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Small Businesses and the Emergence of Financial Technology

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Summary

This preliminary thesis report outlines the research we will conduct for our master's thesis. We believe to have identified a void in small business banking. Small businesses are often underserved in terms of products and services by traditional banks. The fintech-trend holds great promise for serving these customers in a different and better way through use of financial technology. The emerging companies draw on technological expertise and innovative business models that can challenge the incumbents position in the small business market. We will draw on disruptive innovation theory to explain how these new fintech-startups can potentially shake up the banking industry. We will also account for the research methods we will use in our thesis to best answer the research question we present.

Introduction

Banks have traditionally not prioritized small businesses as a customer segment according to a recent report by the Norwegian IT consulting firm Evry (Evry, 2015). Despite the fact that these businesses constitute the vast majority of companies in Norway and a significant creation of value, there is a shortage of financial products and services offered to small businesses. The small businesses appear the victims of a rigid and outdated one-size-fits-all-strategy by the traditional banks. However, this is about to change. New business models that take into account the complexity of small business' needs are emerging rapidly, and they seem to emanate from a strong desire to disrupt the ever so traditional banking industry with technological innovation.

"Fintech" is the buzzword of recent years within financial service provision. New technologies are applied to offer products and services traditionally carried out by banks, insurance companies and advisories in a different way. Interestingly, the fintech-trend is not driven by the banks themselves, but outside players looking to gain a foothold in the market. It has been labelled "the unbundling of banking" because the emerging companies generally focus their efforts on single-purpose solutions to create the best user experience for the customers. These are typically tech start-ups and the trend grew out from Silicon Valley in the United States.

Digital transformation in financial services is hardly a new phenomenon. But unlike previous innovations, the sector is now experiencing penetration of technology-driven applications in nearly all segments (PwC, 2016). And the rate of innovation seems to be growing exponentially as a result of the increased investment. Funding of fintech start-ups reached $12,2 bn in 2015, up from $5,6 bn the year before (PwC, 2016). The technologies are already well on their way to gain foothold in consumer banking segments, and we believe that the small business customer segment is likely to supervene. In the following we will explain what is considered financial technology, how it can be defined and elucidate on its present relevance. Furthermore, we will ask how financial technology can bridge the perceived gap between offerings by traditional financial institutions and the needs of small businesses. In short: how can fintech successfully be applied in the small businesses segment?

Research objective

Despite numerous reports on how financial technology will disrupt the financial service industry in the future, there are surprisingly few that go into detail on the specifics. Even more so when it comes to the small business segment, because much of the literature concerns the consumer segment. Apart from the brief Evry-report, there seems to be a lack of studies on what small businesses actually need in terms of financial products and services, and how particular fintech-solutions can satisfy these needs. However, frequent descriptions of small businesses "falling between two chairs" at the big banks convinces us that there is something worthwhile studying here. For example, ACI Worldwide labels small business banking as a "$56.9 billion opportunity for the taking" (ACI, 2016). For convenience purposes, as well as our own interest, we will limit the scope of the research to small businesses in Norway. Note that this does not exclude studying foreign providers of fintech-solutions. We will adopt an "entrepreneurial lens" to this thesis, exploring what the opportunities are for fintech companies in this segment that has traditionally been occupied by regular banks. We must first delve deeper into why small businesses to such a large extent have been overlooked by the banks. Then, we will map the needs and preferences of these companies to see where financial innovation can best be applied. Finally, we will examine the specific fintech-solutions closely to see how they work and to account for potential impediments to their use. We are still in the initial phase of the master thesis, and it is likely that our research question will be refined. But for now, it reads as follows:

«Why is there a gap between the offering of financial products and services by traditional banks and the needs and preferences of small businesses, and how can emerging entrants capitalize on this via financial technology?»

To make our research objective more clear-cut, we can divide the question into three parts:

RQ1: *Why is there a gap between the offering of financial products and services by traditional banks and the needs and preferences of small businesses?*
RQ2: *What are these needs and preferences specifically?*

RQ3: *How can emerging entrants capitalize on this perceived opportunity via financial technology?*

Small businesses

There is no collective definition of a small business in Norway. Different institutions apply different definitions for different purposes. The Norwegian Accounting Act define an entity as a small business if at least two of the following three criteria's are not exceeded: Sales revenues of 70 million kroners, balance of 35 million kr, and an average number of of employees of 50 full time employees (FTEs). In the government's strategy for small and medium-sized enterprises they target companies with less than 100 employees (Regjeringen, 2012). This definition size is also shared by the Confederation of Norwegian Enterprises (NHO) and the Research Council of Norway (Forskningsrådet). However, the category "small businesses" was to comprehensive to limit in isolation.

It is therefore no official, nor clear definition of characteristics of a small business. Hence, we choose to follow Eastern Norway Research Institutes (2016) assessment of the term, limiting small businesses to entities with 1-4 FTEs. It is emphasized that FTE is preferred over the total number of employees to be able to focus on business activity, and to exclude hobby and part time businesses. Small businesses with less than 5 employees represent a large and important part of Norway's business and industry. Businesses with 0-4 employees represent 81,9 percent of the total number of businesses, which constitute of 366 000 entities of companies without employees and 91 000 entities with 1-4 employees (SSB, 2017).

As mentioned we assess small businesses as entities with 1-4 employees. In the report by Evry (2015) they further characteristics this segment to have been operating for more than a year and that they do not have a CFO position. Meaning that they do not have a dedicated person or department that handle financial and accounting tasks. Instead, financial tasks come in addition to the workload of someone without in depth competence of business economics. Thus, it is common to hire external help from an accountant. Furthermore, small business are started by people who are motivated of being their own boss, love the freedom and flexibility of deciding their own operations, want to contribute to society and want

to do what they love. They do however not have a clear business goal, some settle for having sufficient income to have a thriving business, while others are more ambitious, seeking growth and significant market shares.

