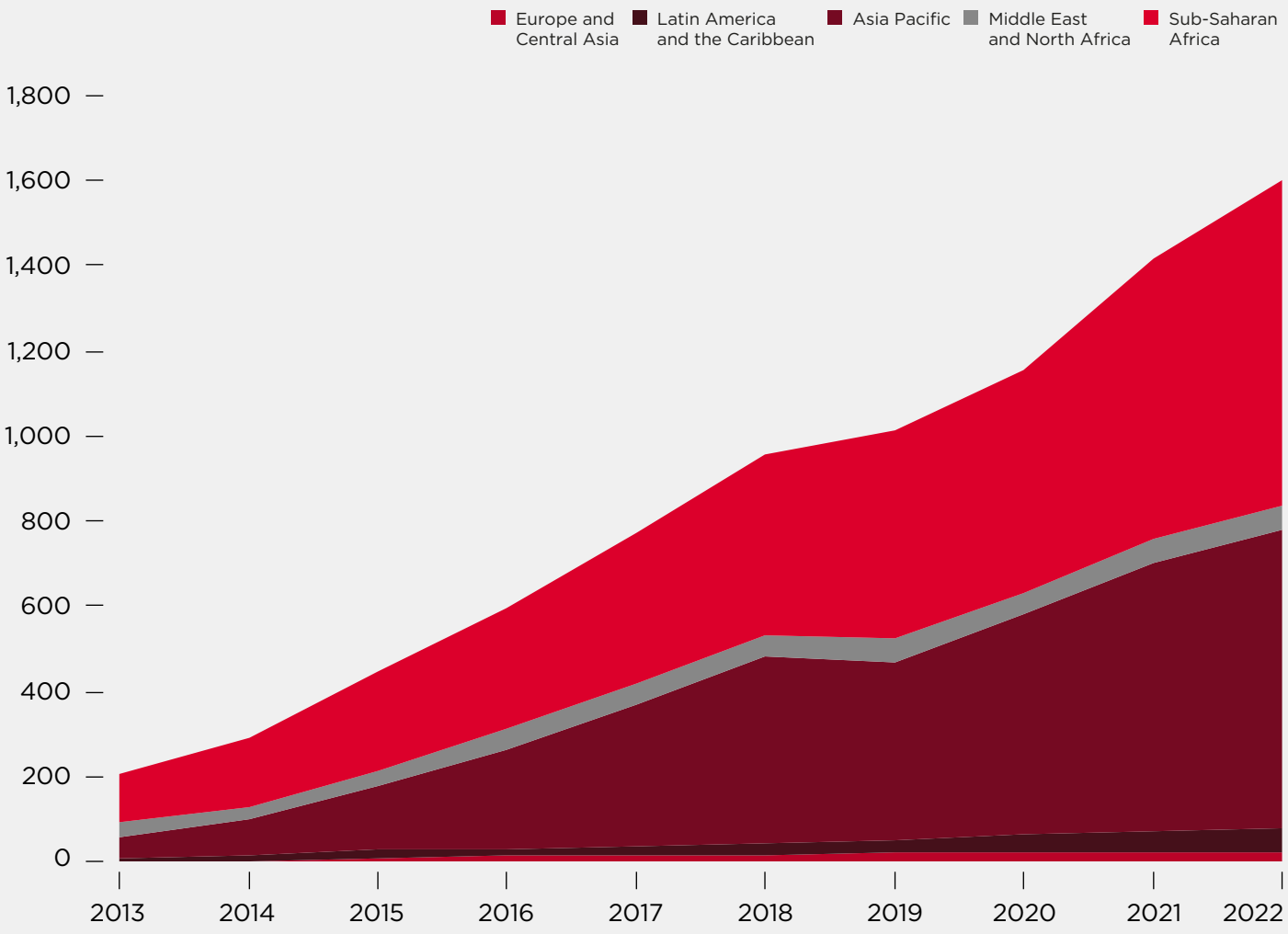
Over the past decade, mobile money has become a mainstream financial service across many low- and middle-income countries (LMICs).

