



Digitalizing Microfinance in Europe

Research Paper

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Abstract

The paper summarizes the results of the survey on the use of fintech solutions and digitalization of the customer relations and lending processes among MFIs in Europe. While there is a widespread recognition about the need to use digital solution to a larger degree, the ability and willingness of MFIs to do that varies greatly. Small institutions claim lack of financial resources as the main challenge in bringing technology to their organizations. The most useful digital services are those related to the automation of loan application and management of the related documentation. Small scale of operations of most MFIs in Europe is a barrier to the introduction of fintech solutions. The results also show that MFIs are cautious about not losing their competitive advantage of personal relationship with their clients. Fintech and digitalization solutions should be applied based on a rational calculus of costs and benefits, in line with the mission of the organization and the needs and capabilities of the clients.

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1. Introduction

Finance and technology have long been interlinked, however the linkage has become particularly strong and far-reaching with the invention of internet and the rapid adoption of smartphones. Consequently, financial technology and digitalization impacts all business models and processes of the financial sector, increasingly including microfinance.

Fintech and Digitalization

Fintech or financial services technology is broadly defined as any technological innovation in financial services leading to using digital technologies that transform business models to generate new revenues and value-adding opportunities. These digital tools often disrupt established business models by creating new and efficient means of providing services. Financial technology leads to digitalization¹ of internal processes, customer interactions with financial institutions and digital financial products like digital credit or deposits. New organizations have the advantage of being 'digital natives' and be able to create an environment for digital business whereby digital information is at the core of their business models, while the older ones need to digitize the content and re-organize the old processes by using digital solutions.

In the context of financial inclusion, fintech brings many opportunities. Adopting financial technology has large potential to financially include people whom the traditional methods failed to reach. More and more traditional banks, MFIs and developmental organisations make use of financial technology to deliver their services. Fintech opens channels to include considerable number of excluded individuals and smaller companies, offering solutions that can be applied at scale and at low cost.

In microfinance, often referred to as people- and paper-intensive industry, digital solutions could allow for speedy credit decisions and loan disbursement, releasing loan officers' time to serve more clients in more places than ever before. Equipping MFIs with digital technology allows the institutions to work more efficiently and cost-effectively, be more agile and responsive to the client needs.

Fintech and Value Chain in Microfinance

Fintech has the potential to impact the whole financial value chain, with parts of or the whole value chain being digitally transformed. If we look at the chain of value producing activities of a microfinance institution, we can identify several stages in the value creation process at which costs and benefits can be maximized using digital solutions. Figure 1 presents a typical value chain of microfinance, organized around three key functions: front-office activities related to customer relations and interface with clients, back-office activities related to data organization, processing and analysis, and funding focusing on securing financial resources for the business. Technological solutions can be introduced at each stage of the value chain or business cycle as well as throughout the chain creating a seamless solution to provide microfinance services.