The core issue

In-depth interviews by Evry (2015) reveal that small businesses often have a strained relationship to banks. Working around the clock, financial activities come in addition to core activities of the business and is frequently conducted outside hours. Because it is not common for small businesses to possess competence in business economics, financial tasks like financial reporting are learned the hard way, from experience. This is viewed as time consuming, boring, complex, repetitive and frustrating, and it requires help from external sources. Small businesses prefer a close relationship with their banks and accountants, to provide them with advice at their request. The issue is that banks do not view the small businesses as profitable. They demand tailored service despite their size, and there is a higher aggregate failure rate. Moreover, liquidity and cash flow issues are much more common for small businesses because they have fewer customers and do not always get their receivables at specific times. According to Evry, the Norwegian banking model is not tailored for the smaller entities needs, and it is a common conception among smaller businesses that the banks serve their own needs instead of their customers.

Financial technology

Fintech companies are on the rise, and are challenging the financial products and services provided by the traditional banks. As mentioned, the small business segment appears to be a neglected one, which has opened for actors like fintech startups to create alternative innovative solutions to compete with the bank's' existing functions. This part contains a definition of what fintech is and provides a brief overview of the different technologies that could be relevant for small businesses.

ORIGIN

The emergence of fintech is believed to stem from the Financial Crisis of 2008. The distrust in the financial system that followed in its aftermath was ideal for nurturing financial innovations. This resulted in a wave of Fintech startups with innovative and consumer friendly products and services challenging the incumbents. Over the years, the banking sector has been resilient towards disruption by technology. Thriving on unique expertise, favorable regulation and consumer inertia, the "big banks" have historically built up defensible economics and a resistant business model according to McKinsey (2016). Even when faced by the advent of the commercial internet and the dot-com boom, the sector stood strong against attempts of disruption. Out of almost 500 new attackers from this period, less than five survived as stand-alone entities according to the consulting company. PayPal is perhaps the best-known example. The current wave of fintech companies is much stronger, and undoubtedly indicates that something is likely to change. The technologies are more mature and the age of digitalization is making more people apt to embrace these types of solutions. Investments are also considerably higher. According to a report by Accenture, over $50 billion have been invested in around 2500 fintech startups since 2010 (Accenture, 2015/2016), and the rate of investment has accelerated each year.

DEFINING FINTECH

Fintech - short for financial technology, is a hot topic that is rich on definitions. However, most agree on the essence of it. Wharton Fintech Club define the term as: *"An economic industry composed of companies that use technology to make financial systems more efficient"* (Wharton Fintech, 2016). PwC further complement the definition by identifying the actors involved as *"startups, technology companies, or even legacy providers"* (PwC, 2016). This indicates that fintech is an umbrella term that entail all innovative new products, services, processes, applications, and business- and revenue models, with the aim to provide improved financial solutions for the financial services industry (Puschmann, 2012; Chishti, 2016). It can involve changing or complementing the traditional way to send, borrow and lend money, or the way payments and investments are made. Essentially, fintech boils down to cutting costs, increasing transparency, and/or being more user friendly and efficient. The keywords are lower transaction costs, better functionality and improved accessibility.

Puschmann (2012) differentiate fintech solutions into six main business processes: Payments, investments, financing, cross-processes, infrastructure and insurance. These business processes are usually provided by retail-, corporate, and private banks, and the insurance processes are usually dealt with by life- and non-life insurance companies. Interactions through fintech can be by business to consumer (B2C), business to business (B2B), but some of the new technology also allow to skip institutions as middle men providing interaction from consumer to consumer (C2C). This thesis will focus on the banking sector and small businesses, and we will therefore disregard the insurance area. The next paragraphs will briefly introduce how fintech is changing the different business processes.

PAYMENTS AND TRANSACTIONS

The radical upsurge in financial innovations have advanced series of new payment features. Following this development, cutting-edge technology has transformed the process of transactions and the way they are initiated. Not just in terms of introducing new currencies, like the cryptocurrency Bitcoin, or by providing faster payment alternatives, but by entirely rethinking how "value" is transferred and how this process is undertaken. Financial innovations are provided by a range of a new breed of non-bank payment actors, ranging from fintech startups (actors seeking to improve existing payment technology) to non-industry operators (Apple and Facebook) (BNY Mellon, 2015). Payment and transaction innovations vary in degree and come in different shapes depending on the market and sector. Above all, the retail payment segment has experienced the most significant changes, leading to a range of financial services being unbundled. Innovations within this segment are digital wallets or peer-to-peer payments (P2P payments). A digital wallet is an electronic device used for online verification or e-commerce. P2P payments allow for more efficient digital transfer of funds from one individual's bank account or credit card to another party using a smartphone or internet. Norwegian examples include Vipps, and Mcash. Paypal is an example of more international dimension.

OPERATIONAL TOOLS

A range of fintech solutions that address more day-to-day routines of small business operation have recently popped up. Areas of application for these solutions include cash flow management, supply chain management and accounting. Although these tasks are not usually carried out by banks, they are

financial issues that the small businesses have to relate to. Accounting software is continuously improving in functionality in order to appeal more to small business managers. Norwegian company Visma eAccounting software is an example of a fintech-solution aimed at small businesses to help them reduce their dependence on external accountants. Another solution is E-invoice management portals, which are typically designed to nudge the customers to make earlier payments, automatize receivables management and streamline the end-to-end process (WEF, 2015).