Between 2013 and 2022, the number of registered mobile money accounts increased from 200 million to 1.6 billion (Figure 1). The COVID-19 pandemic led to an increase in mobile money adoption, as people switched from cash to digital payments. In addition, consumers now use a broader and more sophisticated range of mobile money products, including international remittances, merchant payments and bulk disbursements.

Figure 1

Registered mobile money accounts by region, 2013–2022

Number of registered acconts (millions)



Source: GSMA Mobile Money Global Adoption Survey

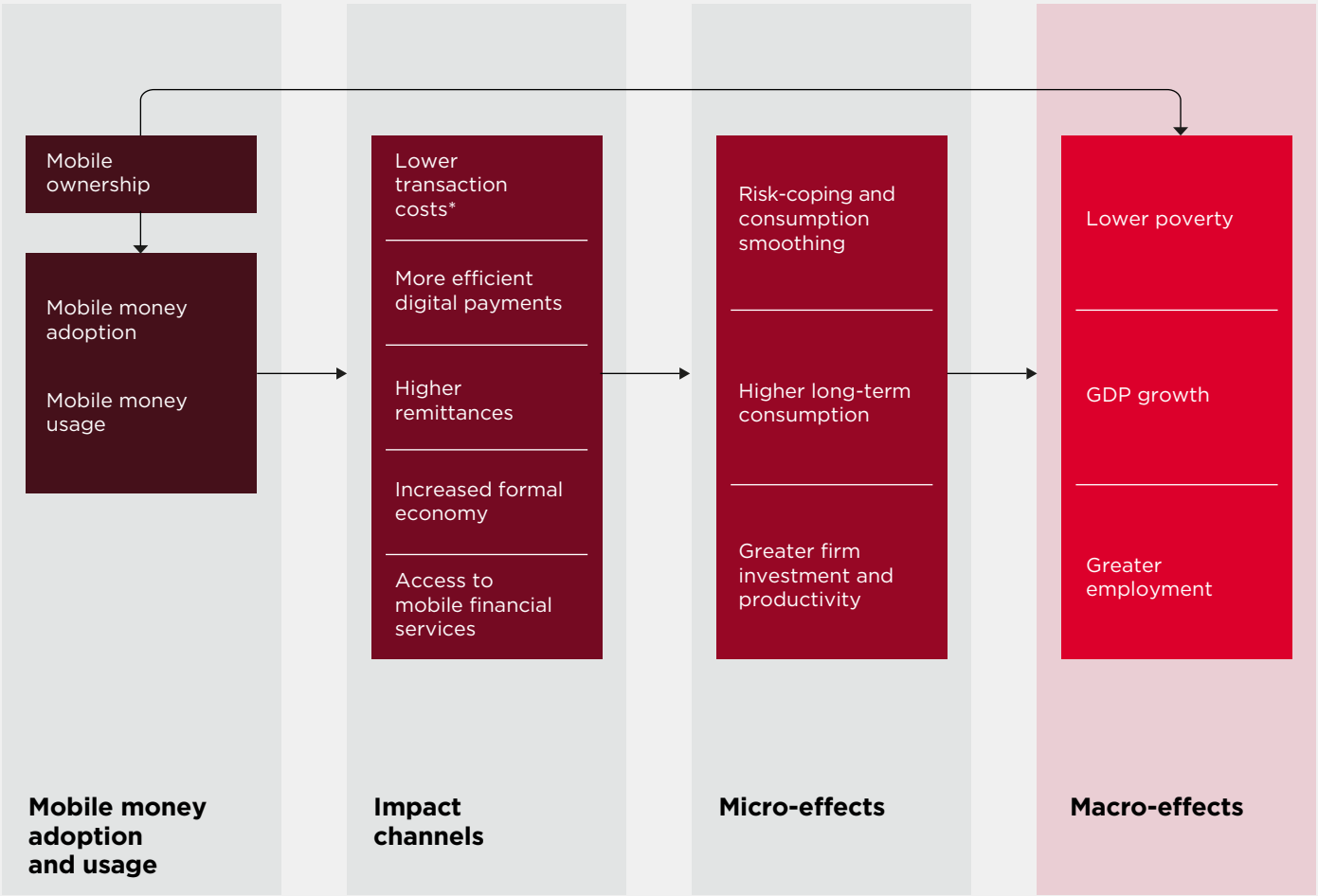
Several research papers and empirical evidence have highlighted the positive social and economic impact of mobile money on individuals, households and businesses. These examples have shown that mobile money reduces transaction costs for users and helps households manage their cash flow, enabling them to smooth consumption and manage risk. Mobile money allows enterprises to expand by facilitating faster and more efficient transfers. As a result, mobile money can lead to an increase in poverty reduction, employment, and gross domestic product (GDP).