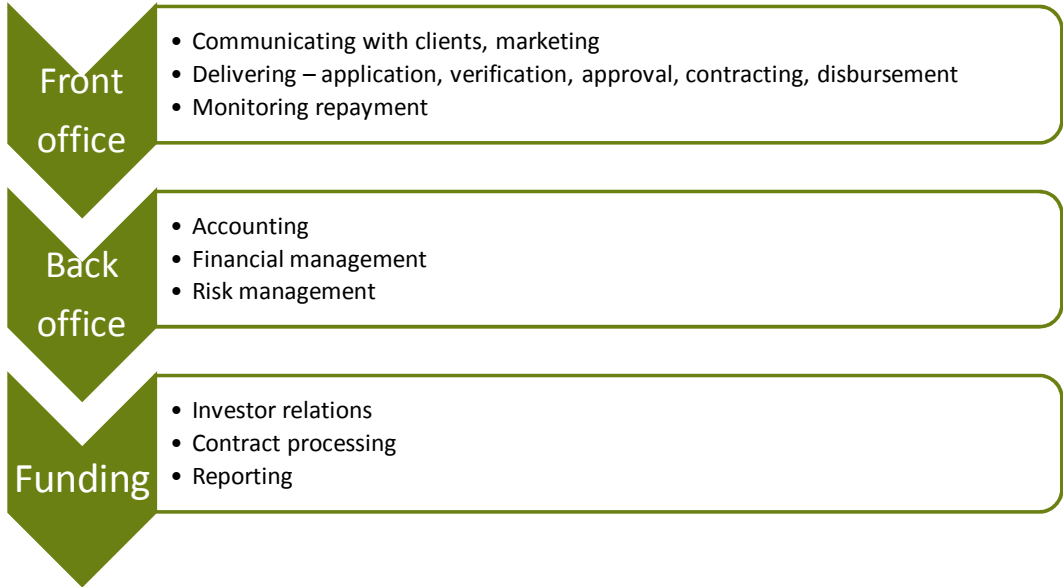
Front Office

In the operations of the front office, digitalizing communication and marketing allows for reaching out to a wider audience, including the tech-savvy generation. It can also fasten communication with current and potential clients about the service offer and product features. In the credit delivery

¹ Digitization, digitalization and digital transformation are often used interchangeably but they have different meaning. For the discussion of the differences and use of the terms, see for example: <https://www.i-scoop.eu/digitization-digitalization-digital-transformation-disruption/>.

process, online loan application, electronic documentation, biometrics, e-contracts make the process less burdensome, especially in terms of reducing the travel time and documentation requirements.

Figure 1: Financial value chain in microfinance



Alternative credit scoring methods, such as psychometric testing, analysis of mobile usage, social media participation and app usage, expand the current credit bureaus limitations and bring new segments of the population and enterprises into financial services. They may provide relevant insights into which enterprises and individuals to finance, helping to overcome the lack of historical business and credit data as the major drawback of the traditional scoring models.

Loan disbursements, which are typically performed through bank accounts, can be improved by mobile (mobile wallet, mBanking) and internet banking. Monitoring of loan performance can be made more systematically using advanced tools for data analytics and cloud computing. The efficiency gains such as lower operating costs and reduced staff time add to the accuracy of data, effective on-going monitoring and ability to react quickly to the emergent problems.

Back Office

The rapid emergence of cloud computing is transforming the way financial institutions think about how they apply and consume their IT resources. The cloud is a paradigm shift in computing by which infinite computing capabilities and resources (servers, storage, networks, applications and services) are delivered as a service to customers using internet technologies. Cloud computing has the capacity to change completely the financial services landscape. By making enterprise-level banking systems and associated technologies available in the cloud on a pay-per-use basis, anyone, anywhere can have access to modern core banking systems without the cost and other barriers usually associated with this technology.

Funding

There are also gains in introducing technology to the process of attracting investment and securing investment deals. Introducing innovation into the traditional investment process, involving communication with the investors, documentation, contracting and performance reporting brings improvements in the speed and accuracy. Moreover, financial technology can be utilized to establish

new channels for investment, such as crowd and peer-to-peer lending. The crowdfunding platforms such as Babyloan allow to collect funds which are then lent to entrepreneurs through the MFIs. Additionally, there are examples of MFIs in Europe which, not being cooperatives or credit unions, attract small equity investments from individuals and companies.

Digitalizing front office operations brings about the question to what extent the interactions between clients and front office personnel can be replaced by technology. Interviews with three MFIs in Western Europe² revealed that self-service functions such as loan applications and repayments through the 'Customer Area' accessible online which do not require staff-client interaction increase to a certain extent the autonomy of the customer in conducting loan-related activities. However, another research conducted in Kenya³ concluded that there are three areas in which customers prefer personal interaction: 1) to establish legitimacy of a product, 2) to fully understand the product, and 3) to resolve problems. Clients prefer digital services for inquiries or services that can be automated, such as loan renewals or account-to-account transactions. In addition, women, elderly, and rural residents tend to favor more 'high touch' service, while men, youth, and urban dwellers tend to be more comfortable with 'low touch' approaches. Finally, there are activities that attract mid-range levels of human interaction, such as call centers, personal emails and texts, and in-app chats.

Stages of Digital Transformation

The speed with which businesses adopt digital solutions ranges from almost ignoring them and adopting the bare minimum to fully digital transformation of the business model and the delivery system. There are six stages of digital transformation⁴ which describe the engagement of a business in applying digital solutions:

- Stage 1: Business as Usual ... Organizations operate with a familiar legacy perspective of customers, processes, metrics, business models, and technology, believing that it remains the solution to digital relevance.
- Stage 2: Present and Active ... Pockets of experimentation are driving digital literacy and creativity, albeit disparately, throughout the organization while aiming to improve and amplify specific touchpoints and processes.
- Stage 3: Formalized ... Experimentation becomes intentional while executing at more promising and capable levels. Initiatives become bolder, and, as a result, change agents seek executive support for new resources and technology.
- Stage 4: Strategic ... Individual groups recognize the strength in collaboration as their research, work, and shared insights contribute to new strategic roadmaps that plan for digital transformation ownership, efforts, and investments.
- Stage 5: Converged ... A dedicated digital transformation team forms to guide strategy and operations based on business and customer- centric goals. The new infrastructure of the organization takes shape as roles, expertise, models, processes, and systems to support transformation are solidified.

