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Mapping of Innovative Ways to Finance
Small- and Medium-sized Enterprises

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Alle Meinungsäußerungen geben die aktuellen Einschätzungen der Verfasser wieder, die nicht notwendigerweise die Meinungen des Programms widerspiegeln.

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List of Abbreviations

ACCA	Association of Chartered Certified Accountants
ADB	Asian Development Bank
CJSC	Closed Joint Stock Company
DEG	Deutsche Investitions- und Entwicklungsgesellschaft mbH
EFLRI	Entrepreneurial Finance Lab Research Initiative
GPFI	Global Partnership for Financial Inclusion
ICT	Information and Communications Technologies
IFC	International Finance Corporation
IFI's	International Financial Institutions
IOSCO	International Organization of Securities Commissions
IP	Intellectual Property
KfW	Kreditanstalt für Wiederaufbau
LDCs	Least Developed Countries
MSMEs	Micro, small and medium enterprises
OECD	Organisation for Economic Co-operation and Development
POF	Purchase Order Finance
POS	Point-of-Sale
SAT	Scholastic Aptitude Test
SMEs	Small and medium enterprises
TA	Technical Assistance
UNEPFI	United Nations Environment Programme Finance Initiative
USA	United States of America
USD	United States Dollar
WBG	World Bank Group
WEF	World Economic Forum

INTRODUCTION

“What is mankind’s greatest invention? Ask people this question and they are likely to pick familiar technologies such as printing or electricity. But they are unlikely to suggest an innovation that is just as significant: the financial contract. Widely disliked and often considered grubby, it has nonetheless played an indispensable role in human development for at least 7,000 years”¹.

Indeed, the topic of finance and consequent financial innovation has both supporters and opponents. Tufano (2013) defines the financial innovation as “the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions and markets” with a purpose of overcoming market imperfections. On a post-2008-financial-crisis-wave, the discussion of “bad” and “good” sides of the financial innovation regained interest of various counterparts, including academia² and international development organizations³.

In 2009, within six months of each other, Paul Krugman and Robert Shiller, both the Nobel Prize Winners in Economic Sciences, posted two diametrically different articles about financial innovation. Krugman states his opposition to financial innovation by writing “it’s hard to think of any major recent financial innovations that actually aided society, as opposed to being new, improved ways to blow bubbles, evade regulations and implement de facto Ponzi schemes⁴”

On the contrary, Shiller supports the phenomena by saying, “it is critical that we take the opportunity of the crisis to promote innovation-enhancing financial regulation and not let this be eclipsed by superficially popular issues⁵. He then lists several “good” innovations, which in his opinion could have eased people’s lives, e.g. life-cycle fund and retirement annuities.

Nevertheless, regardless of the position in the discussion of “bad” and “good” sides of finance and financial innovation, it is impossible to neglect its enormous influence on global development overall as well as on development of small and medium enterprises (SMEs) in particular, as they are considered to be building blocks of developing countries’ economy due to strong employment power⁶. SMEs account on average of 50% of jobs in *both* developing and developed countries, remaining as one of the main driving forces of the economy (Torre, Martinez, Schmukler, 2009).

Simultaneously, however, the SME segment suffers from access to finance constraints mostly due to the inability of conventional finance to accommodate the segment’s needs. As stated by Stein, Ardic & Hommes (2013) commercial banks are still perceived to be the major source of funding for SMEs. Privately held commercial banks provide about 58% of external financing for

¹ <http://www.economist.com/news/essays/21600451-finance-not-merely-prone-crises-it-shaped-them-five-historical-crises-show-how-aspects-today-s-fina>

² See, for instance, Henderson’s and Pearson’s “The dark side of financial innovation: A case study of the pricing of a retail financial product”, 2010; or Allen’s “Trends in Financial Innovation and Their Welfare Impact”, 2011

³ See, for instance, World Economic Forum’s “Rethinking financial innovation”, 2012

⁴ http://www.nytimes.com/2009/04/27/opinion/27krugman.html?_r=0

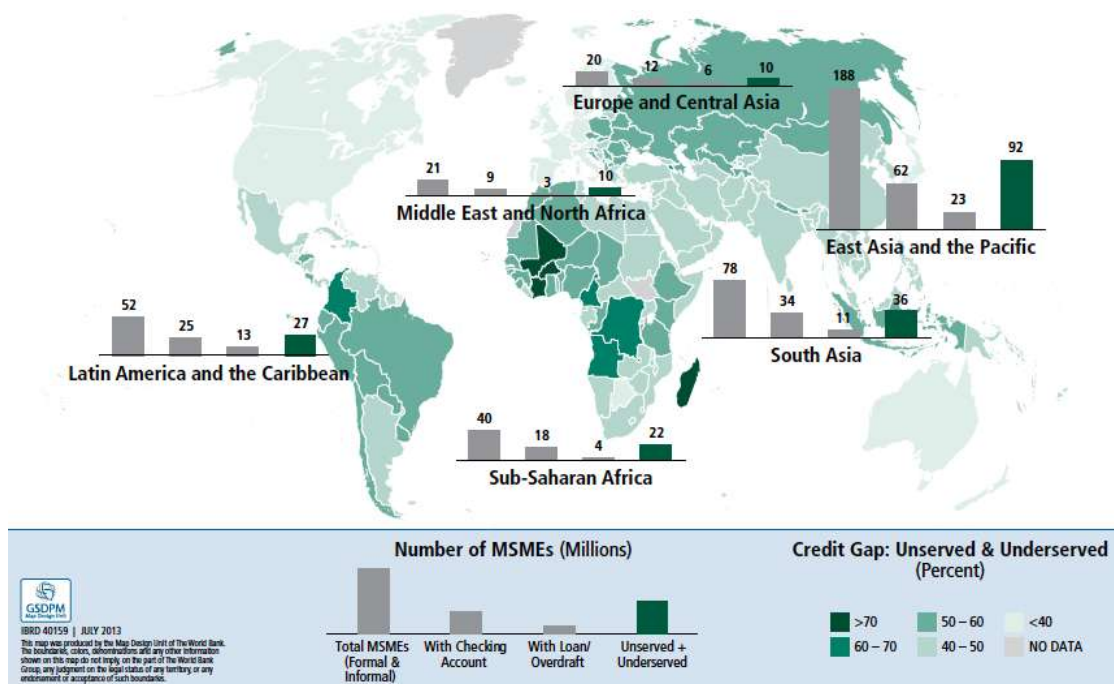
⁵ <http://www.ft.com/intl/cms/s/0/c4a74ba2-ab83-11de-9be4-00144feabdc0.html#axzz3jokYMIlsW>