While the micro-level effects are well documented, the macroeconomic impacts of mobile money are much less understood – particularly in relation to GDP growth (Figure 2). Economic theory and previous literature have established a link between financial inclusion and economic growth. However, there is a significant evidence gap on whether digital forms of financial inclusion, such as mobile money, have a similar effect.

This report summarises the results of an econometric analysis carried out by GSMA Intelligence, commissioned by the GSMA Mobile Money programme. It establishes a causal link between the adoption of digital financial services in LMICs and long-term economic growth. It relies on two global, unique and novel datasets on mobile money usage and regulation that cover the 2013–2022 period. Further details on the econometric framework applied, as well as the data used, can be found in the technical paper.[1]

Figure 2

The potential impact of mobile money on socio-economic outcomes



* Mobile money can offer lower transactions costs for certain transactions compared to other digital financial service alternatives.

Source: GSMA Intelligence

1 See GSMA Intelligence (2023), Beyond financial inclusion: Does mobile money drive GDP growth?

Evidence for mobile money's positive impact on GDP





Overall, an increase in mobile money adoption can lead to a rise in GDP. The study found that a 10 percentage point increase in mobile money adoption[2] can increase GDP by 0.4% to 1.0% in a year.

Comparing this to the uptake of mobile technology, the study found that a 10 percentage point increase in mobile adoption increased GDP by 1% to 1.3%. Previous efforts to assess the impact of mobile technology on economic growth have tended to find that a 10% increase in mobile adoption increases GDP by between 1%–3%, depending on the econometric methodology, time period and geographic scope. As a result, the findings are consistent with past literature, as the combined impact of mobile and mobile money falls within this range.

2 The number of registered mobile money accounts in each market divided by the country's population in the relevant year.

Result 2

Higher adoption of mobile money combined with higher transaction values drive economic growth.

In addition to the increase in mobile money adoption, there has also been more intense use of mobile money services per user. The average annual transaction per registered account increased from just over $500 to almost $800 between 2013 and 2022.[3]

Result 3

Mobile money has a greater impact on GDP growth as the share of ecosystem transactions increases.

The study found that the impact of mobile money is enhanced through broader and more intense usage of mobile money. Specifically, greater transactions and the use of products such as merchant payments, international remittances, bill payments and bulk disbursements increased the economic impact of mobile money.

Consumers are using a broader and more sophisticated range of mobile money use cases (products). In 2013, almost two-thirds of global mobile money transactions were cash-ins, cash-outs or airtime top-ups. By 2022, around 60% of global transactions were driven by person-to-person payments, international remittances, merchant payments, and bill and bulk payments. The proportion of 'ecosystem transactions'[4] doubled from 10% to 21% during the same period.

Result 4

The effect of mobile money adoption on GDP increases as more users adopt the service in a country.

The study showed that mobile money experiences significant network effects, with the economic impacts increasing as more users adopt the service. This is similar to what has been found in most markets where digital and telecommunication services have grown significantly. The benefits of using mobile money increase when there are more people to transact with. Governments and businesses are also more likely to enable and offer digital payments when there is a larger customer base that can drive economies of scale.



3 GSMA estimates and forecasts based on Global Adoption Survey data.

4 These include bill payments, bulk disbursements, merchant payments and international remittances.

Quantifying the macroeconomic impact of mobile money



GDP

+$600 billion

As of 2022, total GDP in mobile money countries was almost $600 billion greater than it would have been without mobile money.