FINANCING

Fintech have altered the way people and businesses receive financing in various ways. Equity crowdfunding is a process where investors, "the crowd", fund startup companies and small businesses at an early stage in return for equity, and hence a relative ownership in the company. An alternative is micro-loans, which is a very small loan ranging from $500- $100,1000, used to fund the development of small businesses. This is a service the bank sector used to provide, however stopped because they weren't considered profitable (Techbullion, 2016). These services have now been taken over by fintech startups with alternative solutions for assessing risks. As fintech do not need require physical offices and many employees, they can offer high quality services and efficiency at lower borrowing rates. A third options is credit facility. It is an agreement that allow businesses to borrow a given amount of money within a given timeframe used for a various of reasons. It is an arrangement between a business and a bank. Fintech startups however seek to skip the intermediator by selling the loans directly to investors (Fintech ranking, 2016). Another alternative is reward based funding. This allows small businesses to collect capital through donations in return for rewards of products/prototypes to the investors.

CROSS-PROCESSES

Fintech has also affected the availability of financial data. Financial innovation has simplified the process of examining large and complex data sets called big data analytics. This type of data was previously reserved for large platforms like e.g. Thomson Reuters, which was expensive to access. However, thanks to cloud computing based market data, fintech startups have made it cheaper and hence more available. (Cavanilas et al, 2016). These innovations are mostly relevant to small businesses in the financial sector, e.g. small professional service firms.

INFRASTRUCTURE

Fintech have the capability to modernize infrastructure in the banking sector through build on- and leveraging their existing rigid ecosystems. The most hyped and salient technology in this segment is the emergence of blockchain technology. Blockchain is the technology underlying "bitcoin" and other cryptocurrencies. PWC (2016) define blockchain as "*a decentralized ledger, or list, of all transactions across a peer-to-peer network.* It provides several possibilities, entirely rethinking *"how we pay for things - as well as how we verify who owns what and who has the right to buy and sell it".* The peer-to-peer network is open sourced, connecting buyers and sellers directly so they can interact without the need for costly a third-party intermediary. Across this network value and contracts can be transferred, verified, and recorded. Hence, allowing for the digitalization of diplomas, testimonials, licenses and real estate documentation. Furthermore, it can potentially be used for syndication of loans, providing more secure and efficient transactions protected by encryption.

Literature review

The underlying objective of our research is to study how new technologies (and herein new business models) can potentially disrupt a segment within a very traditional industry. Clayton M. Christensen coined the term "disruptive technology" in 1995, referring to new technologies that displace the old ones and shake up the industry. The concept quickly rose to prominence within the scholarly world of strategy, innovation and management in general. The Economist has characterized Christensen's theory as "one of the most influential modern business ideas" (The Economist, 2011). But as with popular ideas, their fundamental meaning can easily be eroded by excessive and uncritical use. This literature review aims to elucidate the core concepts of disruptive technology theory. We will also briefly introduce which other theoretical perspectives that we consider to include in the final thesis.

Bower and Christensen (1995) distinguish between sustained and disruptive technologies. The former refers to maintaining a rate of improvement by giving customers something more or better in the attributes they already have. The authors exemplify their claim by pointing to disk drives where engineers replaced conventional ferrite heads and oxide disks in the 80s with new technologies that

enabled information to be recorded more densely. More contemporary examples include the fifth blade in a razor or going from TV screens with 1080p resolution to 4K (Christensen, Raynor and McDonald, 2015). Disruptive technologies, on the other hand, introduce a very different package of attributes from the one mainstream customers historically value, and they often perform far worse along one or two dimensions that are particularly important to those customers (Bower and Christensen, 1995). With this slightly intricate phrasing, the authors stress that disruptive technologies never start out by serving the same segments of customers as the old technologies. Christensen's current definition of the concept reads as follows: "A process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors." (Christensen, 2017). Smaller companies with fewer resources can only successfully challenge established incumbent businesses over time. This tends to happen because the incumbents focus on improving the products and services for their most demanding, and usually most profitable customers (Christensen, Raynor and McDonald, 2015). This allows entrants to gain a foothold in the "overlooked" and often less profitable segments. As their technology improves, the entrants can gradually move upmarket and approach the performance that mainstream customers require, while striving to preserve the advantages that drove their early success (better functionality and/or lower price). When mainstream customers start adopting the entrants' offerings on a large scale, disruption has occurred (Christensen, Raynor and McDonald, 2015). It is worth noting that Christensen renamed the concept to disruptive *innovation* in 2003, to emphasize that it is the strategy or business model made possible by the technology that essentially creates the disruptive effect. This term will be used from now on.

The contours of disruptive innovation theory might appear easy to comprehend, but the implications of its multiple facets is not always straightforward. For example, Uber is often celebrated as a disruptive innovator within the taxi business. But according to the theory, this is a misconception. Although Uber can pride themselves on lower prices, more convenient payment and a better balance between supply and demand, they are still not disruptors according to Christensen. To explain why, we can look at two criteria. First, disruptive innovators originate in either low-end or new-market footholds (Christensen, Raynor and McDonald,

2015). In other words, they start by targeting the less profitable consumers, or they find a way to turn non-consumers into consumers. Second, disruptive innovations do not appeal to the mainstream customers until their quality catches up to certain standards. Uber started out by offering nearly the same services that traditional taxi companies do, to nearly the same customers. And few people would agree that their service was inferior to regular taxis. The main takeaway from this section is perhaps that not all major breakthroughs are disruptive innovations. Similarly, disruptive innovations do not necessarily need to be major breakthroughs, as long as they meet the criteria discussed above.

