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Digital Consumption and Over-Indebtedness Among Young Adults in Sweden

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This LUii report presents empirical results from studies on consumption and over-indebtedness in Swedish young adults in a digital context. The studies have been conducted through in-depth interviews with municipal financial counsellors as well as a quantitative survey with approximately 1,100 respondents in a sample representative of Swedes from 18 to 25 years old. The report includes an extensive literature review on over-indebtedness and consumption in a digital context.

The purpose of the project has been to form a better understanding of in what ways the digitization of our everyday lives – including consumption, credit handling and overall communication – influences economic vulnerability among young adults. The research report is written by researchers linked to Lund University Internet Institute (LUii) and has been funded by the Swedish Enforcement Authority. The research has also been conducted in connection with a wider interdisciplinary research theme on "The Credit Society", at the Pufendorf Institute for Advanced Studies at Lund University.

The research group is led by Stefan Larsson, Associate Professor in Technology and Social Change, and involves Lupita Svensson, PhD in Social Work, and Hanna Carlsson, PhD in Information Science. The work with the literature review received invaluable help from Fredrik Åström, bibliometrician and Associate Professor at Lund University. The empirical research was conducted during 2015 and early 2016.

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Summary

About

The studies reported here have been conducted during the course of one year and contain several elements, of which the most central are a survey of approx. 1,100 Swedish young adults, 18-25 years old (see chapter 2), and an interview study conducted with municipal financial counsellors (see chapter 3). In addition, a more general literature review on digital consumption and over-indebtedness, not limited to young adults only, was conducted prior to this project and has here been summarised for this context (see chapter 4). Given the multiple methodologies and the relatively short time-frame, this study should be regarded as a pilot study in this field. More work would ideally be carried out with regards to how to robustly define recurring payment problems in a digital context, as well as the relationship to over-indebtedness. Nevertheless, given the definitions and methods we utilized, our results in sum indicate the following:

Recurring payment problems among young adults

1.1. Of the respondents to the quantitative survey of approx. 1,100 Swedish young adults (18-25 years old), *18.8%-21.2% have experienced recurring problems paying bills during the past year*, such as rent and down payments. This would equal a number in the span of 194,000 to 219,000 that experience recurring payment problems amongst the 18 to 25 year-olds in Sweden.

1.2. The results indicate that those who have recurring payment problems *tend more often to buy more than planned*; are *less likely to have a social network to talk to about financial problems*; are *less likely to have friends that would help them financially* – than those who did not experience any payment problems during the past year. Others have stated the link between over-indebtedness and social exclusion (cf. Kronofogden, 2008), and that notion is clearly a part of what our results indicate.

1.3. Even if we couldn't provide with reliable results with regards to the role the size or type of city plays for payment problems overall, there are indications that combined point to that young urban males is a particularly vulnerable

risk group for financial problems. For example, those with recurring payment problems tend to more often be male than female, and having more than one mobile subscription – which are more common among urban males – may indicate financial problems.

1.4. Those who take payday loans are almost exclusively those who have recurring payment problems, which could indicate that those with urgent financial problems and small margins in the household budget also pays more to stay afloat than those with less urgent problems.

Being digital: young adults

2.1. It is fair to say that we currently live in a credit-centric consumer society in times of rapid technological transition. Our survey confirms that the Internet is a natural part of the young adults' everyday lives and that the smartphone is a central device in this development, as has already been recognized in several other studies. The smartphone is well integrated in consumption practices too, but also in itself constitutes a cost that is not negligible in the context of the financial situation for most young adults. It is also described as the "first access-point to credit" by the municipal financial counsellors in the interview study we present in chapter 3 below.

2.2. Based in the detailed literature review (presented in chapter 4), it is worth noting that many sources highlight the need for further studies specifically concerning the category of young adults. This is, at least partly, because this age group is vulnerable to the challenges involved in building an independent financial base and that the structures that fail here probably will have far-reaching implications. There seem to be need for more knowledge of what modern digital society and the use of smartphones entail from the perspective of consumption and indebtedness.

2.3. When compared to other studies that include all ages, it is clear that the mobile phone is more actively used by the respondents in our sample of young adults in relation to physical stores. In our sample, 54.7% of young adults have searched for a nearby store compared to 25% in the so-called E-barometern (18-79 years old, see chapter 2 below), 32% of young adults have checked the stock balance before going to a store compared to 17% of the comprehensive age group. Young adults using social media also check in at stores more often (10.2% v. 3%), click ads more often (27.4% v. 8%), and do more research on products on the mobile phone (62.7% v. 42%).

An age of transition

3.1. A large share of young adults in this survey lives with both parents (37.7%) or one of the parents (9.9%). Around 1 out of 4 lives with a partner or spouse, and 1 out of 5 lives alone, all of which is likely to be of importance for their financial situation, and this age-span represents a very transitional time, where conditions change.

The long road to financial counselling

4.1. The municipal financial counsellors state that over-indebted young adults do not seek their help. The most common client has tried to solve his or her financial problems by themselves for maybe 10-15 years before they contact the municipal financial counsellor. Since the average age of the clients, from the financial counsellors' experience, is between 35-45 years old, many of them have had economical problems since their early twenties. Therefore, a common wish among the counsellors is to have the possibility to work more preventively, through information and knowledge, preferably at early ages. This speaks for the importance of earlier interventions for the most vulnerable subjects, in order to counter unsustainable financial practices created as young adults but not visible until the subjects are well into their thirties.

4.2. The counsellors describe different categories in the group of over-indebted young adults (*the Heir*, *the Unable*, *the Criminal*, and *the Due-to-Others*). Common to these groups is some mutual form of alienation and vulnerability. Therefore, the financial counsellors' statements challenge the myth that over-indebtedness can happen to anybody.