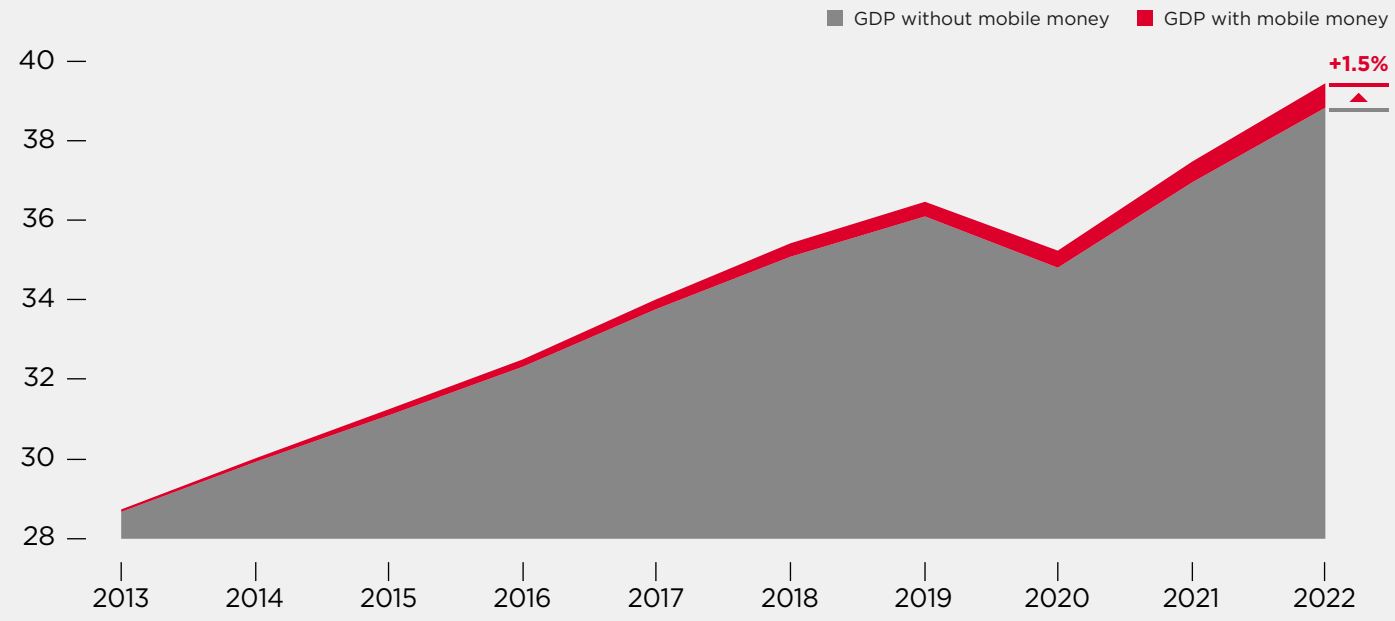
The four results were applied to how mobile money is used in each country with a mobile money service[5] between 2013 and 2022. Through this, it is possible to simulate how GDP would have evolved during the same period – with and without mobile money (Figure 3).

At the end of 2022, total GDP was almost $600 billion[6] higher than it would have been without mobile money in these countries. This is equivalent to mobile money increasing GDP by 1.5% at the end of the period.

Figure 3

Simulated impact of mobile money on GDP in mobile money countries, 2013–2022[7]

GDP (2017 $PPP, trillions)



Source: GSMA Mobile Money Global Adoption Survey

5 Countries in which mobile money was available at some point between 2013 and 2022. The full list of mobile money countries can be found in the Appendix.