Clayton Christensen is best known for his first book, *The Innovator's Dilemma* from 1997, where he demonstrates how incumbent firms can do everything "right" and yet still lose their market leadership to new, and often unexpected competitors. Why is it so? Christensen points out that the trajectories of market need and technological improvement do not always correspond. There is only so much tech-improvement a market can absorb at a time. But the nature of competition frequently causes incumbent firms to overshoot the performance requirements of their high-end customers in terms of offering them more than they need or more than they are willing to pay for. This explains how inferior technology can displace superior alternatives due to different functionality or lower price. Considering how collusion is not a legal option for incumbents to maintain the "right amount" of technological improvement, what can they do to defend their market position against disruptors? Conspicuous alternatives include buying the competitors or using market power to prevent their entry. If, however, the incumbents would want to try and outcompete the new entrants, Christensen propose four strategies. (1) To focus on developing technology for the *right* customers, who are not necessarily the current customers. (2) Place the development of technology into an autonomous organization where small wins can be celebrated and customer expectations do not bear the burden of affiliation with the parent organization. (3) Acknowledge that failure is bound to happen along the way in pursuit of the correct technology. (4) Allow the autonomous organization to utilize resources from its parent when needed, but be careful to not converge their processes and values.

Christensen, Raynor and McDonald (2015) argue that the right terminology is far trivial when it comes to disruptive innovation theory. Applying the theory correctly is essential to realizing its benefits. Incumbents will respond differently to sustaining entrants and disruptive entrants. This makes Uber's performance all the more impressive, as Christensen's seminal study of the disk drive industry reveals that only 6% of sustaining entrants managed to succeed. It may therefore be important to evaluate the disruptiveness of the different financial technologies to determine their appeal to small businesses. But a key tenet of the theory is that disruptive innovation cannot be determined ex ante. The markets for disruptive innovations are unsuitable for study as they are widely unknown (Christensen, 1997, p. 191). As a result, the traditional method of strategic planning falls short in this sense, and managers should rather focus on recognizing the uncertainties and facilitate learning and discovery. Instead of identifying and analyzing the market, they must allow for exploration. In a later book, Christensen and his co-authors accentuate the importance of looking for *asymmetries of motivation* (Christensen, Anthony and Roth, 2004, p. 38). Taking advantage of these asymmetries basically means flying beneath the radar and capitalizing on opportunities that other actors are happy to ignore or walk away from (Christensen, and Raynor, 2003, p. 288).

In spite of its wide recognition, disruptive innovation theory has come under recent fire. It has to some extent become a victim of its own success, something in which Christensen expresses concern over in a 2015 HBR-article. The concept has been disseminated far more broadly than he had ever imagined, and essential refinements over the last 20 years have been overshadowed by the popularity of the initial formulation (Christensen, Raynor and McDonald, 2015). Critical voices have addressed the empirical relevance of the theory. In an MIT Sloan Management Review Article from 2014, Andrew King and Baljir Baatartogtokh ask how useful the theory really is. They scrutinized the 77 business case studies mentioned in *The Innovator's Dilemma* and concluded that only seven of them actually adhered to Christensen's own criteria for disruptive innovation. Their investigation also found evidence that incumbents rarely engage in sustaining innovation to the same degree as Christensen describes when faced by young rivals with new technologies. The article by King and Baatartogtokh can be seen as an academic follow-up of a New Yorker magazine article published earlier in

2014. Written by Harvard professor Jill Lepore, the article calls into question the glorification of disruptive innovation theory. She points out that the disk-drive firm that Christensen studied in *The Innovator´s Dilemma* actually survived and subsequently outcompeted their start-up rivals, despite being framed as ill-fated victims of disruption in the book. What is more, she questions Christensen's application of the theory outside the world of business, such as the two books from 2008 about higher education (*Disrupting Class*) and health care (*The Innovator's Prescription*). As Lepore writes: "People aren't disk drives". One must therefore be careful to use such ideas as explanation and justification beyond their domain, she argues.

As mentioned, we must assess the potential disruptiveness of financial technology to determine how they can potentially benefit small businesses. Given that fintech is a collective term for multiple different technologies, this assessment must be done in parts. But for now, we will confine ourselves to think of it as a composition of the technologies described in previous sections because they share some similar traits. In a sense, the technologies *should* appeal to small businesses because their main selling points are improved functionality, lower transaction costs and more accessible services. For businesses without dedicated employees in finance this could be a major advantage. On the other hand, small businesses are not necessarily early adopters of new technology. Quality of the different technologies is also differing at this point in time, which can also indicate a disruptive path if this quality catches up to the standards of more profitable segments. For now, the conclusion will be that some financial technologies appear to have more disruptive potential than others.

Additionally, we will also consider including literature on transaction cost theory and design thinking in our thesis. These concepts are relevant because the fundamental objectives of most fintech-innovations are to reduce transaction costs or to improve the functionality of financial products and services.

Methodology

RESEARCH PHILOSOPHY AND APPROACH

Before commencing any research endeavor, one must take epistemological considerations. An epistemological issue concerns the question of what is

regarded as acceptable knowledge in a discipline (Bryman and Bell, 2015, p. 26). We consider the context of our research to be socially grounded, as we are ultimately studying the influence of a social phenomenon (fintech) on social actors (small businesses). As a result, the underlying paradigm appropriate for the thesis is *interpretivism*. This view assumes a fundamentally different logic of research than that of natural sciences and provides guidelines for choice of methods, which we will get back to. *Ontology* concerns the question of whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered as social constructions built up from the perceptions and actions of social actors (Bryman and Bell, 2015, p. 32). Due to the central position of small businesses in this thesis, it is important to clarify how we view them. Although we recognize that the concept of a small business is a socially constructed one where meaning is continually being accomplished by the social actors (Bryman and Bell, 2015, p. 33), it is more convenient for our research purpose to adopt a view of objectivism. This ontological position implies giving organizations a meaning of existence that is independent of social actors. Since we are not studying intra- or inter-organizational relations, it is reasonable to regard the organizations in this sense.