² The Role of FinTechs in the Business Model of Microfinance Institutions in Western Europe: a Qualitative Study. Research Master's Thesis submitted by Benoît De Toffol & Pauline Vandeputte, Louvain School of Management UCL, 2017

³ Alexis Beggs Olsen 'Uniting Tech and Touch. Why Centaur Products Are Better for Consumers and Providers. Evidence from Kenya', Center for Financial Inclusion at Accion, November 2017

⁴ <https://www.altimetergroup.com/pdf/reports/Six-Stages-of-Digital-Transformation-Altimeter.pdf>

- Stage 6: Innovative and Adaptive ... Digital transformation becomes a way of business as executives and strategists recognize that change is constant. A new ecosystem is established to identify and act upon technology and market trends in pilot and, eventually, at scale.

While MFIs recognize the value and the necessity of digitalization of their business models, most of them seem to operate at stage 1 and 2, with some intentionally experimenting with new digital solutions (stage 3), and very few beginning to think strategically in this area (stage 4).

2. Research Objectives

The objective of the study is to review what digital solutions are employed in microfinance provision in Europe and assess the level of interest in introducing new solutions at various stages of the delivery of financial services.

The study wanted to establish to what extent the trend of digitalizing microfinance services delivery and other internal processes so popular in the countries with large microfinance markets of the global South is reflected by microfinance institutions in Europe. It also aimed at understanding to what extent digital delivery channels are relevant for European clients, and to what extent MFIs are ready for digital solutions. As digitalization is not only about the delivery channels, the study was interested in learning how the internal processes of MFIs evolve towards modern technological solutions.

3. Methodology

An on-line survey was conducted among microfinance institutions in the European countries. The questionnaire containing 17 questions was prepared using Google forms and the link to the on-line form was distributed via e-mail. The survey was completed by 36 MFIs from 16 countries of Eastern and Western Europe in May-July 2017.

Table 1: Number of survey respondents by country

Eastern Europe	Number of MFIs	Western Europe	Number of MFIs
Bosnia and Herzegovina	5	Belgium	2
Bulgaria	5	France	1
Hungary	1	Greece	4
Macedonia	2	Ireland	1
Moldova	1	Netherlands	1
Poland	1	Spain	1
Kosovo	1	UK	5
Romania	3		
Serbia	2		
Total for Eastern Europe	21	Total for Western Europe	15

4. Survey Results

The results of the survey reveal how MFIs in Eastern and Western Europe adopt new technologies in their operations, and shows the varying degrees and reasons for using new technology. In general, unlike banks and microfinance institutions in the developing world, MFIs in Europe are slow adopters of new solutions. So far, there are no fully digitalized and automated MFIs in Europe (stage 5 and 6), but all MFIs use technology to some degree and apply it for some parts of the lending process. There is recognition among the MFIs in the survey that at this point digitalization, at least on a partial basis, is necessary because without it they will become uncompetitive, if not completely obsolete, in relation to other credit providers in the market.

Digital Field Applications

Loan officers use digital solutions in 81% of MFIs participating in the survey. In 17% of MFIs loan officers use mobile phones while in case the others - tablets or laptops. Western European MFIs are more advanced in digitalizing the work of their field staff compared to MFIs in Eastern Europe. As many as 87% of Western Europe MFIs equip their credit officers with electronic devices compared to 76% of MFIs in the East.

Loan officers most often check credit registry records (33% of MFIs), do credit scoring (19%) and prepare preliminary credit offer (19%) through digital channels while in the field meeting with the potential client.