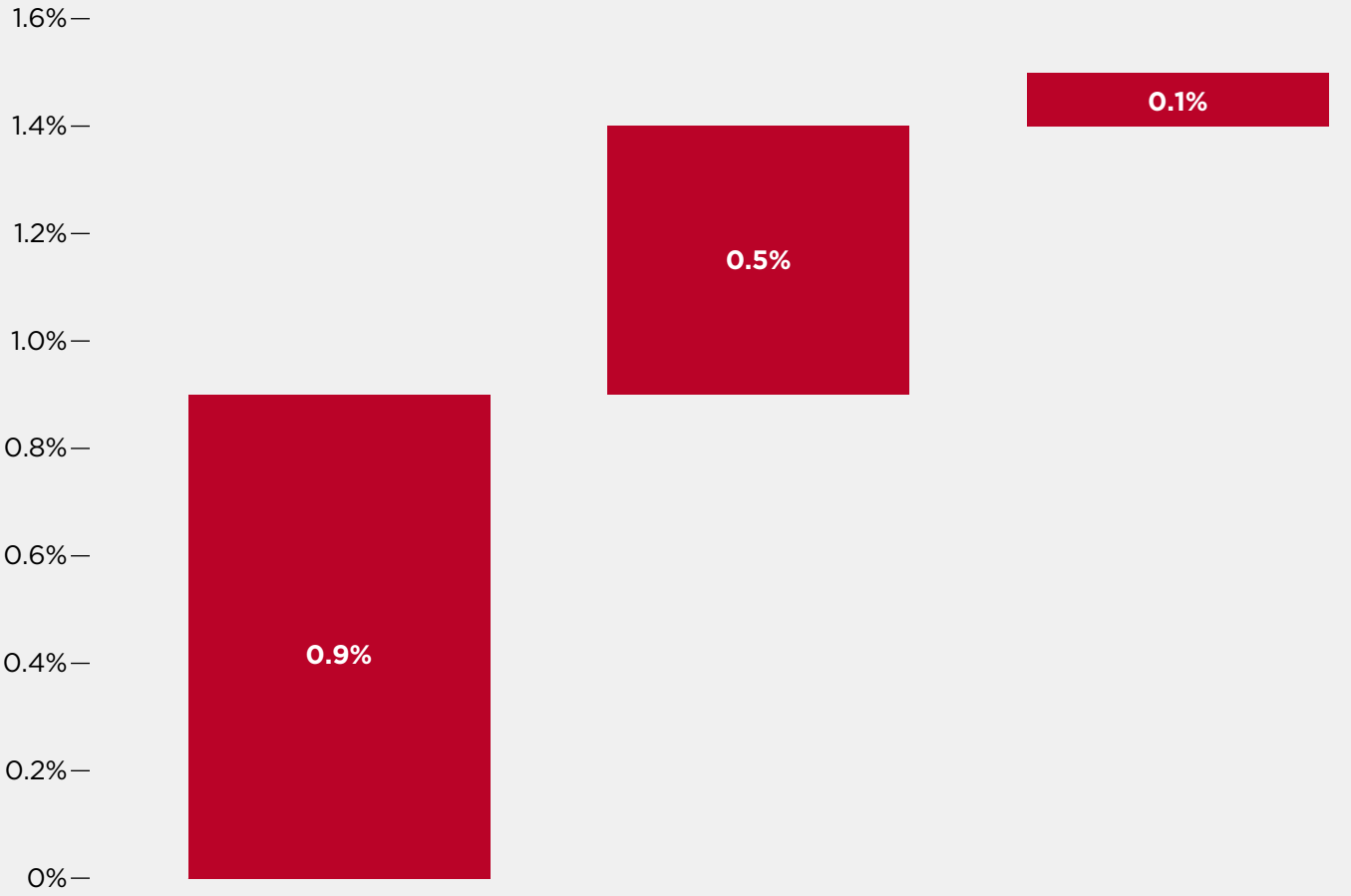
6 In 2017 purchasing power parity $

7 The condition stated in result 1 was applied to each mobile money market to determine the change in GDP brought about by mobile money adoption. The value of the change in GDP for each country is added up to illustrate the overall GDP impact shown above across all mobile money countries.

Around 40% of the impact of mobile money was driven by more frequent and broader use of mobile money products. Specifically, if transaction values and the proportion of transactions accounted for by P2P, cash-in/out and airtime had not increased since 2013, then mobile money would have increased GDP by 0.9% in 2022. However, the growth of more advanced digital financial services added a further 0.5% to GDP, while the increase in transaction values added 0.1% (Figure 4).