Our approach to link theory with data will be inductive for the following reasons: From fragments of information we have observed that financial technology is fast becoming an unassailable factor when it comes to provision of financial products and services. In the end, our goal is to theorize about what this technological trend can bring to the table for small businesses. How to get there is currently a matter of uncertainty, but we believe that the overarching research approach thus require the open-ended and exploratory view of induction.

RESEARCH DESIGN

Our subject of study warrants a mixed method research approach, although the primary emphasis will be put on qualitative methods. To be able to answer our research question, we must expand our knowledge in two areas. We must first inquire a representative sample of small businesses to learn more about how they experience the current provision of financial products and services, and what they would like to be done differently. Then, we must explore the relevant financial technologies in depth to see how they can be helpful for the small businesses.

Bryman and Bell (2015, p. 48) describe five different research designs applicable for business research. Our choice of design may best be explained by a process of elimination. With regards to the research question, our study will be a single case, at a single point in time, without experimentation, and primarily with use of qualitative data. Hence, the remaining viable option seems to be the case study. A frequently outed issue with case study research is how to assess it. The common criteria - reliability, replicability and validity, are mainly relevant to quantitative research. Lincoln and Guba (1985) launched *trustworthiness* as a criterion of how good a qualitative study is. The idea was to attach the concept to reliability, replicability and validity by asking for example: how believable are the findings? Or: are the findings likely to apply at other times? Although these are considerations we will include in our assessment, we assert that our primary goal is to develop knowledge about the current and future ways in which financial technology development can appeal to the "overlooked" small business segment. Our findings and conclusions will inevitably be time- and context specific.

Yin (1993) describes three specific approaches to case studies: exploratory, explanatory and descriptive. The formulation of the research question should determine which type of classification the case study falls under (Saunders et al., 2009, p. 139). Given that our objective is to explore how fintech can resolve a possible discrepancy between the needs of small businesses and the offerings financial products and services they are offered, we are inclined to characterize the main purpose of our research as exploratory. We want to delve into the potential disruptiveness of a phenomenon of which our current knowledge is fairly limited. That is why the exploratory approach is a useful starting point. However, we are aware that the openness and flexibility associated with this path may require us to change direction as new data and insight might occur to us (Saunders et al., 2009, p. 140). A tenet of exploratory studies can even be that our research is not worth pursuing, i.e. if our data concludes that financial technology will have a very limited impact within the time frame we set. To provide our thesis with a contextual background we will also need to add an element of descriptive research. Although descriptive research is considered a stand-alone approach, it is perhaps more often used as a forerunner to exploratory or explanatory research (Saunders et al., 2009, p. 140). In order to theorize about the future role of fintech

we must first describe its current embodiment as accurately as possible. Thus, we conclude our study to be descripto-exploratory in essence.

SAMPLING

As mentioned, we need two primary sources of information. Data on small businesses' need is best gathered through a survey in order to achieve a representative sample. We might also limit this to a specific industry or a legal structure if we perceive their differences in needs to be significant. This sampling will for the most part be done online for the sake of convenience. After setting our criteria for relevant SMEs, we will use Brønnøysundregistrene to derive our sample from. We will strive to make the sampling random, but recognize that it can be more accidental in nature because we do not have any systems for contacting these companies.

When it comes to the context of qualitative research, purposeful sampling is essential, as it contains recognizing and selecting individuals that are particularly knowledgeable about and experienced with topics and object of interest (Palinkas et al., 2013). Such sampling can not be done at random, thus requiring us to opt for a non-probability strategy. To identify the most knowledgeable individuals, we will use snowball-sampling. Fortunately, the fintech-community is still relatively small in Norway which is likely to make it easier for us to be granted access. We will start by contacting the government-run fintech facilitator FinTech-Forum and hopefully get the snowball rolling from there. We will also try to get in touch with representatives from different banks to ask them how they envision the influence of fintech and what measures their organizations are currently taking. This will typically be chief officers within strategy divisions or their like. A leading figure in fintech like Christoffer Hernæs in Skandiabanken is an example of someone we will try to contact. We have also established relations with Sparebanken Hedmark who can put us in contact with the right people in Sparebank1-Alliansen.

DATA COLLECTION

The data in this paper on fintech will be obtained through interviews for a couple of reasons. First, fintech is a relatively new phenomenon, particularly in the Norwegian context. Accordingly, only a small group of people have in-depth knowledge on the subject and the existing literature is limited. Second, our research question is rather prospectively formulated, seeking to predict a future

state. The best we can do is to guess, and the best guesses are often made by the most competent people. But to predict we must also understand how small businesses operate, how content they are with the current situation and what they would like to see different about the financial

We will conduct *semi-structured interviews,* meaning that we will be guided by a list of questions specifically prepared for our interview subjects. Preferably, these interviews will be done face to face, but we are prepared to make do with phone or Skype if the time of our subjects does not suffice. The idea behind a semi-structured interview is to give the respondent some leeway to add new insight and perspectives that has not been accounted for in the interview guide, while at the same time making sure that the conversation sticks to the subject. We know that our questions will potentially be prone to institutional bias and general subjectivity by the interviewees. We also assume that the subjects we are going to meet are knowledgeable people with valuable time. In order to obtain efficient responses and to keep bias at a minimum, we will exert ourselves to follow Steinar Kvale's (1996) ten criteria of a successful interviewer.