⁶ According to IFC Jobs Study, 2013, SMEs represent on average about 66% of permanent, full-time employment in developing countries.

the SME sector, while state owned banks and other agencies cover a further 20%. These numbers make the urgency for innovation of the banking industry obvious. As Kevin Hanley, Director of Design and Services, at the Royal Bank of Scotland stated at the Financial Services Forum (23-24 June 2015, London), “we spend most of our time in this industry fixing today, and making incremental improvements. Innovation is different, it is thinking about what tomorrow holds. And about making disruptive change happen”⁷.

Despite the evident augmentation of the financial system across the globe (Beck et al., 2008), the financing gap of MSMEs (micro, small and medium enterprises) in developing countries is still estimated at \$2.1 to \$2.6 trillion (Stein, Ardic & Hommes, 2013). Figure 1 provides an overview of a total financing gap of both *formal* and *informal* MSME sector. Here, the region of South East Asia and the Pacific has the highest percentage of unserved and underserved MSMEs.

Figure 1: Formal and Informal MSMEs sector – Total financing gap



Source: Stein, Ardic & Hommes, 2013

After the “role of the entrepreneurial enterprise as an engine of economic growth has garnered considerable public attention in the 1990s” (Berger & Udell, 1998, p. 613), the finance gap hypothesis, which presumes that small and medium enterprises suffer from a lack of external financing more than larger companies, has started being widely researched (Ang, 1992; Avery et al., 1998; Berger & Udell, 1998; Gregory et al., 2005; Beck & Demirgüç-Kunt, 2006; Ayyagari et al., 2007). Consequently, all types of factors affecting growth and development of SMEs from a degree of institutional development and judicial system

⁷ <http://thefinancialbrand.com/52725/banking-innovation-imperative/>

efficiency (Kumar et al., 1999) to access to external financing (Demirgüç-Kunt & Maksimovic, 1998; Beck & Demirgüç-Kunt, 2006; Ayyagari et al., 2006) also grabbed the attention of academics and policy-makers alike.

Traditionally the finance gap hypothesis assumes that (i) SMEs will grow but due to (ii) disadvantageous market conditions the SMEs sector is left behind. Using an empirical set of data, i.e. World Business Environment Survey⁸, Ayyagari et al. (2006) define the main obstacles that influence enterprise growth to be limited access to external finance, as well as high levels of crime and political instability. Additionally, Beck et al. (2003), using the survey data of 10,000 companies from 80 countries, conclude that foreign-owned larger and older companies face fewer constraints with external financing than SMEs.

The existence of a finance gap is driven by many factors. In addition to macro level issues, like undeveloped financial and legal systems (Beck et al., 2003), there are at least five more obstacles (Zavatta, 2008) faced both by the demand and supply sides when pursuing financing of the SMEs sector:

- Informational asymmetry - where lender or investor faces difficulties with differentiation between high and low quality projects (adverse selection problem) due to limited access to unofficial insider information about financial status of the given SME.
- Higher risk – the problem of informational asymmetry leads to a problem of higher risk ratings of SMEs projects. Due to lack of hard information or its' opacity, SMEs are given higher interest rates.
- Transaction costs – SMEs financing is perceived as an expensive business as this segment usually borrows little amount of loans, or better say, it is allowed to borrow only smaller loans, due to direct correlation between repayment power and size of operation. At the same time administrative costs, legal fees and cost for acquisition of information about business stays the same as it is for bigger loans, while profit from these types of deal is kept low.
- Lack of collateral – younger and smaller businesses have fewer (or in many cases none) assets that could be used as a collateral.
- Institutional and legal factors – which directly influence the ease of SMEs' access to external finance. This includes highly concentrated and uncompetitive banking sector, which is built as a result of highly restrictive and conservative government regulations and undeveloped legal systems.

From a theoretical point of view, the finance gap hypothesis is built upon at least two more theories, i.e. *conventional wisdom* and *relationship lending*. For a long time, the “conventional wisdom”, an assurance that SMEs are better served by small and niche banks through the “relationship lending”, which implies application of “soft” skills by a relationship manager in order to overcome an information asymmetry problem, was believed to be the only way to deal with the above stated obstacles for SMEs' access to external financing. These two theories started being widely researched and discussed in early 90's after the USA approved its Interstate Banking and Branching Act in 1994. An ample amount of publications argued that large multi-office and branch banks were less likely to provide lending to small businesses than other types of banks (Keeton, 1995). Furthermore, the literature stated that with a

⁸ For the very recent data see <http://data.worldbank.org/data-catalog/BEEPS>

transformation and consolidation into more complex larger banks, these banks reduced funding for SMEs (Berger and Udell, 1996; Craig and Hardee, 2007; Francis et al., 2008; Jimenez et al., 2009).