4.3. The municipal financial counsellors identify in digitalization a simplified and automated access to to credits and loans that may lack some of the interpersonal inertia from pre-digital times. This can be a problem for vulnerable groups. The financial counsellors' impression is that in the process, this simplicity has removed some of the systemic friction previously involved when putting oneself in debt. Based on age and use of digital technology for shopping, using credit and taking loans, they could not distinguish the young adult's actions from the group in general. The debt counsellors' impression is that easy and fast access to money made possible through various digital forms demands a capacity for abstract thinking to which society is not paying any attention.

4.4. The municipal financial counsellors describe the smart phone subscription as a problematic "first credit" for their clients. This has been debated, but our survey study to some extent support this, in terms of that the results indicate that having more than one mobile subscription – which are more common among urban males – may indicate financial problems. It is more common to have recurring payment problems in the group with more than one mobile subscription (10% of the sample) than those with none or just one.

Debt as taboo

5.1. The financial counsellors bear witness to a shameful taboo involved in being formally registered as indebted in the Enforcement Authority's databases. This taboo adds risk instead of functioning as an incentive to stay out of the registers by any means, including the development of coping strategies that, actually, may lead to a worse financial situation than otherwise.

Datafication of consumer profiling

6.1. One aspect that has not (yet) been problematized in any greater depth in public debate – but which we view as an important object for further studies – concerns advanced and data-dependent *consumer profiling* that includes both descriptive and predictive analyses which have been made possible through data mining of consumers' behaviour. This is relevant for all e-commerce as well as loyalty cards or "club memberships" in physical retail stores (which includes 3 out of 4 respondents). This concerns not only issues of rights-based privacy – i.e., the control over personal information – but is also to some extent an ethical and political issue that needs more debate; How do we best balance utility and privacy?

Box 0.1: Results in numbers

- Between 18.8% to 21.2% of the respendents of Swedish young adults have experienced recurring payment problems the past year. This means 1 out of five and would equal 194,000 to 219,000 Swedes in the age group 18 to 25.
- This group experiences less social support when suffering from financial problems, and more often buy more than planned in shopping situations than the groups with less payment problems.
- Bills concerning mobile phones and subscriptions is the single highest stated bill (14.5%) that young adults experience recurring problems with.
- 9 % of all the respondents use payday loans. 50% of the group of payday loan takers states that they use it for "rent and food."
- 45% of the entire survey sample claims to always "buy more than planned."
- 6% of the respondents have utilized the municipal budget counselling in the last year. Almost half of the respondents do not know it exists.
- 96% are smartphone users.
- 98% use the Internet every day.
- 85% state they use it "virtually all the time."
- 1 out of 3 states that their mobile subscription costs more than 32EUR (300SEK) per month. 1 out of 10 states that it costs more than 54EUR (500SEK) per month.
- 14% of the respondents state that they do not have friends to help them if they need money. 1 out of 5 states they do not have a good social network to consult when in financial difficulties.
- 3 out of 4 use some kind of loyalty card.

1. Project Objectives

Background

In a recent report, the Swedish Enforcement Authority states that the number of people registered as being in debt in the age group 18 to 25 years old has decreased by 11% from 2013 to 2015.[1] In numbers this means a decrease from 41,000 to 37,000 people, which in turn represents a decrease from approximately 4.0% to 3.6% of the entire age group in Sweden.[2] This is of course good news.

However, the results of this study indicate that in this age group of young adults in Sweden, 18.8-21.2% have experienced *recurring payment problems the past year*, which would equal something in the range of 194,000 to 219,000 individuals. To study experienced recurring payment problems is a way of addressing subjective over-indebtedness and to find out more about the stages that may precede the somewhat more static notion of administrative over-indebtedness and become a matter for the Enforcement Authority's registry. It is a way to find out more about how young adults experience their financial situation from a perspective that sees it as a component in an often rather dynamic part of life, also financially, and what type of consumption and credit patterns that may develop during this time. Some of which may lead to formally registered over-indebtedness at a later stage. Some of which already have.

Young adults (18-25) are underrepresented at the Swedish Enforcement Authority generally, but are over-represented for debts below 20,000 SEK (2,155 EUR) and among those that have payday loans registered (SOU 2013:78, p. 21). That it may take time to reach over-indebtedness is also affirmed by our interviews with municipal financial counsellors, who often wish that they could beneficially influence the development at an earlier stage.

These consumption and credit patterns are to some extent a moving target in a digital society where so much effort is spent on how to simplify monetary transactions. When assessing the role of credit and payment

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[1] http://www.kronofogden.se/48374.html (last visited 31 January 2016).

[2] According to Statistics Sweden (SCB), Sweden's population aged 18 to 25 (December 31, 2014) consists of 1,031,812 persons.

problems, it is also important to acknowledge the fact that we live in dynamic times where some notions of how things used to be concerning credit not necessarily can be held as true anymore, when both norms and practices change. The relatively rapid transition towards a high degree of borrowing and a natural state of credit practices in our everyday lives has led to what governmental investigator Anna Hedborg described as "the untried credit society" in the Swedish governmental report translating to *Over-Indebtedness in the Credit Society?* (SOU 2013:78, p. 214).

The technologies develop – the role of the smartphone, i.e. mobile internet access, has completely changed the game over the last five years – and societal norms around credit changes as well as, likely, the perception of money and credit. Due to the magnified information collection features of a digital environment, we are profiled and analysed as consumers and borrowers more than ever before. This holds the potential to both beneficially appeal to individualised suggestions to consume things and services we do need and want, but is just as much used to target us in our weak moments to buy stuff we don't need, to "trigger" purchases or keep us in the omnichannel loop to conclude the buys we hesitated over – reassured that the actual full payment can be done sometime in a blurry and distant future – and to easily lend us small amounts of money at high interest in moments of our lives when we really shouldn't.