Figure 4

Simulated impact of mobile money adoption, ecosystem transactions and higher transaction values on GDP in mobile money countries, 2022

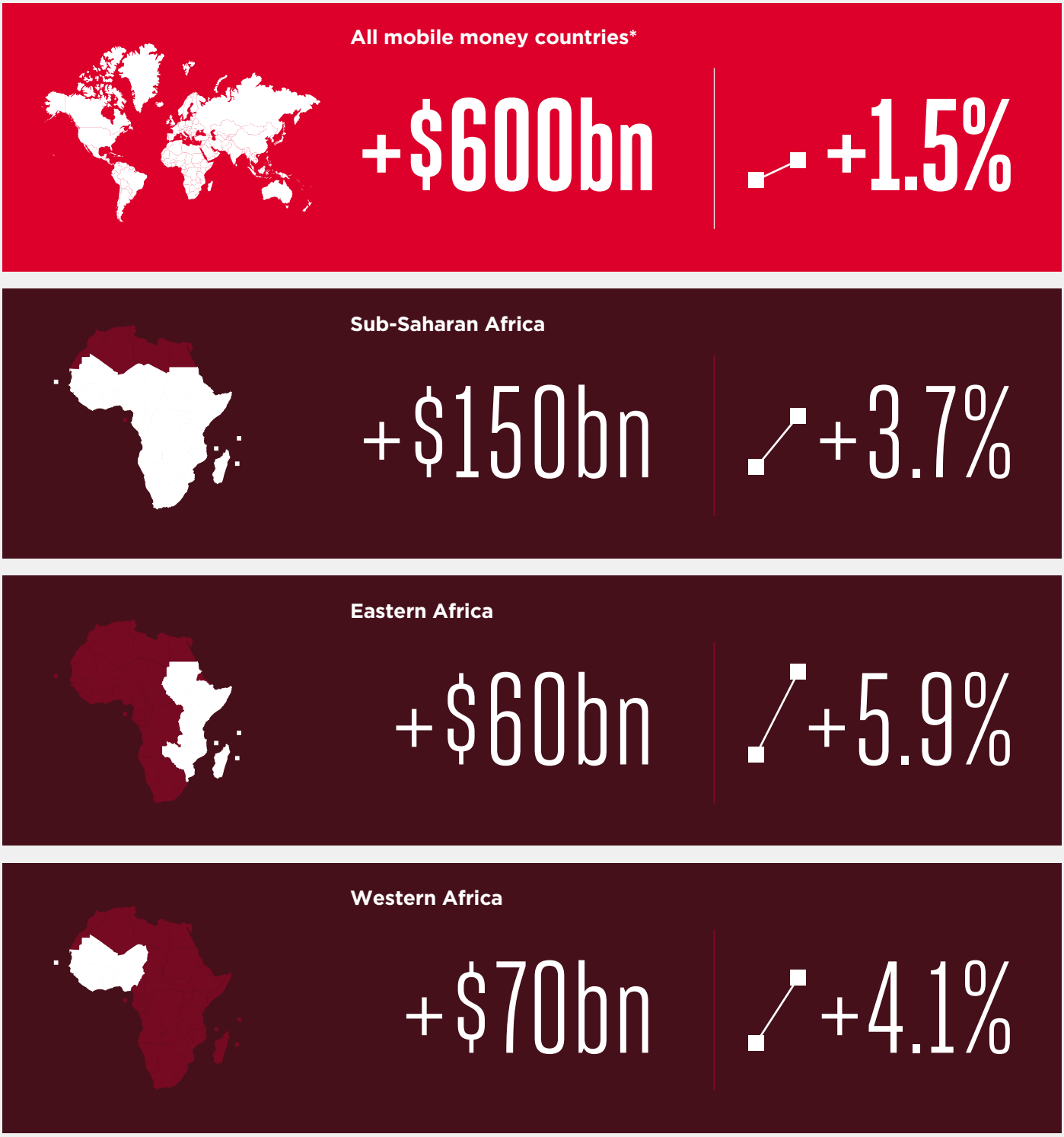


Source: GSMA Mobile Money Global Adoption Survey

Sub-Saharan Africa has seen the highest levels of mobile money adoption globally, driven by East and West Africa. In these regions, mobile money led to significant increases in GDP at the end of 2022 (Figure 5). For Sub-Saharan Africa, the contribution to GDP at the end of 2022 was more than $150 billion, equivalent to mobile money increasing the region's GDP by 3.7%. When considering the sub-regions that have achieved the highest levels of mobile money adoption, namely East and West Africa, the simulations suggest that by 2022 mobile money had increased GDP by 5.9% and 4.1% respectively.