Figure 2: Procedures performed by loan officers using digital channels (% MFIs)

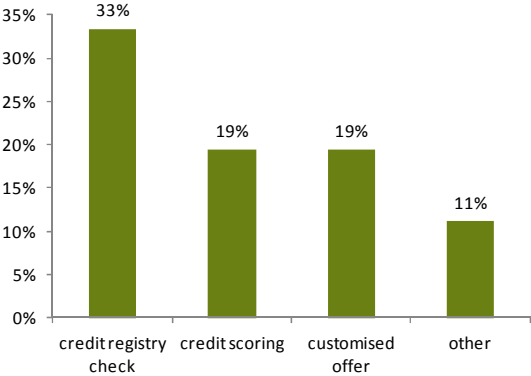
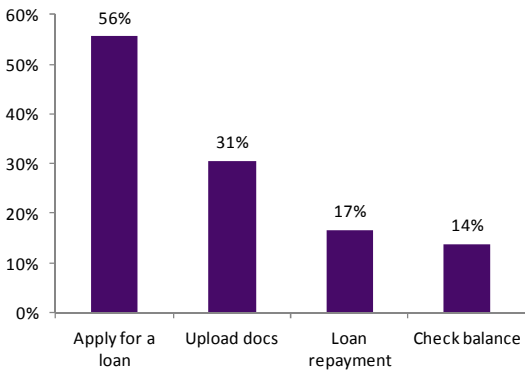


Figure 3: Procedures performed by clients using digital channels (% MFIs)



Tablet solution

When visiting entrepreneurs on location, a loan officer is equipped with a tablet which is used for entering client data and conducting preliminary credit scoring on the spot. This allows to prepare and present a credit offer to the client. In some cases, the full credit approval can be conducted while in the field within 20 minutes. Data collected using the tablet is automatically transmitted to the MIS system. The advantage of this solution is that it shortens the time of the fieldwork and data processing and is eco-friendly as it eliminates paper forms.

Digital Communications

A large percentage of MFIs give clients an opportunity to connect virtually with the MFI through laptops and tablets (53% of MFIs) or through a smartphone (14% of MFIs). Most commonly, clients apply for a loan online (56% of MFIs) or upload the documents accompanying the loan application. Some MFIs give access to the 'Client Area' with real-time financial information where clients can review their loan history and make repayments. MFIs in Western Europe more often have the facilities for clients' interaction with the MFI. Clients of as many as 87% MFIs in Western Europe can electronically communicate with the MFI through its website, including 27% of MFIs that have developed mobile apps for clients. Only 13% of Western MFIs do not have contact with their clients via internet while in Eastern Europe 48% of MFIs do not have any facilities to support online communication with their clients.

Online loan application

Clients apply for a loan online by filling in an application form. Usually, the client states the required amount and the purpose of the loan, in addition to the contact information. The MFI reviews the application and performs the same loan verification and approval procedure as with the applications received via traditional channels. The client can choose the form of communication (e-mail, phone) and is contacted by the loan officer to schedule a meeting and prepare required documents.

Mobile app

Clients install a mobile app on their smartphones to interact with the MFI. In addition to getting access to information posted on the MFI's web site, they can use the features such as online loan application and get access to the 'Client Area'.

Cloud Computing

The largest number of institutions still use server-based loan tracking systems. Among the surveyed MFIs, 81% have the MIS on their servers while only 14% used cloud-based systems.

The loan tracking and the accounting systems are usually linked, but in only about a third of the MFIs (36%) they are fully integrated. In other cases, both systems are separate with automatic communication (31% of MFIs) or require manual connection/data transfer (33%). In general, MFIs in Eastern Europe have more advanced systems, as 48% of institutions located in Eastern European countries have fully integrated accounting and loan tracking systems. In Western Europe, only 20% of MFIs have fully integrated systems, while 47% have to manually transfer data from one system to another. This is connected with the size of the institution - full integration is characteristic for MFIs that have more than 10,000 active borrowers and over 100 staff.

Figure 4: Distribution of MFIs by type of IT systems (% MFIs)

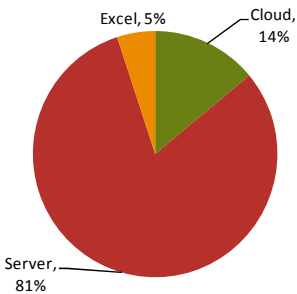
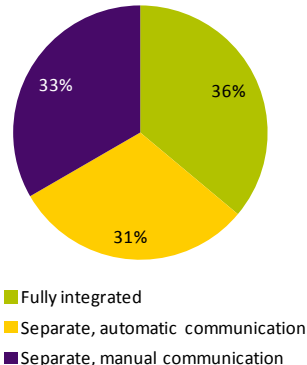


Figure 5: Distribution of MFIs by type of communication of loan tracking and accounting systems (% MFIs)



Benefits of Digitalization

The major benefit of digitalization is seen in improved efficiency of operations: reduced time to serve the client (72% of MFIs) and reduced costs of operations (67%).