Furthermore, the SME sector is characterized by a high heterogeneity, making it highly complicated to serve, as well as to define. Ang (1992) prefers to define a small firm as one that is privately held as opposed to a publicly traded firm. The condition of private ownership is important but it does not solve the problem of classification, as it differs on a country-to-country basis. The more conventional approach is to define the size of an enterprise based on the number of employees, Gibson and Vaart (2008) thus argue that a better way of defining size of an enterprise is to base it on an annual turnover variable. The World Bank definition on the other hand, puts a set of requirements, where the enterprise must meet at least 2 out of 3 characteristics (see Table I) in order to qualify for MSME definition. Therefore, the issue of defining SMEs still remains highly disputable.

Table 1: History of application of effectuation principles in field studies

Firm size	Employees	Assets	Annual sales
Micro	<10	<\$100,000	<\$100,000
Small	<50	<\$3 mln	<\$3 mln
Medium	<300	<\$15 mln	<\$15 mln

Source: Ayyagari et al., 2007

Despite the arguments provided and discussed above, substantial changes of the financial landscape over the past years, including the post and pre-2008-financial-crisis, showed that the SME sector is “perceived to be big and with good prospective” (Beck et al., 2008, p.6) by all types of banks.

In a highly competitive environment banks tend to have more incentives to bear the costs of serving the SME sector and applying new approaches in doing so, such as credit scoring and coming up with innovative products like factoring, fixed-assets lending and so on (Torre, Martínez, Schmukler, 2010). Because, as Berger & Udell (2006, p.2946) stated, relationship lending is not the only way to work with the SME sector and “the inference that large institutions are disadvantaged in lending to opaque SMEs is flawed”.

Therefore, Chapter 2 will look through the current trends of innovation in the area of SMEs’ finance.

TRENDS

The list of identified and provided below trends in the area of SMEs' finance is by no means exhaustive and/or complete. It was built through a compilation of the results of empirical researches in the area of finance, access to finance, financial inclusion, and financial innovation. Hence, the typology of trends in SMEs' finance was created.

Figure 2: Mapping at a glance

#	Trend Area	Trend Description	Innovative Financing Instrument	Descriptive Example	
1	Alternative financial services	Growing digitalization of financial services leads to increasing use of online platforms that reduce intermediation between financial institutions and SMEs.	Crowdfunding	Kickstarter	
			Mobile Payment Services	EcoCash M-Pesa	
			Peer-to-Peer Lending	Person-to-Person	Lending Club Kabbage
				Person-to-Business	MoolahSense Intelcap Impact Investment Network
			Online Equity Financing	Equity Crowdfunding	Seedrs
				Venture Capital	LetsVenture
2	Specialized screening tools	Digitalization also facilitates the trend of big data, which leads to partial solution of information asymmetry problem through establishment of data warehouses, i.e. credit information sharing systems, and use of collected data for further assessment through various screening models.	Predictive Modelling	Alipay	
			Rating Modelling	Banco AC San José Attjariwafa Bank	
			Use of POS account data	Nanchong City Commercial Bank	
			Psychometric Assessment	Harvard's Entrepreneurial Finance Lab Research Initiative	
3	Capacity building	Growth of financial literacy of SMEs fuelled by digital apps and conventional financial institutions, which are interested in long-term high capacity demand side.	Financial literacy campaigns	CJSC FINCA Bank	
			Financing blended with technical assistance	DFCC The Medical Credit Fund Sembrani Sartawi IFD	
			Financial literacy apps	Xero ClearBooks	
4	Development financing	FinTech is also being used in the area of development finance with the aim to increase financial inclusion and access to finance by SMEs and individuals in developing countries.	Social financing	Finance through Fintechs	Mobile Money for the Poor The Better than Cash Alliance
				Social Success Note	Yunus Social Business
				Social Venture Capital	AgDevCo
			Sustainable financing	Green Bonds	Bank of America
5	Asset based financing	Fast growing SMEs using intangible or tangible assets as key success factors are served through more innovative financing ways.	Intangible Asset based financing	IP Auctions	ICAP Patent Brokerage Patent auction.com
				IP Collateral Enhancement	MCAM Global Holdings LLC Paradox Capital Partners, LLC
				IP Backed Loans	Ocean Torno, LLC
			Movable Asset based financing	Equipment Finance	Banco De Lage Landen Brasil, A Kilimo Biashara
				Infrastructure Finance	Mahindra & Mahindra Financial Services Jain Irrigation Systems Ltd
				Warehouse Receipts financing	Origo Commodities ICICI Bank National Microfinance Bank of Tanzania SME Leasing Ltd
6	Accounts financing	Growing use of accounts financing to manage cash flow problems in SMEs	Invoice trading	Platform Black	
				Market Invoice	
			Invoice financing	FundBox	
				Novicap	
			Savings account linked input finance	NIMB Kilimo Account	
			Value chain finance	Go Finance	
Supply chain finance	Aztec Exchange				
Purchase order finance	Crimson Finance Fund				

Source: Author

1. Growing digitalization of financial services leads to increasing use of online platforms that reduce intermediation between financial institutions and SMEs.