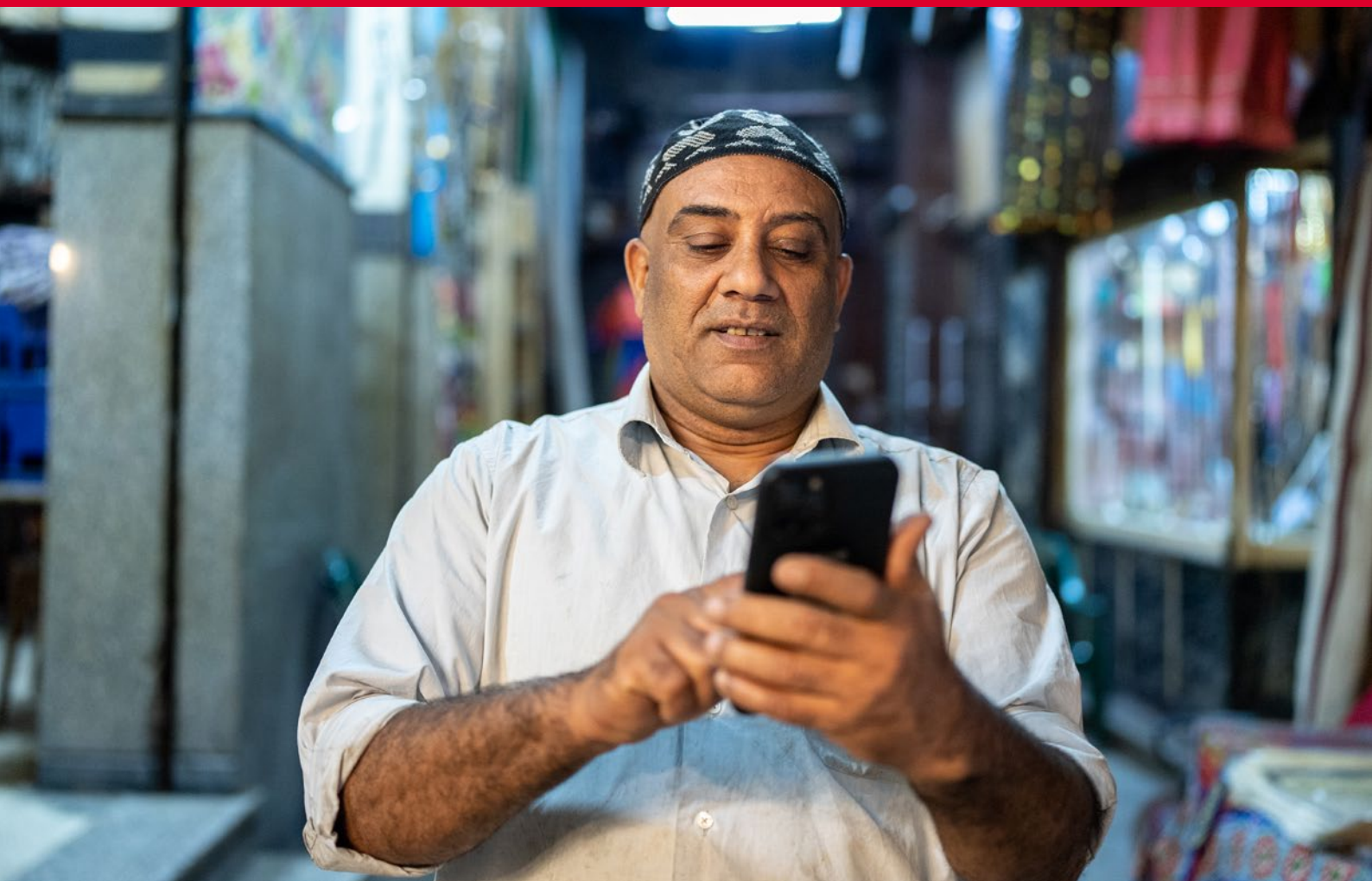
Figure 5

Simulated contribution of mobile money to GDP, in absolute and percentage terms, at the end of 2022 by region



*view the list of mobile money countries in the Appendix

Conclusion: How policy can drive mobile money adoption and economic growth



The study has shown that digital financial inclusion can drive long-term GDP growth, just as traditional financial services have been shown to do.