Better response to client needs was more readily recognized by small MFIs (less than 1,000 clients) and those located in Western Europe. Efficiency gains in terms of reduced time and cost of services were more often appreciated by larger MFIs, serving over 1,000 clients and those located in Eastern Europe. Interestingly, the opportunity to increase outreach through digitalization was seen more often by larger MFIs (over 1,000 clients) and those located in Eastern Europe.

Figure 6: Benefits of digitalization (% MFIs)

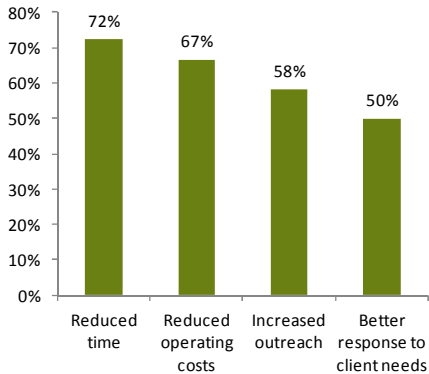
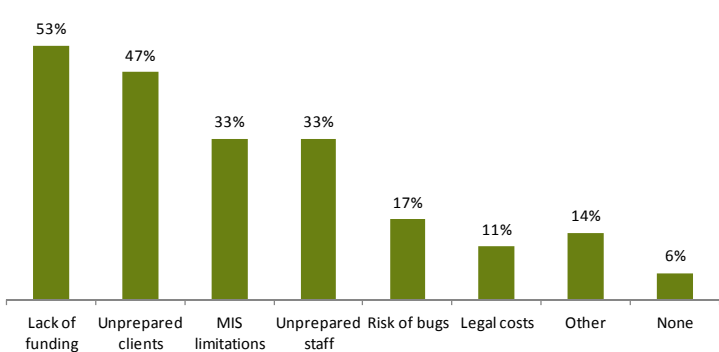


Figure 7: Obstacles to digitalization (% MFIs)



There are two major challenges to introducing digital solutions:

- Lack of funding to introduce the solution in the MFI - 53% of MFIs
- Reluctance of clients to use digital devices or lack of technical means (no internet access, no smartphone) - 47% of MFIs

Lack of funding relates to low availability of grants at the national and EU levels to support MFIs in modernising their operations. MFIs in both parts of Europe equally often feel constrained by lack of

funding. However, smaller MFIs throughout Europe more often perceive lack of subsidies as a limiting factor for digitalization.

The second most frequently mentioned challenge - clients who are not prepared for using digital solutions - was more often voiced by MFIs in Eastern Europe (52% of MFIs) than in Western Europe (40% of MFIs).

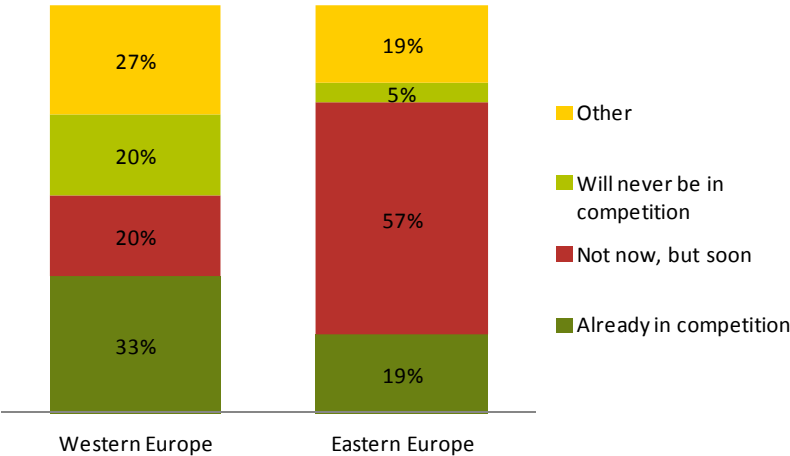
Readiness for Digitalization

MFIs generally feel ready to adopt digital solutions - only 8% of MFIs are not ready for digitalization. As many as 83% of MFIs participating in the study plan to introduce new digital solutions in the nearest future. MFIs in Western Europe are more often in the planning stage than institutions in Eastern Europe (93% and 76% respectively). The priority is to digitalize the loan application process: client acquisition, client assessment, credit scoring, and documentation collection.