Although interviews will be our primary source of data, we will also need to gather the fore mentioned data on small businesses. Some information in this area exist already, such as the report by Evry from 2015 on the banking challenges of serving small businesses. The data in this report is gathered from all the Nordic countries. Since our focus will be limited to the specific Norwegian context, we therefore find it necessary to collect data ourselves. We plan to draw up a self-completion questionnaire that can be sent out to small businesses via e-mail. We figure that we must send the survey to somewhere around 1000 businesses because the response rate in these studies tend to be quite low. We might also target forums for business owners as well to get more respondents. Furthermore, we will ensure full anonymity to prevent response bias related to sensitive information. However, we will include questions to identify what line of businesses the respondents belong to, and other factors that are of interest.

This thesis will also rely on material collected by others. Secondary data sources will be utilized to provide in-depth understanding of the different technologies and as a complementary source to indicate that our obtained data does not deviate

entirely from the (limited amount of) prevailing knowledge. Most research questions are answered using some combination of secondary and primary data (Saunders et al., 2009, p. 258), and we believe that the secondary data sources we have access to will enrichen the trustworthiness of the study. The most important ones will be reports by large consultancies and information gathered by the cluster organization for fintech in Norway. These are particularly important to reach a certain level of knowledge about financial technologies so that we can ask the right follow-up questions during the interviews. We will also make use of business news articles and material from tech magazines, as these are usually the most up-to-date sources. Books and journal articles will be included to find academic literature to lay the theoretical foundation for the thesis.

According to Bryman and Bell (2015, p. 320-8) secondary data sources bear numerous advantages such as cost- and time efficiency, high-quality data and "pre-analyzed" material. However, we are also aware of potential limitations like data complexity and absence of key variables (Bryman & Bell, 2015, p. 329). Some of these sources might also be biased and self-favoristic. It is therefore essential that we assess the quality of the secondary data collection through a critical lens. We will approach this by cross-checking with the four criteria put forward by Scott (1990): authenticity, credibility, representativeness and meaning together with the checklist provided by Saunders et al. (2015, p. 279). Regarding the academic literature, we will use the Web of Science, Financial Times' list of journals, and the built-in functions within Google Scholar such as rankings and number of citations to critically evaluate the sources on relevance, validity and trustworthiness.

ANALYSIS

Qualitative methods naturally yield qualitative, non-numerical data. The nature of this type of research is not to look for causal relationships between variables, but rather to build theory. In the words of Kathleen M. Eisenhardt (1989): "The final product of building theory from case studies may be concepts, a conceptual framework, or propositions or possibly mid-range theory… On the downside, the final product may be disappointing. The research may simply replicate prior theory, or there may be no clear patterns within the data." We hope to generate propositions for action (or non-action) for the developers of fintech towards the

small business segment. We will do our best to keep in mind Eisenhardt's words of caution: acknowledging that our findings may very well be that the fintech-hype is unwarranted for the foreseeable future.

Qualitative data analysis consists of identifying, coding and categorizing patterns or themes found in the data (Woods, 2011). There are no right or wrong ways of analyzing this type of data, but some strategies are more prominent than others. Grounded theory has become the most widely used framework for analysing qualitative data (Bryman and Bell, 2015, p. 584), and is our preferred choice. In simple terms, it is a way of extracting theory from empiricism. The tools of grounded theory are: theoretical sampling (in our case: snowball sampling), coding, theoretical saturation and constant comparison. The key process in grounded theory is coding, which is used to break the data into component parts. The open coding will generate concepts (building blocks of theory) that in the future can be grouped and turned into categories. This will enable us to code the emerging data as it is collected. In time we will reach a stage where there is no further point in coding the data, and a point where further collection of data to fit in with our concepts or categories is no longer necessary, as new collection will not provide any additional insight to our concepts. By continuously comparing our data collection and concepts we hope to not lose congruence between the concepts and categories. In the end, we should be left with only the core ways in which fintech can be applied for small businesses, as well as specific definitions of how the different technologies work. The end product should be grounded in the data obtained through the interviews.

Although most of our data will be large bulks of unstructured textual material, we will also try to operationalize some factors. This can be done by counting the number of times a word is mentioned, interpreting emphasis or simply asking the respondents to fill out a short survey as well. For example, we would be interested in knowing how our respondents see the potential disruptiveness of a technology, what the main regulatory issues are, or which solution that is most developed at this point in time. Not only will such information enrichen the thesis, it will also be suitable for visual representation that can make the final paper more appealing.

When it comes to our survey, we will make use of exploratory data analysis on a quite basic level to derive the most valuable insight. Two-way tables, frequency tables and regression models are likely examples. The most important function of this will be to map what small businesses in Norway actually need in order to study the relevant fintech-solutions that can suit these needs. Conducting the survey will be an important step in order to prepare ourselves for the interviews, but the statistical analysis of it will not be very complex.

Further progression

At this point in time, we acknowledge that our research proposal should be narrowed down to something a little more precise. For example, rather than looking at how financial technology can be better at meeting the needs of small businesses than traditional financial services, we could investigate how a specific fintech-solution can succeed in this order. Or on the contrary, we could see how a specific line of business can benefit from an array of fintech. Either way, this is the first thing we will address after handing in the preliminary thesis report. We expect to have resolved this issue no later than the end of January.