The complexity of the moving target entails that the field of research is to be found in the intersection of research on consumption and youth culture, digitisation and technological mobility, credit and indebtedness, as well as welfare research on vulnerabilities and risk groups in society. As a result of the digital revolution, including the very recently reached high levels of smartphone penetration, the practices of consumption are undergoing drastic changes. For example, the overall use of cash and in-store shopping is becoming less frequent in general, as coming generations use phones rather than coins, bills or credit cards to order substantial amounts of consumer goods online (Molesworth & Denegri-Knott, 2012). A particularly interesting group in this context is young adults, due to the fact that they on the one hand are early adopters of this technological dispersion (cf. Palfrey & Gasser, 2008), and are particularly affluent when it comes to "digital literacy" (Thomas, ed., 2011; cf Lankshear & Knobel, 2008) in a way that may tell of the direction society is heading in. On the other hand, they are a documented risk group when it comes to over-indebtedness (Kronofogden, 2012; 2013, p. 31; SOU 2013:78, pp. 198f.) and are often pointed out as lacking in "financial literacy." Still, the consequences of digitization for practises of consumption and indebtedness among young adults remain to a large extent under-researched.

In Sweden, the time spent on mobile access to the Internet has exploded over the last few years. The use of smartphones in all age groups (over 12) has gone from 22% to 77% in five years (Findahl & Davidsson, 2015, p. 11). The daily

use of the Internet on the mobile phone for the age group 16-25, has moved from less than 10% in 2010 to above 90% in 2015 (Findahl & Davidsson, 2015, p. 28). This "on-going revolution" of digital technologies (Belk & Llamas, 2013, p. 10) also points to the fact that smartphones are not only a tool for communication but have acquired a wide variety of uses, "replacing wallets, watches and doorbells" (Watson, 2010). The changed consumption practices this leads to unfortunately come with risks. A study by the Swedish Enforcement Authority concludes that there is an overrepresentation of young people among submitted applications to the Swedish Enforcement Authority regarding unpaid e-commerce bills (Kronofogden, 2013, p. 31). The Swedish Enforcement Authority has previously noted that one of the common grounds for orders for payment for those aged 18-25 is purchases by invoice and that a large proportion of these is related to purchases made from e-commerce companies (Kronofogden, 2012). Although these reports indicate some of the frequencies of handled cases related to indebtedness, there is not much research to be found yet that offer insights into the reasons behind those high frequencies and how this indebtedness relates to digital literacy and vulnerability. Such insights would be valuable as over-indebtedness is creating a vulnerable situation for young adults, since a payment default registered by the credit report companies can make it harder, for example, to rent an apartment or take out a loan from a bank. This may create a situation that is difficult to evade.

Regarding previous research, some scholars focus the relationship between economy and society in terms of a "consumer culture" (Lury, 2011), or by speaking of a "consumer society" (Miller, 2012). As mentioned, there are interdisciplinary accounts of debt in relation to consumption (eg. Brubaker et al., 2012), but the majority of consumer research, perhaps especially the branch of "e-commerce", does not deal with negative effects in terms of over-indebtedness. Yet another strand of research deals with the dematerialisation of money, as in "cybercash" (Guttman, 2003), which can be seen as a development from research on credit card systems. Notably, the payment systems or methods are of key relevance for digital consumption. An emerging research field within economics dealing with consumer competences is financial literacy, which is broadly defined as "the ability to make informed judgements and to take effective decisions regarding the use and management of money" (Schagen & Lies, 1996 p. 91). The growth of this research field indicates that it has become more widely acknowledged that consumer practices require particular knowledge and skills. However, while recognising the importance of the broader skills emphasised in the field of financial literacy, digitally mediated consumer practices also require competences related to the particular affordances of mobile digital technology, e.g., being able to critically reflect on and make sense of a mobile interface, as well as to choose between and handle

different forms of digital payments. These competences lie beyond the scope of the areas examined within the field of financial literacy.

A number of studies have explored the role of mobile technologies, in particular smartphones, in the intersection between consumer practices and everyday life (cf. Caron & Caronia 2007; Goggin 2006; Silva 2012). A Finnish study shows that the use of small payday loans among young adults could be a gateway to economic insolvency (Autio et al., 2009). However, studies focusing particularly on the practices of young adults are largely lacking. Furthermore, one implication of the mobile digital expansion for consumer practices, which has not yet received much attention in research, is the elusive contexts for consumption that this expansion brings about in terms of recurring payment problems and over-indebtedness.

Purpose

The overarching goal of this research project is to help strengthen solvency and reduce over-indebtedness among young adults in an increasingly digitally mediated society. *The purpose of the project* is to form a better understanding of consumption practices and recurring payment problems relation to digital tools and structures among young adults (18-25 years) in Sweden. The research questions that operationalize this purpose in more detail are:

1. Are there demographic or other patterns in how economic vulnerability and over-indebtedness is related to digitally mediated consumption among young adults?
2. How do different aspects of digitization – such as high accessibility, fewer or different boundaries, access to credit, the demands for new skills, the abstraction of money, or less normative intermediaries – interact with the patterns of consumption and payment problems among young adults?
3. How do municipal financial counsellors experience and bear witness to the causes of over-indebtedness amongst over-indebted young adults?

The study combines different methods. Firstly, and before the empirical collection had begun, we conducted a comprehensive literature study on indebtedness and consumption patterns in digital society, which was not limited to young adults only. This was largely conducted during 2014 and reported in January 2015 (Carlsson et al.; cf Carlsson et al., forthcoming). Secondly, a set of in depth interviews of municipal financial counsellors was conducted during

2015. And thirdly, at the end of 2015 we conducted an empirical survey on a sample of 1,109 Swedish young adults in the age bracket 18 to 25 concerning questions on digital consumption as well as lending practices, problems with payments and indebtedness.