The FinTech innovators have started disrupting the financial sector after its' global collapse in 2008. Goldman Sachs estimates that FinTech's annual revenue could go up to \$4.7 trillion⁹, the revenue taken away from conventional and established financial companies (WEF, 2015). There are at least four different types of non-bank market based online financing, which SMEs can benefit from, namely:

- *Crowdfunding* - Kickstarter¹⁰ is a leading rewards and pre-selling based crowdfunding site where project owners have raised over \$1 billion in funding for their projects. In the company's own words, "Kickstarter is a new way to fund creative projects. We're a home for films, games, and music to art, design, and technology." Kickstarter does not support charities or personal financing needs; it also does not offer equity crowd funding. In 2014, it has raised the largest rewards-based crowdfunding campaign with Coolest Cooler at over \$13M.
- *Mobile Payment Services* - EcoCash¹¹ is a mobile payment solution that enables its users to complete simple financial transactions such as sending money and buying and paying for goods and services. It also provides an option of saving money, earning interest and obtaining loans, which range from as low as \$15 to \$500 depending on how much customer saves with EcoCash. The higher the savings are, the higher the loan limit is. To qualify for the loan, customers need to have an EcoCash Save account and to save a minimum of \$5 or more for 3 months. EcoCash belongs to Econet Wireless, which is a diversified telecommunications group with operations and investments in Africa, Europe, South America and the East Asia Pacific Rim, offering products and services in the core areas of mobile and fixed telephony services, broadband, satellite, optical fibre networks and mobile payment.

Peer-to-Peer Lending – is an online-enabled lending wherein individual lenders provide capital directly to individual borrowers with further ability to get higher yields. However, unlike conventional providers of financial services, most of the online-enabled platforms do not guarantee full return of funds to the savers, putting capital into the system (TheCityUK, 2013). In addition, these platforms could act as secondary markets by providing marketplace for existing lenders who want to withdraw their capital prior to the loan term through selling shares of any loans to other investors (ACCA, 2014). There are two sub-types of peer-to-peer platforms; those are *person-to-person (P2P)* and *person-to-merchant (P2M)* or *person-to-business (P2B)* platforms.

⁹ The Economist, "The fintech revolution", 2015

¹⁰ <https://www.kickstarter.com>

¹¹ <https://www.econet.co.zw>

- *P2P* - Unlike traditional lenders, Kabbage¹² approves small business loans by looking at real-life data. It obtains borrowers' consent to access real-time data from their e-commerce seller's accounts, PayPal accounts, UPS shipping accounts, as well as from a variety of SMEs accounting software packages such as QuickBooks, Stripe and Xero. Kabbage offers advances of between \$500 and \$50,000 at interest rates of between 2% and 7% for a 30-day period. For a six-month advance, rates range from 10% - 18%.
- *P2B* - MoolahSense¹³ is a Singapore-based platform, where people invest directly in local businesses (P2B) for a fixed return of interest. The portal's stated vision is to cultivate entrepreneurship by empowering businesses and investors with a trusted and vibrant crowdfunding platform, and to address the structural impediments toward entrepreneurship with a focus on SMEs. MoolahSense enables business loans from between SGD\$100,000 to SGD\$300,000 (\$74,349 to \$223,048), and uses information from official sources and information providers to review all applications before businesses (corporates and limited liability partnerships) are allowed to list on the platform. Each business' identity checked and only businesses with at least 1 year of audited financial statements or 2 years of trading history are allowed to be listed on the platform. The loans made through the portal are repaid by the borrowing businesses in monthly payments of principal and interest. No collateral is pledged for the loans received. MoolahSense states its benefits to SMEs as "potentially lower borrowing costs, being fast and convenient, building a resilient long-term funding strategy by cultivating a relationship with alternative pools of investors and being empowered to negotiate your own rates". (ADB, 2014)

Online equity financing – is a transaction aimed to raise new equity, where equity is defined as the part of long-term liabilities used to fund a company (Moles & Terry, 1997, p.188). This transaction is being fully done electronically, mainly through the dedicated platforms on Internet.

- *Business Angel* - Intelicap Impact Investment Network¹⁴, which states that it is India's first angel network of high-net-worth individuals and institutional investors seeking investments in fledgling enterprises. The use of mobile technology by the I3N—mainly through its website— is designed to bridge gaps of geography, mindset, and knowledge between angel investors and impact entrepreneurs. I3N also provides extensive consultations in preparation of business projects by applicants, i.e. entrepreneurs and startups.
- *Equity crowdfunding* - Seedrs¹⁵ is an equity crowdfunding platform for discovering and investing in seed-stage startups, based in the United Kingdom but open to investors

¹² <https://www.kabbage.com/>

¹³ <https://moolahsense.com/>

¹⁴ <http://www.i3n.co.in/>

¹⁵ <https://www.seedrs.com/>

and entrepreneurs throughout Europe. Minimum threshold of investment is €10, there is also an option for early-stage startups and more established businesses to raise investment from friends, family, customers, angels and other independent investors in exchange for equity in the business. The platform offers three types of campaigns for investment - equity, funds and convertible campaigns. Seedrs is an "all or nothing" platform where companies do not receive any funding unless they reach their declared investment target. In late 2015, Seedrs has expanded to US market. Up to 2015, it has funded over 270 deals, and raises up to £3.5m per month on average. The company predicted that the US would represent between one-third and half of the business over the next two to three years.

- *Venture capital* - Letsventure¹⁶ enables start-ups that are looking to raise seed capital to create investment-ready profiles online and to connect to accredited investors. The amount of financing ranges between \$1 million and \$10 million, and is focused on the internet sector. Around 750 startups and 1,200 investors across 20 countries, 375 of them Indian, are registered on its platform. The platform is free for investors, and charges startups 2 per cent of the funds raised as fee. It invests 1 per cent back into the startups as equity. Once investors make a verbal commitment to the startup, LetsVenture leads them through the process of funding closure. In 2015 LetsVenture has managed to raise \$17 million for 53 startups that are under its aegis.

2. Digitalization also facilitates the trend of big data, which leads to partial solution of information asymmetry problem through establishment of data warehouses, i.e. credit information sharing systems, and use of collected data for further assessment through various screening models.