Globally, 1.4 billion adults remain unbanked, almost a quarter of the adult population. In LMICs, around 30% of the adult population is unbanked, while in low-income countries only, the proportion is around 60%.[8] Mobile money makes it easier to reach populations that are underserved by traditional financial institutions, unlocking economic growth in countries with low levels of financial inclusion. These findings can have important implications for policymakers.

Addressing policy hurdles that slow mobile money adoption

Recent changes to mobile money licensing have strengthened the industry's growth. In Nigeria, Payment Service Bank (PSB) licenses introduced in 2018[9] have enabled mobile network operators to offer mobile money services. In 2020, the National Bank of Ethiopia amended payment system legislation[10] to support new market entrants providing mobile money services. However, there is less support for fintechs in this in this space – many of which are not regulated in the same way as mobile money. Central banks need to formulate an overarching policy and regulatory framework to support emerging fintech business models. Such legislation is important as it can minimise complications arising from existing regulations, delays to products and service approvals, and risk assessments.

Know-your-customer (KYC) regulations have become more enabling for many mobile money providers, according to GSMA's 2022 Global Adoption Survey. However, certain challenges – such as the lack of access to national identity documents needed for mobile money registration – persist in some countries. Implementing supportive mobile money licensing and KYC regulations can drive the adoption of mobile money and lead to long-term economic growth.

8 Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank.

9 Central Bank of Nigeria. (26 October 2018). Circular to all Stakeholders on Guidelines for Licensing and Regulation of Payment Service Banks in Nigeria.

10 National Bank of Ethiopia. (2020). Licensing and Authorization of Payment Instrument Issuers Directive No. ONPS/01/2020.

Policy can hinder wider and more frequent use of mobile money

The study found that higher average transaction values and greater shares of ecosystem transactions drive economic output. This should be considered by policymakers, especially concerning international remittances (which are significant contributors to GDP in many LMICs), person-to-government payments, and taxation.

Many countries in Sub-Saharan Africa have implemented mobile money taxes to increase government revenue collection. For instance, Cameroon, Ghana and Tanzania introduced mobile money levies in 2022. If higher taxation leads to lower average transaction values, then this can negatively impact economic output. Policymakers need to consider this effect when evaluating the net outcome of mobile money taxation.

Regulations that carefully consider mobile money taxation and drive more advanced mobile money use cases, such as international remittances, can improve economic performance.

Tackling wider barriers to mobile adoption

The research highlights the importance of mobile coverage and usage gaps. Mobile money is only accessible if individuals can access and use a mobile device, while mobile internet offers a broader range of financial products and services. At the end of 2022, one in three do not use mobile services at all and over half the population in LMICs was not using mobile internet services. For mobile money and digital financial services to reach more people in LMICs and promote economic growth, barriers to mobile and mobile internet adoption need to be overcome. These include digital skills, handset affordability, relevance, and safety and security.[11]

11 For further discussion, see GSMA, State of Mobile Internet Connectivity Report

Appendix



The countries in which mobile money was available at some point between 2013 and 2022 are listed below.

Afghanistan
Argentina
Armenia
Bangladesh
Belize
Benin
Bolivia
Botswana
Brazil
Burkina Faso
Burundi
Cambodia
Cameroon
Central African Republic
Chad
Colombia
Congo
Congo, Democratic Republic
Cote d'Ivoire
Dominican Republic
Egypt
El Salvador
Eswatini
Ethiopia
Gabon
Gambia
Georgia
Ghana
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
India
Indonesia
Iran
Iraq
Jordan
Kenya
Kyrgyzstan
Laos
Lesotho
Liberia
Madagascar
Malawi
Malaysia
Maldives
Mali
Mexico
Mongolia
Morocco
Mozambique
Myanmar
Namibia
Nepal
Nicaragua
Niger
Nigeria
Pakistan
Papua New Guinea
Paraguay
Philippines
Rwanda
Senegal
Sierra Leone
Somalia
South Africa
South Sudan
Sri Lanka
Sudan
Tanzania
Thailand
Togo
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