Over-indebtedness

While the development and changes in credit practices are of interest here – both a for Sweden important governmental report (SOU 2013:78) and a research group that this project is linked to speak of a "credit society" – the first terminological issue to clarify here is the difference between indebtedness and over-indebtedness. Credit, and therefor indebtedness, is closely related to trust between parties and central for movement in our economies, and do by no means have to be closely associated with any of the negative effects often discussed in relation to the insolvency of over-indebtedness. For example, other studies point out that a high level of consumer credit use is not necessarily an indicator of debt problems; Niemi-Kiesiläinen and Henrikson (2005, p. 7) state "that in those countries where the consumer loan market is well developed the consumer debtors less likely have loan problems than in countries with a less developed consumer credit market. In other words, in a well developed consumer credit market consumers use credit and pay it back in due course."

There is however no clear consensus on the definition of over-indebtedness. Different countries use different definitions, and when over-indebtedness is quantified, different measurements are used (cf. SOU 2013:78). However, three main methods to determine over-indebtedness have emerged in European comparisons: *the administrative* (official registration of non-payment in the court or similar procedures), an *objective/quantitative* (often using information on the economic situation of a household as the measure of its solvency or over-indebtedness, such as the ratio of total debt to assets and income) and a *subjective* method (Fondeville et al., 2010; Davydoff et al., 2008; Niemi-Kiesiläinen and Henrikson, 2005). The subjective model has been defined as that it "means that the household's own perception of its ability to pay back its debts is the criterion for over-indebtedness" (Niemi-Kiesiläinen & Henrikson, 2005, p. 6). The aspect of experienced and perceived payment problems is therefore the key.

The survey study accounted for in chapter 2 below is one way to operationalize a subjective over-indebtedness in that it focuses to what extent the respondents have *experienced problems with paying bills over the past year*, of *at least one* of a set of clearly defined types of bills asked for. We have specifically separated those that have experienced payment problems *two times or more* during the past year from the other frequencies, which forms our definition of

recurring payment problems. The argument for asking about specific bills is that it may increase clarity of how the respondents experience problems when paying bills. Specificity hopefully leads to more truthful and reliable results. This type of study has been conducted before, perhaps most recently in Denmark, where Forbrugerrådet Tænk published a report in November 2015 that roughly translates to *Youth on Credit – Debt Problems in Consumer Society* (Böcker Jakobsen et al., 2015). This study found that a share of 13.4% of all Danes from 18 to 30 years old experience debt problems, defined as "recurring payment problems" with one or more bill types.

In 2008 the Swedish Enforcement Authority published a study on over-indebtedness which included a survey that also took its stance in the subjective and experienced form of over-indebtedness. The working group from the Enforcement Authority defined the over-indebted as "the person who experiences a constantly recurring problem with paying all of the bills." They surveyed a comprehensive age group of Swedes (16-74), not only young adults, and concluded that a share of 18% were found to have hade payment problems the past year, albeit not necessarily at multiple times. They did, in a sense, use a more inclusive definition than does our current study, in that they included those respondents who stated that they had payment problems *once* the past year.

Our reason for using the slightly more exclusive definition of "two or more" can, at least partly, be motivated by the character of this particular age group. Young adults are often described as a financial risk group with a more volatile or dynamic financial situation than other age groups. Another reason is that it is likely harder to be certain that the results will truthfully display *recurring* problems if "once" is included. Still, the category ("once") can still be important for the contextual understanding of recurring payment problems, perhaps in relation to repeated studies over time, and it can be of relevance for some other types of analyses, such as the one we display for gender in figure 2.21 below. The agency reports, and others, speak of payment problems over time, and note that over-indebtedness relates to those who cannot pay bills over a long period of time. Even if we study the experiences of recurring problems over the past year, our study would most likely have to be complemented with repeat studies to more truthfully speak of over-indebtedness as defined over a longer period of time.

The aim for the survey is to search for a group that is not necessarily visible through administrative means; that is, that may be regarded as a group for whom a warning flag could be raised for their financial, albeit possibly dynamic, situations. Situations where, at least to some extent, we do not yet really know whether their future path will lead to the more static or administratively defined over-indebtedness. After all, the administrative indicators have been criticized from the perspective that they "leave a large amount of debt problems unrecognised since many people seek alternative

solutions to their problems and are not registered in the administrative and legal procedures" (Niemi-Kiesiläinen & Henriksson, 2005, p. 6).

Project team and organisation

The authors of this report are Stefan Larsson, Lupita Svensson and Hanna Carlsson. Fredrik Åström, Associate Professor and bibliometrician at Lund's University library, has contributed to the bibliometric sub-study mainly reported by Carlsson et al. (2015), and summarized in chapter 4 below. The project has been led by Stefan Larsson, Associate Professor in Technology and Social Change at Lund University Internet Institute. The different disciplinary backgrounds of the researchers in the project have proven to be a great benefit, with Lupita Svensson, PhD and researcher of Social Work, and Hanna Carlsson, PhD in Information Science.

Furthermore, the project has also benefitted greatly from being part of a larger research network on "the Credit Society" linked to the Institute for Economic Security, EconSec, at Lund University. This network received funding from the Pufendorf Institute at Lund University during 2014-2016, creating an interdisciplinary research project consisting of about 20 researchers and running, led by Associate Professor Måns Svensson.