Marshall and Rossman (2011) state that time, personnel and financial support are the most critical resources for successful completion. The first step should be to work out a timetable, according to Bryman and Bell (2015, p. 85). This can be seen in the Gantt-chart below. Regarding resources at our disposal, we will primarily draw on relations from our network. For example, we have several contacts that run their own small businesses whom we could initially inquire to help us develop the survey. We also hope that our supervisor, Espen Andersen, with his technological competence and broad professional network can prevent us from going astray when it comes to the more technical bits. Financial support will be disregarded in this case, as we do not plan to apply for or receive any funding to this research.

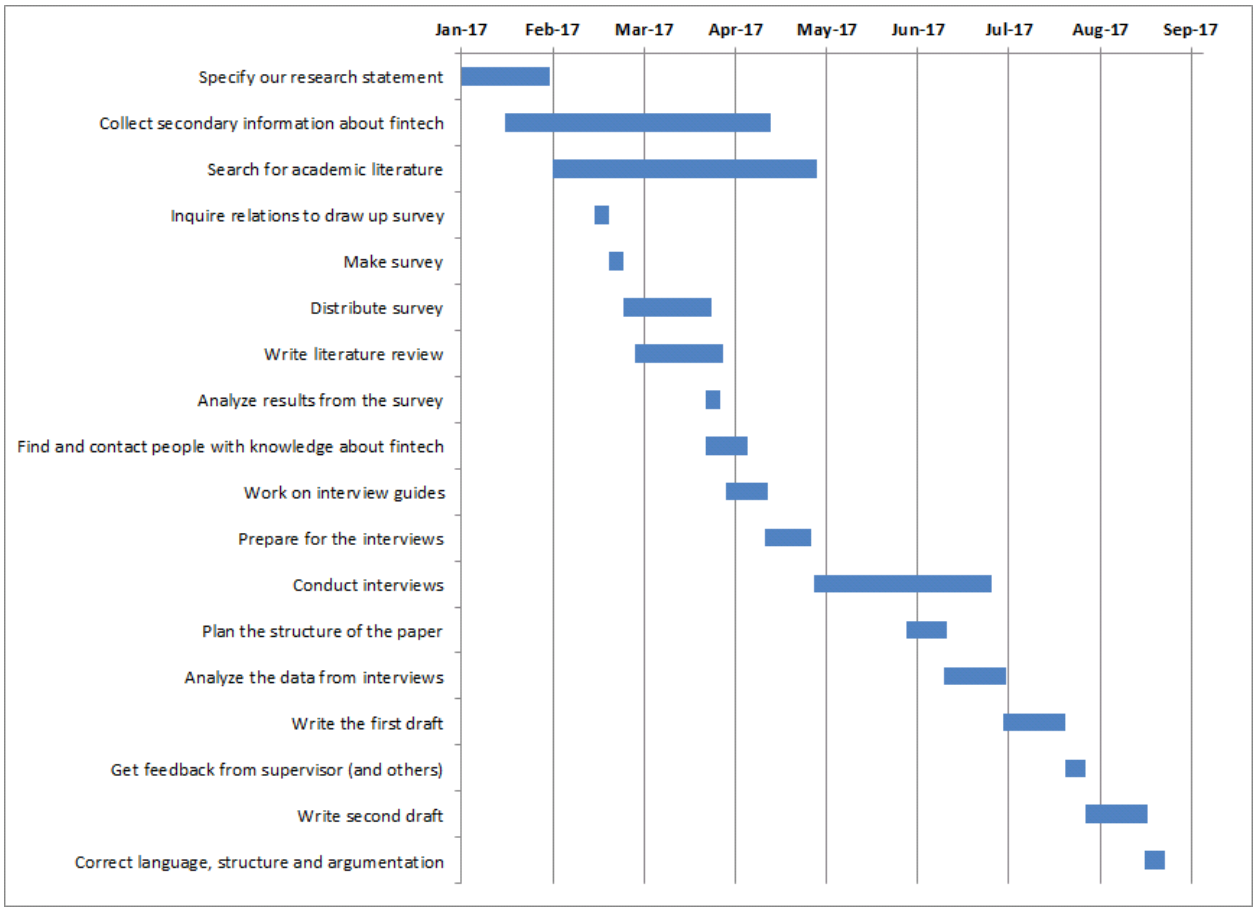

Figure 1: Gantt-chart of future progress

Reference list

Alt, R., Puschmann, T. (2012). The rise of customer-oriented banking – electronic markets are paving the way for change in the financial industry. Electronic Markets, 22(4), 203–2015.

Bower, J. L., & Christensen, C. M. (1995). Disruptive technologies: catching the wave (pp. 506-20). Harvard Business Review Video.

Bryman, A., & Bell, E. (2015). *Business research methods*. Oxford University Press, USA.

Cavanillas, Jose M. Curry, Edward and Wahlster, Wolfgang. 2016. *New Horizons for a Data-Driven Economy: A Roadmap for Usage and Exploitation of Big Data in Europe.* Springer

Chishti, Susanne and Barberis, Janos. 2016. *The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries*. Wiley

Christensen, C., Raynor, M. E., & McDonald, R. (2015). What Is Disruptive Innovation? Boston: Harvard Business Review.

Christensen, C. (2013). *The innovator's dilemma: when new technologies cause great firms to fail*. Harvard Business Review Press.

Christensen, C., Anthony, S., & Roth, E. A. (2004). *Seeing what's next: Using the theories of innovation to predict industry change*. Harvard Business Press.

Christensen, C., & Raynor, M. (2003). *The innovator's solution: Creating and sustaining successful growth*. Harvard Business Review Press.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, *14*(4), 532-550.

King, A. A., & Baatartogtokh, B. (2014). How Useful Is the Theory of Disruptive Innovation?. *MIT Sloan Management Review*, *57*(1), 77.