Competition from Digital Credit Providers

While only one fourth of the MFIs already feel competitive pressure from telecoms and lending platforms, many more (42%) realize that the competition is going to come soon. Western Europe MFIs already feel more pressure from the competition, while Eastern Europe MFIs are more aware of it approaching soon.

Figure 8: Perception of competition from digital credit providers (% MFIs)



In order to remain relevant in an evolving financial landscape, MFIs need to develop strategies to stay competitive and keep pace with new financial technology solutions.

The most common solution proposed by MFIs is to digitalize the lending process of MFIs to the extent that it does not replace the human contact entirely and that it does not threaten the social mission. This would include creating common platforms with on-line lenders to the extent that they support microfinance lending process. Another solution is to differentiate microfinance from digital services providers by adding business development services and educating clients and wider public about the unique approach of microfinance where personal approach is irreplaceable by the technology.

5. Conclusions

MFIs recognize the need to digitalize the lending process and understand the efficiency gains from digitalization. Many MFIs have already introduced digital solutions, however the application of fintech in microfinance is slower than in other financial institutions. At this point, there are no fully digitalized MFIs although there are many online consumer lenders, and fintech is making inroads into business lending as well.

There are several reasons for this. Microfinance's competitive advantage is the personal and direct contact with the client who needs more assistance in resolving their business problems. If the lending process is fully automated and driven by fintech, this aspect of microfinance will be lost, and with that, the ability to serve the more challenging client with their idiosyncratic needs that fall outside of the streamlined digital solutions. It is important to keep the balance between automatization and the need for 'human touch', which suggests that a certain part of the relationship with the client will not be automated.

Scale of operations is also a barrier to using fintech. Most MFIs are small and the number of clients is too small to efficiently apply digital solutions, for example credit scoring. Creating a common processing platform for smaller MFIs could solve this challenge allowing them to operate at scale while retaining their local presence and respond to local needs.

There are differences between Eastern and Western Europe. Eastern Europe has longer experience in microfinance but also a stronger legacy burden of a more traditional approach to microfinance, which requires larger efforts and costs to change the current systems to fintech solutions. At the same time, there is no evidence that larger application of fintech would bring breakthrough to scale, efficiency and profitability of microfinance. Those organizations which operate at a significant scale and retain the relational model of lending are profitable with only partial application of digital solutions, often applied to the back office operations.

The rush to digitalize should be examined with caution. Fintech and digitalization solutions should be applied based on a rational calculus of costs and benefits, in line with the mission of the organization and the needs and capabilities of the clients.

6. Bibliography

Banking in the Cloud. Temenos 2016

Byoung-Hwa Hwang and Camilo Tellez 'The Proliferation of Digital Credit Deployments', CGAP 2016

Digital Finance For All: Powering Inclusive Growth In Emerging Economies, McKinsey Global Institute, September 2016.

Digital Financial Services And Risk Management. Handbook.

Digital Field Applications: Case Study. Channels & Technology, Accion, September 2015

FinTech for micro, small and medium sized enterprises – creating jobs at the bottom of the pyramid through financial and digital inclusion' ING Economics Department, 2016

Rachel Schneider Arjan Schütte 'The Predictive Value of Alternative Credit Scores.' Center for Financial Services Innovation CSFI

Shreya Chatterjee and Misha Sharma 'What Does Effective Human Touch Look Like in India's Digital Age?' Center for Financial Inclusion at Accion, (forthcoming)

Alexis Beggs Olsen 'Uniting Tech and Touch. Why Centaur Products Are Better for Consumers and Providers. Evidence from Kenya', Center for Financial Inclusion at Accion, November 2017

The FinTech Index. Assessing digital and financial inclusion in developing and emerging countries.', ING Economics Department, 2016

The Role of FinTechs in the Business Model of Microfinance Institutions in Western Europe: a Qualitative Study. Research Master's Thesis submitted by Benoît De Toffol & Pauline Vandeputte, Louvain School of Management UCL, 2017

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