The information asymmetry is one of the most cited obstacles that supply side refers to when talking about SMEs financing (Torre, Martínez, Schmukler, 2010). Growing digitalization of services provides an innovative way not only in delivering those services, but also in collecting and assessing data on end users. This opens new ways for investment analysis of loan applicants.

- *Predictive Modelling* - Alipay¹⁷ is a unit of Ant Financial Services Group, an affiliate of Alibaba Group. Alipay is China's most popular e-payment service while its mobile application Alipay Wallet is China's top mobile-payment service. Users can use their Alipay accounts to pay their bills, shop online, transfer money to each other and also invest their idle cash. By using Alipay Wallet, users are able to participate in offline-to-online promotions, pay for products in stores with smartphones, book transportation services and hospital appointments, among other uses. At the end of 2013, the number of Alipay registered users reached 300 million and the number of collaborating financial institutions exceeded 200 entities. Alipay handles over 80 million transactions daily, 45 million of them generated by mobile devices. Alipay also

¹⁶ <https://letsventure.com/>

¹⁷ <http://www2.alizila.com>

uses the predictive models, which assess an individual's online presence: number of social networking connections and how close those connections are geographically. This helps to indicate whether a business that seeks to raise money via a crowdfunding site will be successful in fundraising from its own friends and family networks (ACCA, 2014).

- *Rating Modelling* - Banco BAC San José¹⁸, Costa Rica, has developed a new mathematical model to give credit to, among others, the following groups of clients: (i) Autocred: Merchants with 18 or more months of continuous sales with BAC credit card processing company are candidates to receive a credit, based on their monthly billing; and (ii) Suppliers: Clients constantly receiving payments of their respective clients through BAC electronic payment platform are also candidates to receive a credit based on the amounts received. The new mathematical model analyses amount average, dispersion, total amount trend and other variables to calculate the final credit amount. Given the large amount of clients, BAC needs to check first the previous payment record of the client and commercial references from the bank. Here, BAC also developed software that massively checks all the references.
- *Use of point-of-sale (POS) account data* - SMEs often operate on a small business scale, do little financial bookkeeping, and own a few liquid assets but very little fixed assets. As a result, those SMEs normally find it difficult to get credit from banks. Here is where Chinese Nanchong City Commercial Bank's¹⁹ innovative POS account transaction flow rate loan product resolves that problem. This loan product allows the Bank to review loan applicants' POS account transaction flow rate, analyze its business operation condition, and other factors such as loan applicants' business assets, business selling channels or length of trading history. After analyzing all the information, the exact amount of loan credit should be determined. This product is a small & micro loan product based on a loan applicant's creditworthiness. Loan applicants will not be asked to submit company financial accounts or asset backed securities. In terms of risk control, the bank will investigate and analyse a loan applicants bankcards usage and source of loan repayment from their POS machine transaction records at Bank's pre-lending period. Moreover, at post-lending period, the bank will continue to monitor an applicant's bankcard usage from their POS machine transaction records. Thus, the Bank can oversee their business operation condition. In addition, the bank will perform post-lending onsite investigation for the clients, look for any potential business problems, prepare for business risk early warning and fulfill Bank's risk management duty.
- *Psychometric Assessment* - Unlocking entrepreneurial potential in developing countries requires a new way for banks to screen clients and evaluate risk. Harvard's

¹⁸ <https://www.bac.net>

¹⁹ <http://www.cgnb.cn>

Entrepreneurial Finance Lab Research Initiative²⁰ (EFLRI) does this with a psychometric assessment tool. In tests over four years in seven countries in Latin America and Africa, the tool was able to predict default as well as or better than traditional credit scoring models. In Africa, the initial research and adaptation of the tool has already started to catalyze private sector scale-up. Financial institutions on the continent are now lending out over \$1.5 million per week based on these tools to small-scale entrepreneurs that would have previously been rejected.

3. Growth of financial literacy of SMEs is fuelled by digital apps and conventional financial institutions, which are interested in a long-term high capacity of the demand side.

According to the World Bank survey (Torre, Martínez, Schmukler, 2010), conducted in Argentina, Chile, Colombia and Serbia, roughly 50% of surveyed banks point at SMEs specific factors²¹ as one of the main obstacles to serve the sector. One of the ways to mitigate that obstacle is to build capacity of the SMEs sector itself. This goal is being achieved through application of such tools as:

- *Financial literacy campaigns* - after the over indebtedness crisis of 2011 both regulatory bodies and non-bank financial institutions of the Kyrgyz Republic started admitting the importance of financial literacy of local SMEs and individuals. Shortly after, the Closed Joint Stock Company (CJSC) FINCA Bank²² launched its Financial Literacy Project, which is a multiple level program that includes various directions, channels and instruments of distribution. Within the program, a series of educational materials and training has been prepared and disseminated through training events, which were conducted jointly with the National Bank of the Kyrgyz Republic. In 2015, the CJSC FINCA Bank published the electronic version of the manual on financial literacy prepared in cooperation with the Kyrgyz-Russian Slavic University. This edition is a basic course, combining 101 theoretical foundations and practical experience.
- *Financing blended with technical assistance* - Sembrar Sartawi IFD²³ / Sembrar is a Bolivian development finance institution providing a variety of financial services to micro and small agricultural producers since 1989. There is a need to increase production and productivity of agriculture, particular for net food importing countries like Bolivia. Furthermore, agriculture is the most important source of income for millions of smallholder farmers with no access to technology, credit and markets. Here, the Sembrar Sartawi IFD has developed the ATF model (Technical Assistance and Financing). This innovation works on a platform of these two institutions. They were created to deliver services to smallholder farmers through a comprehensive approach.