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2. Surveying Consumption and Debt among Young Adults in Sweden

In December 2015 we surveyed 1,109 respondents between 18 and 25 years old – equally divided between males and females – and asked a number of questions surrounding their use of the smartphone for consumption, to what extent they had problems paying their bills, to what extent they experienced that they had social and financial support around them etc. The respondents live in Sweden and the survey was in Swedish, and therefore the questions and replies have been translated here.[3]

We asked a total of 26 questions of which 7 concerned demographical questions, 3 were strictly about technology use, 6 about consumption mainly related to smartphones and the Internet, and 10 regarding debt-related issues.

1. Gender	11. Multiple subscriptions	17. Ability to pay bills, frequency and type
2. Age		18. Payday loans, frequency
3. Marital/partnership status	12. Approximate monthly costs	19. Payday loans, use
4. Living conditions	13. Which devices, purchase goods online	20. Payday loans, reasons
5. Type of area		21. Payday loans, attitude, open-ended
6. Education level	14. Smartphone practices, consumption	22. Monetary support, friends and family
7. Occupation	15. Self control, planning	23. Counselling/support, network, friends
8. Internet use, frequency	16. Loyalty card use	24. Knowledge of economic situation, friends
9. Internet access at home		25. Municipal financial counseling, use and knowledge of
10. Smartphone use		26. Open-ended question

Figure 2.1: Overview of survey questions.

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[3] See appendix 1 for survey questions in Swedish.

The survey was conducted online through the use of panels of respondents being available for taking surveys, which skews the sample in the sense that the digital method screens out those that are not prone to using the Internet. Other studies on Swedish youth that have not used Internet-dependent samples and were conducted in 2015, do, however, show that 97% of 16-25-year-olds use a smartphone and 95% use the Internet on a smartphone at least daily (Findahl & Davidsson, 2015). This means that the more digitised the entire population is in this age group, the less skewed an Internet-dependent survey may be, and young adults in Sweden are very much Internet-connected.[4]

Experienced recurring payment problems vis-à-vis subjective over-indebtedness

In general, we are apt to use the terminology *experienced recurring payment problems* in this chapter rather than "over-indebtedness", due to that the latter tends to describe a more static state of financial hardship than we find relevant in this case. Particularly, young adults tend to have a more volatile and dynamic financial situation than the static notion of over-indebtedness describes, which is why the survey has not been designed to robustly depict the over-indebted, but rather, to show indications of problematic aspects in their financial situations, and aspects that may develop over time. In relation to the elaboration of the term "over-indebtedness" in chapter 1 above, the experienced recurring payment problems can be seen as relevant for *subjective over-indebtedness*, but the latter could likely be captured in many other ways too, and perhaps demands a more nuanced approach. The experienced payment problem, however, can be seen as one way to operationalize the study of subjective over-indebtedness, thereby enabling for an applicable method. In order to achieve more valid measurements, we have asked for specific types of bills, outlined below, as opposed to a more general question concerning whether the respondents have experienced recurring payment problems.

In relying on self-assessments made by young adults, that is, how they themselves experience payment problems and the use of smartphones etc., the strengths of this method are mainly related to the fact that, given that the sample is good, different groups and categories can be singled out from a statistical analysis of the data which may speak for a larger population than the sample. There are a few natural weaknesses related to self-assessment, and some types of knowledge are not fit to ask for through this method. The surveyed group represents young adults in Sweden overall, not just those with

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[4] See appendices in chapter 5 for more on methodology.

recurring payment problems or those burdened with over-indebtedness. In terms of methodology, it is often argued that for some types of deeper understandings and meanings that lead to a particular measurable event or preference, the survey method can be a weak one. This is also why we have utilised in-depth interviews with a group that has access to the most vulnerable and indebted individuals: the municipal financial counsellors. The purpose, here, has been to reach for a deeper understanding of this particular group, which part of this study can be found in the following chapter.

Characteristics of the young adult sample

As mentioned, the respondents in this survey are between 18 and 25 years old. Even if the exakt definition of "young adults" in any context is debatable, it may also be seen as contextual – who is regarded as a young adult may, to some extent, differ in different cultures and jurisdictions – for example, the recent Danish study on debt problems amongst young studies a sample from 18 to 30 years old (Böcker Jakobsen et al., 2015). Nonetheless, we aim for the segment of life that in a Swedish and Nordic context has been shown to be particularly vulnerable from a private economic perspective. The Swedish Enforcement Authority utilized this specific range in their data collection and preventive efforts.

In short, to develop what we do know about the sample of respondents for this particular survey, we surveyed 1,109 respondents divided between 50.4% males, 48.4% females and an "other" category consisting of 1.2%.[5] Furthermore, a fairly large group still lives with both parents (37.7%) or one of the parents (9.9%), see figure 2.2. Around 1 out of 4 (23.8%) lives with a partner or spouse, and 1 out of five (18.8%) lives alone, see figure 2.2. How the respondents live is naturally of importance for their financial situation, and the survey reveals that this age-span is a very transitional time.

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[5] According to Statistics Sweden (SCB), Sweden's population aged 18 to 25 (December 31, 2014) consists of 501,628 men and 530,184 women. This means means that the male share was 48.6% and the female share 51.4% of the total in this age category.
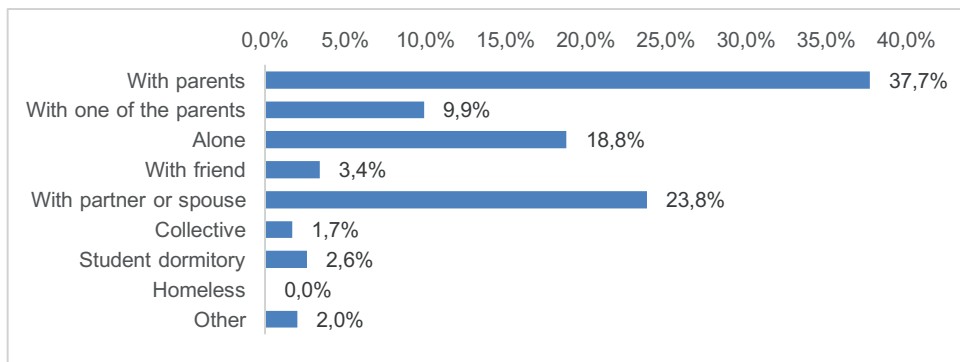
Figure 2.2: How the respondents live.