Kvale, S. (1996). *Doing Interviews*. London: SAGE Publications.

Lepore, J. (2014). The disruption machine. *The New Yorker*, *23*, 30-6.

Lincoln, Y. S., and Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Sage.

Marshall, C, and Rossman, G. B. (2011). *Designing Qualitative Research*. 5th ed. Newbury Park, CA: Sage Publications.

Palinkas, L. P. A., Horwitz S. M., Green C. A., Wisdom J. P., Duan N., and Hoagwood K. (2013). "Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research." *Administration and Policy in Mental Health and Mental Health*

Services Research Adm Policy Ment Health 42, no.: 533-44.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students*. 5th ed. Harlow, England: Prentice Hall.

Scott, J. (1990). *A matter of record: Documentary sources in social research*. John Wiley & Sons.

Yin, R. (1993). *Applications of case study research*. Newbury Park, CA: Sage Publishing

Woods, M. (2011). Interviewing for research and analysing qualitative data: An overview. *Massey University*.

Web references

Accenture "Fintech and the evolving landscape"
https://www.accenture.com/no-en/insight-fintech-evolving-landscape
Accessed 10.01.2016

ACI Worldwide. 2016. "Small business banking: A $56.9 billion opportunity up for the taking."
https://www.aciworldwide.com/-/media/files/collateral/trends/small-business-banking-an-opportunity-for-the-taking-tl-us.pdf
Accessed 12.01.2017

BNY Mellon. 2015. "Innovation in Payments: The Future is Fintech"
https://www.bnymellon.com/_global-assets/pdf/our-thinking/innovation-in-payments-the-Future-is-fintech.pdf

Clayton Christensen. 2016. "Key concepts".
http://www.claytonchristensen.com/key-concepts/
Accessed 08.01.2017

E24. 2014. "Uten småbedrifter vil Norge forvitre"
http://e24.no/makro-og-politikk/bedriftsforbundet-uten-smaabedrifter-vil-norge-forvitre/23017349
Accessed 14.01.2017

Eastern Norway Research Institute. 2016. "Hvordan lykkes stort som små"
http://www.ostforsk.no/wp-content/uploads/2016/10/052016_Hvordan_lykkes _stort_som_sm%C3%A5.pdf
Accessed 14.01.2016

Epsi Rating. 2015. "Bankbransjen 2015"
http://www.epsi-norway.org/report/bankbransjen-i-norge-2015-et-sammendrag/

Accessed 14.01.2017

Evry. 2015. “Small business banking - the challenge of serving small businesses.” https://www.evry.com/globalassets/insight/bank2020/small-business-banking---labs-whitepaper.pdf
Accessed 11.01.2017

Fintech innovation lab London. “Fintech and the evolving landscape”. http://www.fintechinnovationlablondon.co.uk/pdf/Fintech_Evolving_Landscape2016.pdf
Accessed 10.01.2016

Fintech ranking. 2016. “Goldman Signs $100 million credit facility for online lender fundation.” http://fintechranking.com/2016/08/24/goldman-signs-100-million-credit-facility-for-online-lender-fundation/
Accessed 11.01.2016

Huffington post. “Fintech is changing the way we invest”. http://www.huffingtonpost.com/nikolai-kuznetsov/fintech-is-changing-the-w_b_11697066.html
Accessed 11.01.2016

McKinsey. 2016. “Cutting through the noise around financial technology.” http://www.mckinsey.com/industries/financial-services/our-insights/cutting-through-the-Noise-around-financial-technology
Accessed 14.01.2017

Norges Bank. 2013. Competitiveness and regulation of Norwegian banks http://www.norges-bank.no/pages/98578/Staff_memo_2013_18.pdf
Accessed 13.01.2016

PwC. 2016. “Blurred lines: How fintech is shaping financial services.” http://www.pwc.com/gx/en/advisory-services/FinTech/pwc-fintech-global-report.pdf
Accessed 07.01.2017

PWC. 2016. “Q&A – What is blockchain?” http://www.pwc.com/us/en/financial-services/publications/viewpoints/assets/qa-what-is-blockchain.pdf
Accessed 13.01.2017

Regjeringen. 2012. “Regjeringens strategi for små og mellomstore bedrifter”. https://www.regjeringen.no/globalassets/upload/NHD/Vedlegg/Rapporter_

2012/102377_NHD_SMB_Web.pdf

Regjeringen. 2016. “Små bedrifter - store verdier”
https://www.regjeringen.no/no/aktuelt/sma-bedrifter--store verdier/id2473521/
Accessed 14.01.2016

Statistisk Sentralbyrå. 2017. Virksomheter, 1. Januar 2016.
http://www.ssb.no/virksomheter-foretak-og-regnskap/statistikker/bedrifter
Accessed 14.01.2016

TechBullion. 2016. “What are Micro-Loans and how Fintech is influencing the Loan Industry”.
http://www.techbullion.com/micro-loans-fintech-influencing-loan-industry/
Accessed 11.01.2016

The Economist. 2011. “Aiming high”.
http://www.economist.com/node/18894875
Accessed 13.01.2017

Wharton FinTech, 2016. “What is FinTech“
http://www.whartonfintech.org/blog-archive/2016/2/16/what-is-fintech
Accessed 09.01.2016

World Economic Forum (WEF). 2015. “The future of fintech: A paradigm shift in small business finance.”
http://www3.weforum.org/docs/IP/2015/FS/GAC15_The_Future_of_FinTech_Paradigm_Shift_Small_Business_Finance_report_2015.pdf
Accessed 12.01.2017

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