²⁰ <http://www.hks.harvard.edu/centers/cid/programs/entrepreneurial-finance-lab-research-initiative>

²¹ These factors mostly refer to low quality balance sheets and/or lack of quality information in overall. In Colombia, for instance, this percentage goes up to 88%.

²² <http://www.finca.kg/>

²³ <http://www.sembrarsartawi.org/>

One institution specializes in the transfer of knowledge and builds productive capacities, and the other provides customized financial products to small agricultural unit. The value for the smallholder farmers consists of: (i) Technical assistance (TA) provides best practices and the farmer can increase yields, (ii) TA helps the producer to mitigate risks, this reduces the probability of crop failure and an eventual credit default, and (iii) Information and initiatives to reach markets allow farmers to find more stable demand paths.

- *Financial literacy applications* - Creation and popularization of online applications aimed at simplifying or teaching bookkeeping, such as Xero²⁴, which is a cloud-based accounting solution tailored to the needs of small to mid-size businesses. Features include account management, billing, invoices, expense reporting, and payroll (this last is currently limited to the United Kingdom, Australia, New Zealand, and 20 states of United States of America). Xero also integrates with over 400 other applications, which facilitate nearly all aspects of business operation, including inventory management, CRM, and POS. Prices range from £9 a month for the starter- to £30 a month for a sophisticated version, with multi-currency options.

4. FinTech is also being used in the area of development financing with the aim to increase financial inclusion and access to finance by SMEs and individuals in developing countries.

As was stated previously the FinTech companies are truly booming. Today they have proved to be leaders in finding new solutions for old problems to such an extent, where even International Financial Institutions (IFIs) have also started using the financial technologies in the process of their programs' delivery. However, application of financial technologies is not the only innovative instrument being used in the area of development finance.

Listed below are the innovative instruments, which embrace the *social financing* of SMEs in developing countries as a part of development finance:

- *Finance through FinTech* - Mobile Money for the Poor²⁵ is a global programme funded by the United Nations Capital Development Fund, the Swedish International Development Cooperation Agency and the Australian Government, Department for Foreign Affairs and Trade. The programme provides support to branchless and mobile financial services in a select group of Least Developed Countries, particularly Benin, Lao-PDR, Liberia, Malawi, Nepal, Senegal, Uganda and Zambia to demonstrate how the correct mix of financial, technical and policy support can build a robust branchless and mobile financial services ecosystem that reaches low income people in Least Developed Countries (LDCs).

²⁴ <https://www.xero.com/>

²⁵ <http://www.uncdf.org/en/mm4p>

- *Social Success Note* - Yunus Social Business²⁶ in collaboration with Rockefeller Foundation launched The Social Success Note, which is a financial innovation that allows capital to flow into underfunded sectors (e.g., low income geographies and “push” product sectors) deemed traditionally too risky or unprofitable for mainstream capital. It is an innovative pay-for-success financing mechanism that addresses the investment gap for impact-oriented SMEs and social businesses. Through a new alignment of incentives and interests among entrepreneurs, investors, and philanthropic outcome payers, the SSN holds the promise of addressing the missing-middle financing gap for impact SMEs by mobilizing commercial capital into these businesses while overcoming the long-entrenched trade-off between social impact and financial return. It also allows existing social businesses to delve deeper into their area of social impact, e.g. targeting a poorer customer segment than traditional IRR investment hurdle rates would allow. Yunus Social Business and The Rockefeller Foundation are working together to launch the pilot in 2016 with one of YSB’s investment-ready social businesses.
- *Social Venture Capital* - AgDevCo²⁷ established in 2009 as a social impact investor and agribusiness project developer. Incorporated as a non-for-profit distribution, limited company in the UK to invest patient capital in the form of debt and equity into early stage agribusinesses. Operations with locally managed subsidiaries in five countries in sub-Saharan Africa (Mozambique, Ghana, Zambia, Malawi and Tanzania). AgDevCo has developed an innovative Social Venture Capital model to serve the “missing middle” in the African agricultural sector. Beneficiaries are SMEs who are too large for microfinance but too small for private equity. AgDevCo offers: (i) flexible risk capital with a 5-10 year time horizon. Mezzanine loans are structured to match the projected cash flow, and (ii) Hands-on technical support to improve financial management, governance, agronomy and smallholder support schemes.

Another sub-category of the development financing is the one, which supports projects with *sustainable* agenda.

- Such as issuance of *green bond*, this is a debt security that is issued to raise capital specifically in support of climate-related or environmental projects. Those projects typically include renewable energies, energy efficiency, sustainable waste management, clean transportation, biodiversity, sustainable land use and climate change mitigation and adaption. The green bond market has grown exponentially in recent years, going from \$4 billion in 2010 to over \$37 billion in 2014, according to the World Bank. Private commercial lenders such are also stepping into the sector. Bank of America has issued two green bonds — one for \$500 million in November 2013 and

²⁶ <http://www.yunussb.com/social-success-note/>

²⁷ <http://www.agdevco.com>

another for \$600 million in May 2015 — to finance renewable energy projects in solar, wind, geothermal and energy efficiency. This financing also covers the SMEs.

- *Financing of energy efficient technologies*, where subject of investment is an enterprise or a project that works or plans to work with the energy efficient technologies, instead of old inefficient ones, also falls into this category. Center-Invest bank²⁸ was the first Bank in Russia to participate in International Finance Corporation's (IFC) Russia Sustainable Energy Finance Program for SMEs in 2005. In 2008, with a credit line from Kreditanstalt für Wiederaufbau (KfW), the Bank opened up energy efficiency lending to the agricultural sector. In 2009 the Bank started another program with IFC on "Energy Efficiency in the Housing and Communal Services Sector". In 2011 Center-Invest Bank launched a loan product to enable its retail customers to purchase modern, energy efficient household appliances and to carry out energy efficiency renovations to their homes.