The respondents tend to be quite equally spread between *types of areas*, where 1 out of 5 (20%) lives centrally and 16.9% in the outer areas of one of Sweden's three biggest cities, Stockholm, Gothenburg or Malmö – see figure 2.3. There are somewhat similar figures for what may be called a "medium city" for this Swedish context – 50,000-200,000 in population – where 1 out of 5 (21.3%) lives centrally and 1 out of 10 (10.5%) in the outer areas. About 1 out of 6 states they live in a small city (15.6%) or in the countryside (14.7%), see figure 2.3.
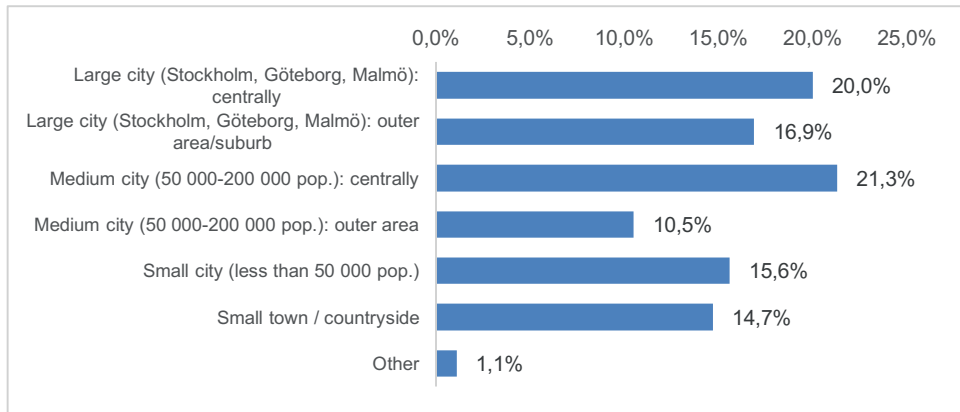
Figure 2.3: What type of area the respondents live in.

One should note here that the categorization of living areas is, of course, self-assessed by the repondents and other types of categories utilized by statistical organs (commuter municipality or goods producing municipality, etc.) are not possible here. Also, the perceived city is, of course, not always the same as the administratively defined city as shown, for example, in a study on Malmö and Stockholm (Lundblad & Ulfgren, 2014).

Regarding the level of education, a large majority of 9 out of 10 has stated that it has reached at least upper secondary school, and slightly more than 1 out of 4 reports having reached university level education, see figure 2.4.[6] It may, however, be difficult judge to what extent the repondents have stated that they have finished a particular type of education or if they are currently pursuing it.
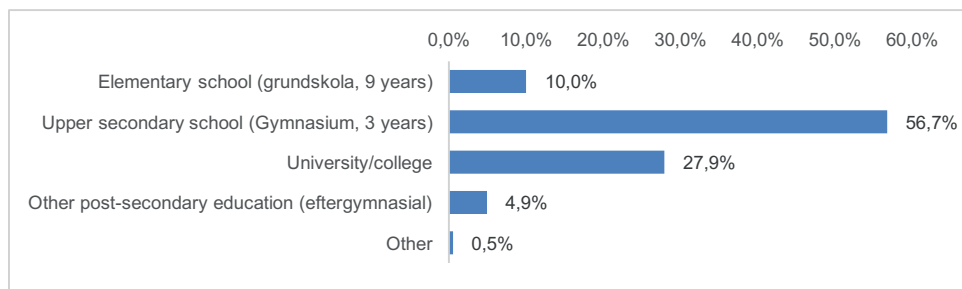
Figure 2.4: Stated highest level of education.

Use of Internet and smartphones

The Internet use in this age group is very high and in the sample there is an almost absolute majority of very frequent internet users. Over 13.3% claim to use the Internet a "couple of times" every day whereas 84.4% claim that they use the Internet "virtually all the time / several times a day." Smartphone usage is at 95.5%.

Using smartphones is connected to costs and a majority of 72.4% had only one subscription while 10% had more than one. The share that didn't have any subscription, 14.9%, is much higher than the share that doesn't use smartphones, and therefore, a plausible explanation is that at least around 10% use a smartphone that is formally subscribed to someone else who likely pays for it. In the commentary section there are indications of that this other person is often a parent. Some reported that they had one private subscription and one for work. Another interesting innovation on the market, mentioned in the commentary section, is represented by a service called *Wifog*, where the core idea is that users can gather points or credits from either when buying something from a partner to Wifog, watching commercials or responding to market investigations. These points can then be used for paying for the phone services. This works as a sort of prepaid phone card, but the resources utilized

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[6] Brief overview of the Swedish school system: http://www.skolverket.se/om-skolverket/andra-sprak-och-lattlast/in-english/the-swedish-education-system [last accessed 25 January 2016.]

for payment are not only money, but also time and the willingness to be exposed to new products and sharing of information.