5. Fast growing SMEs using intangible or tangible assets as a key success factor are served through more innovative financing ways

As stated by McKinsey, "software and online services are in a period of dizzying growth"²⁹. A small start-up can easily become a billion-dollar giant. The latest example of such companies is Airbnb, which was valued at \$25.5 billion³⁰ and Uber, which has a valuation of \$62.5 billion³¹. Traditionally, one of the main obstacles for financing of SMEs engaged in the area of ICT was the absence of the tangible collateral. The introduction of *intangible asset based financing* has partially solved that problem.

- *Intellectual Property (IP) Auctions* - PatentAuction.com³² is an online free marketplace designed only for selling or licensing patented inventions. PatentAuction.com is a non-commercial and not for profit initiative, only designed to help inventors get more exposure for their patents. PatentAuction.com provides potential buyers with the opportunity to contact the inventors and to have a private conversation within the site. When that happens, it is up to the parties to come to an agreement and seal the deal outside the platform.
- *IP Collateral Enhancement* - MCAM Global Holdings³³ is a global, financial services and collateral management firm with specialized expertise on capital risk management. In 2000, it introduced the Certified Asset Purchase Price tool, which allowed the process of IP collateral enhancement to become commercially viable and secure. MCAM provides lender with a Property & Casualty Insurance policy that provides a

²⁸ <http://www.centriinvest.ru>

²⁹ McKinsey, "Grow fast or die slow", 2014

³⁰ Fortune, "Airbnb raises \$1.5 billion, valuing it at an eye-popping \$25.5 billion", 2015

³¹ Bloomberg, "Uber Raises Funding at \$62.5 Billion Valuation", 2015

³² <http://patentauction.com/>

³³ <http://www.m-cam.com/>

predetermined purchase price in the event that a lender forecloses on the borrower's collateral. This insurance product, backed by an A-rated counterparty, provides a lender with a decreasing price over time that MCAM will pay for the collateral assets.

- *IP Backed loans* - Paradox Capital Partners³⁴ provides intellectual property-based loans, second lien loans, and mezzanine investments for medium-sized companies. Paradox is specialized in financing non-royalty and royalty generating IP using a wide variety of credit structures, including loans and securitizations. The firm has established itself as the de facto financing partner to IP-centric businesses. In conjunction with its parent, Babcock & Brown Limited, Paradox Capital has established a \$280 million fund that provides financing to companies with strong patent, trademark, and copyright portfolios.

Another sub-category of innovative asset based financing is one where *movable assets* are used as the collateral. This instrument is widely used particularly in the agricultural sector.

- *Equipment Finance* - Equity Bank of Tanzania³⁵ provides Kilimo Biashara (Agribusiness Small Scale): A credit product for the procurement of agricultural tools and equipment for smallholder farmers cultivating grains and other crops. The product targets Self Help Groups and provides seasonal loans. Loans are given at an interest rate 20 percent with a payback period of 24 months.
- *Infrastructure Finance* - Jain Irrigation Systems LTD³⁶ (JISL) is the largest manufacturer of micro-irrigation systems (MIS) in India, and the second largest globally. In 120 districts with a total workforce of 7,000, JISL focuses on small farmers with holdings of less than 10 acres. JISL pre-finances farmer micro-irrigation system purchases against the "collateral" of a government subsidy payment. Farmers who buy irrigation equipment from Indian MIS producers such as JISL obtain a subsidy of 50–70 percent of the equipment purchase price, with the national Government supplying 40 percent and the state Government providing the remaining 10–30 percent. The JISL dealer prepares the cost estimate, and the applicant farmer submits a subsidy application to the local subsidy Implementing Agency (IA). After approval, subsequent MIS installation, and IA inspection, the subsidy release requires a 180–360 day processing period (IFC & GPFI, 2012).
- *Warehouse Receipts Financing* - Origo Commodities³⁷ is a collateral management company based in India, which allows farmers to make deposits of their products in its warehouses and obtain pledge financing. It currently operates over 350 warehouses on a lease basis and has over 3.5 million tonnes of commodities valued at around United States Dollar (USD) 1.4 million under management.

³⁴ <http://www.paradoxcapitalpartners.com/>

³⁵ <http://ke.equitybankgroup.com/>

³⁶ <http://www.jains.com/>

³⁷ <http://origoindia.com/>

- *Leasing* - Development Finance Uganda Leasing Company³⁸ (DFCU) specializes in providing finance leases to SMEs for agricultural machinery — particularly tractors, milk equipment, harvesters, and agro-processing equipment. Typically, DFCU finances 60 percent of the asset purchase, while the client finances the additional 40 percent. The client share, however, may range between 10–50 percent. DFCU retains full ownership during the life of the lease, though the asset is transferred to the client or sold to a third party after the lease terminates. Although DFCU’s interest rates are similar to those of banks, their leases are more attractive to SMEs because they typically offer longer payment periods (3–5 years as compared with around 2 years), provide flexible lease payment schedules that match enterprise cash flows, and recognize the leased asset as primary collateral. Additional security is only requested in specific circumstances. (IFC & GPFI, 2012)

6. Growing use of accounts financing to manage cash flow problem in SMEs

Accounts financing is a type of financing against collateral where funds are provided against the firm’s accounts. There are different types of accounts financing, these are:

- *Invoice trading* - MarketInvoice³⁹ is offering a new type of invoice finance, built for savvy growing businesses. Their online platform gives clients access to funds in outstanding invoices, otherwise tied up for between 30 to 120 days. They are entirely different to traditional factoring. Businesses can sign up online, sell an invoice and draw down funds on the same day. There are no contracts, hidden fees or personal guarantees. MarketInvoice launched in 2011 and they have already helped hundreds of growing companies overcome their fluctuating cash flow. Over £300m has been funded already. Their clients use the finance raised to launch new products, hire more staff and expand internationally.
- *Invoice financing* – The Fundbox⁴⁰ is helping business owners and freelancers overcome cash flow gaps by advancing payments for their outstanding invoices. The companies are not charged interest and get 100% of the value of the invoice. The Fundbox, however, charges a small fee for each week of an outstanding balance (equal to approximately 0.5% of the invoice value). The fee varies slightly, depending on the invoice. However, on a \$1,000 invoice the company pays ~\$60 in fees over the 12 week repayment period - this equates to ~\$5 per week. Advances are automatically paid back over 12 weeks, but there is a choice to repay early, at any time, without penalty and all remaining fees will be waived.

³⁸ <https://www.dfugroup.com/>

³⁹ <https://www.marketinvoice.com>

⁴⁰ <https://fundbox.com/>

- *Savings account linked input financing* - National Microfinance Bank of Tanzania⁴¹ has a specialized NMB Kilimo Account which is a tailor made saving account for farmers. It offers bonus interest rate for farmer savings from realized sales proceeds after crop harvest and sold through warehouse receipt system or other market channels.
- *Value chain finance* - Go Finance⁴² provides short-term working capital loans to micro, small, and MSMEs that work in business value chains, such as consumer goods value chains (for example, the soft drinks industry) in Tanzania. Go Finance augments their credit offering by collaborating with complementary financial services providers, such as health and business insurance providers to provide a range of relevant financial solutions to the target market. Go Finance is pioneering the use of data (such as payments & historical sales data from large consumer goods and telecom companies) in combination with data from credit bureaus etc. as a satisfactory innovative to assessing credit worthiness in absence of traditional options such as audited financials. Go Finance secures its loans primarily through guarantees based on the business and social relationships that exist within a value chain as the main form of collateral as opposed to requiring hard collateral such as title deeds. The value proposition is to use existing data and social/business relationships within a value chain to assess and extend credit in a manner that is convenient and flexible to the SMEs. Go Finance's approach is unique in the region because of the collateral-lite approach and the use of innovative data to screen potential clients.
- *Supply chain finance* - Aztec Exchange⁴³ is an online platform launched in May 2013 to enable SMEs in the developing world and credit constrained developed markets, particularly in Europe, to sell invoices that they have issued to large overseas buyers and those buyers' local subsidiaries and that have been approved for payment. Aztec aims to expand global supplier access to simple low-cost invoice finance. Company's technology and Global Institutional Investor capital pool enables it to offer systematic, invoice discounting globally to supply-chains, e-invoice networks and suppliers at a low cost and without the credit scoring and the application process of traditional trade finance solutions. Suppliers simply register once on Aztec's 'Pay-me-Now' portal, select the invoices they want paid, at a single transparent discount rate available to all suppliers, and click submit. Aztec is available to corporations and e-invoice networks as a full third-party invoice finance solution extending coverage to 100% of the suppliers in the supply-chain, complementing existing finance providers.
- *Purchase order finance* - Crimson Finance Fund⁴⁴ (CFF) targets the large number of SMEs in developing countries that cannot obtain the financing they need to grow and become competitive. Banks in Kosovo view SMEs lending as risky and costly and the underwriting requirements of most banks make loans out of reach for many SMEs in

⁴¹ <http://www.nmbtz.com/>

⁴² <http://www.gofinanceco.com/>

⁴³ <https://www.aztecexchange.com/>

⁴⁴ <http://www.cffkosovo.com/>

the region. CFF's main lending instrument is Purchase Order Finance (POF), which is an innovative working capital finance instrument. In POF, the SME obtains a verified purchase order from a buyer and estimates the total cost required to complete the order. The financier reviews the order, the cost breakdown, and the operational history of the SME. If the loan is approved, the financier advances a percentage of the total order value to the SME, equal to the exact amount the SME needs to complete the order. The SME then produces the good and invoices the customer. The receivables are assigned to the financier and the customer is instructed to pay the financier directly. When the financier receives the payment, it deducts the amount advanced and interest or fees, and remits the balance to the SME.

SUMMARY

The topic of financial innovation is quite a controversial one. It has many opponents, as well as allies. However, whatever the outcomes of the innovations in the financial sector are, it is very clear that there is an obvious need for it. One of the arguments for this statement is the existence of a financing gap and a high percentage of unserved individuals and SMEs.

The FinTech companies, true disruptors of the financial sector, are at the leading centre of the innovation movement. Nonetheless, the conventional players, i.e. banks, still dominate the sector. According to the Economist, the “Lending Club has arranged \$9 billion in loans through its marketplace, small change compared with \$885 billion of total credit-card debt in America⁴⁵”. However, as seen from the cases provided above banks are also stepping into the field of innovation through the creation of tailored products and the adoption of new financing instruments.

It is also important to note that as Schumpeter stated the “defining characteristic of innovation is simply the doing new things or the doing of things that are already being done in a new way” (Schumpeter, 1934, p.153). That is the criteria that the research was guided by when selecting cases upon which the trends were identified. Therefore, we also list instruments that could seem to be quite traditional in one region of the world but very innovative in another. Such instruments as financing blended with technical assistance, financial literacy campaigns or mobile payment services.

It also can be suggested that the SME financing niche is narrowing down thanks to the emerging innovative financing instruments applied in the given area by various financial institutions. The availability and application of those instruments vary greatly on a country-to-country basis. This can be explained by the influence of different factors, where degree of development of financial and legal systems is among the major ones.

⁴⁵ <http://www.economist.com/node/21650546/print>

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