Since the smartphone clearly is very important for this age group, not the least for Internet access, what this means in terms of costs also becomes of strong interest. A common subscription model is that the actual phone is paid for through instalments over 12 or 24 months, on top of the actual subscription. This is likely also an important reason for why over 30% have costs over 32 Euro (300 kr) for the subscription per month, see table 2.5.
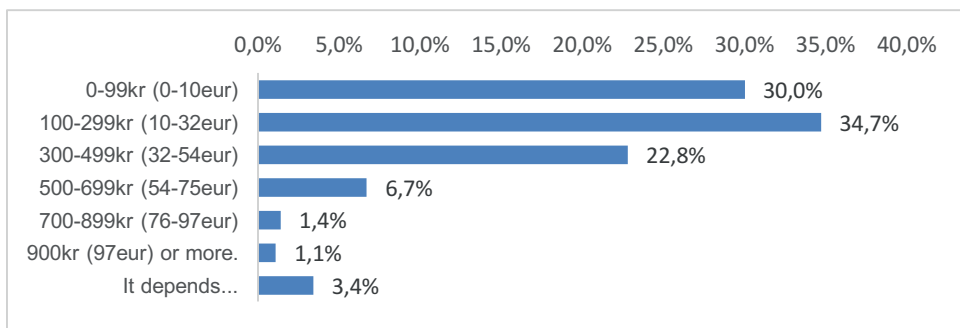
Figure 2.5: Mobile subscription costs per month.

The smartphone and consumption

The consumption particularly questioned here (see figure 2.6) does not specifically include in-app purchases, but focuses the use of the mobile phone in relation to consumption and in particular the relationship to physical stores.
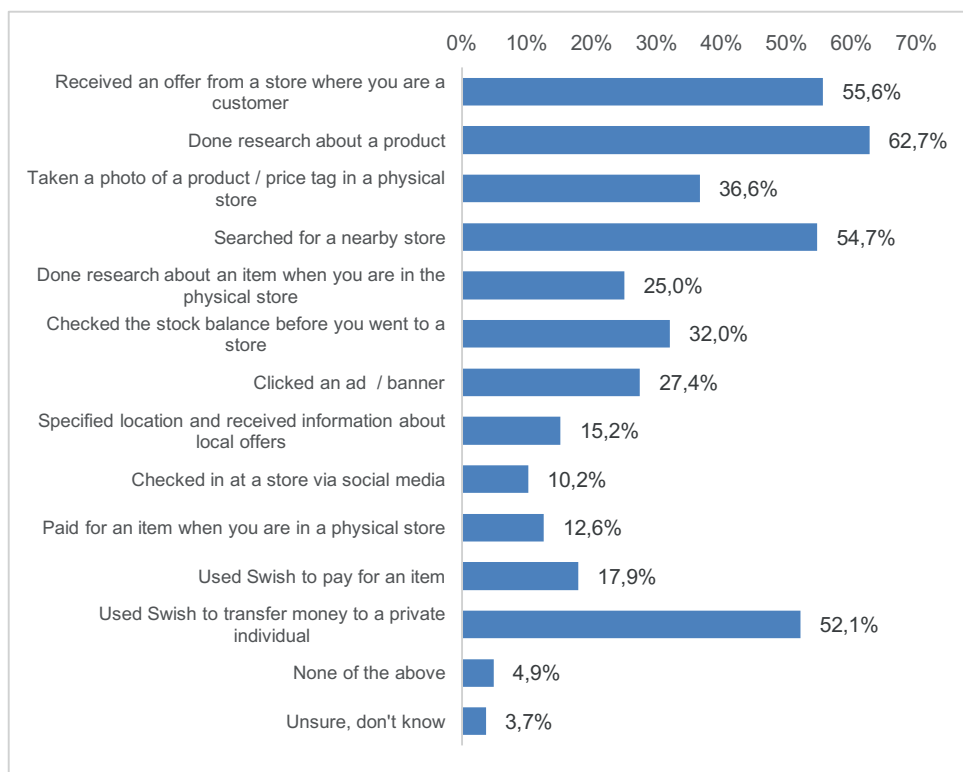
Figure 2.6: Mobile phone practices in relation to shopping in physical stores.

When compared to the Swedish so-called *E-barometern*[7] for the third quarter of 2015, you can see that the mobile phone is more actively used by the respondents in our sample than in the E-barometern. This is likely an outcome of the more extensive use of mobile phones overall in age group 18 to 25 in our sample than in the more general age group of 18 to 79 that constitute the sample in the other study. For example, where 54.7% of the young adults in our sample has searched for a nearby store, 25% has done it on E-barometern, and where 32% of the young adults have checked the stock balance before going to a store only about 17% has done it on E-barometern, see table 3. Young adults also check in at stores more often (10.2% v. 3%), click ads more often (27.4% v. 8%), and do more research about products on the mobile phone (62.7% v. 42%).

[7] Conducted by PostNord, Svensk Digital Handel & HUI Research.

Devices for consumption

It could be of interest to have a look at what devices the respondents use for their consumption, particularly in relation to an older age group of 18-79, as studied in the Swedish E-barometern, mentioned above. What stands out the most is the differences in the use of the mobile phone to shop online, where 2 out of 5 (39.4%) of the young adults uses it to shop online, as compared to 1 out of 5 (22%) in the study on all adult ages, see figure 2.7. This is in line with the narrative of the smartphone as playing a key role in the lives of young adults.
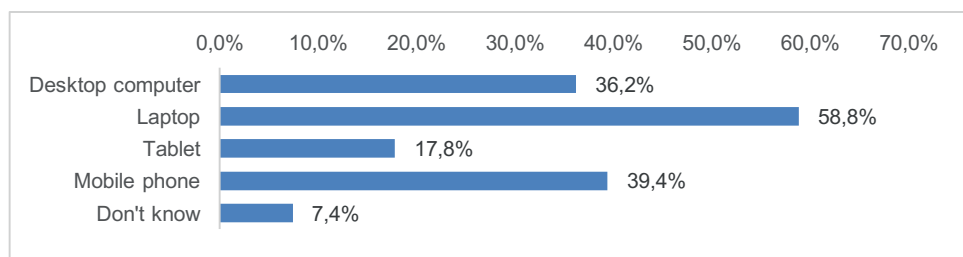
Figure 2.7: Devices used when shopping online during the past three months.

Loyalty cards

The use of loyalty cards is of interest not only from the perspective of to what extent customers create an individual link to particular stores or franchises but also from the perspective of data collection about consumers that allows increasingly sophisticated profiling. 3 out of 4 use some kind of loyalty card, see figure 2.8.
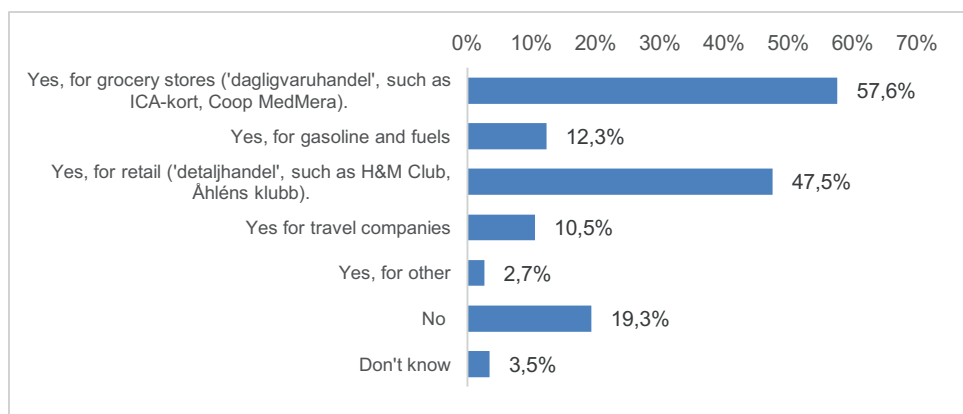
Figure 2.8: Use of loyalty cards. "Are you a member of the following, or do you use one of the following forms of customer / loyalty cards?"

This question only scratches the surface of this particular mode of consumer profiling from the angle of merchants with physical stores, as opposed to the more mail-order based style of most distance-based e-commerce. Merchants with physical stores – where most buying still takes place – have struggled to find profitable models for 'omnichannel' retailing as they confront competition via mobile purchases even in store aisles. Searching for solutions to what the American consumer scholar Joseph Turow calls "hypercompetition" and better-informed shoppers, many large American merchants have seized on using predictive analytics with high-volume, high-velocity data for tailoring personalized relationships and prices to desirable customers with the goal of cultivating their loyalty. This development is very much relevant for the Swedish market too, and raises questions about surveillance, power asymmetries, privacy and democratic participation in the public sphere to an extent hardly studied by academics (cf. Singh & Lyon, 2013).

For example, Turow et al. (2015) conclude that in the USA there is a disconnect between commercial claims that Internet users are happy to trade privacy in exchange for 'benefits' such as discounts; that a large majority of Internet users feel powerless to stop their data being harvested and used by marketers; and that there is a genuine lack of knowledge in that the consumers think their rights are stronger than they are.

Figure 2.9: "Have you over the past year taken part of the budget and debt councelling offered by your municipality?"

Yes 6%

No, and I don't know what it is/ have never heard of it 48%

No 46%
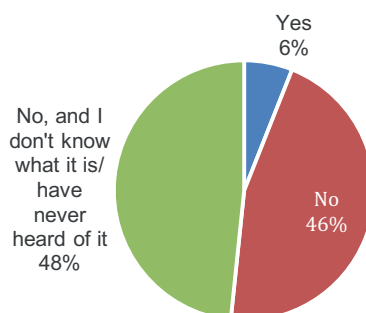
Municipal financial counselling

The municipal financial counsellors, or "municipal budget and debt counselling", using a more direct translation from Swedish, is a function offered by all 290 Swedish municipalities, and it is mandatory for the municipalities to offer it. In the governmental strategy against over-indebtedness that was published in September 2015, a more "resourceful budget and debt counselling" is asked for.[8] As part of this work, an in-depth study of municipal counselling was conducted by the Swedish Consumer Agency, which

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[8]http://www.regeringen.se/artiklar/2015/09/strategi-for-att-motverka-overskuldsattning/ (last visited 29 January 2016).

concluded that the extent and quality of the counselling varies, and that it is relatively unknown to the public (Heneryd et al., 2015).

It is in this context this specific question in our study should be seen. When asked if the respondents have over the past year taken part of the budget and debt counselling offered by their municipality, almost half (48%) replied that they have no clue of its existence, see figure 2.9, which thereby further confirms what the agency's report has already stated (even if the agency's study showed even less knowledge for all age-groups, and that only 2% had utilized counselling; Heneryd et al., 2015, p. 111). This is an area for improvement – it is of course harder to reach for this type of advice for young adults who struggle financially if they are not knowledgeable of its existence. There are some reasons to question the figure in our survey on the ones that have taken part in the municipal counselling (6%), not the least based in the interviews accounted for in chapter 3.

Payday loans

The share that takes payday loans is small, only 8.6% does it at all, see figure 2.10a.
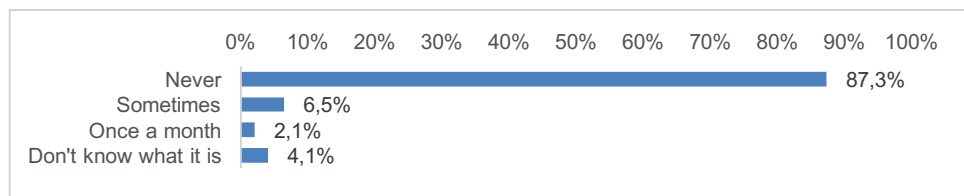
Figure 2.10a: "How often do you take a payday loan?"

Half of the group that states they take payday loans claims to do it for "rent and food", and 1 out of 3 does it for consumer goods or instalments on other loans, see Figure 2.10b.
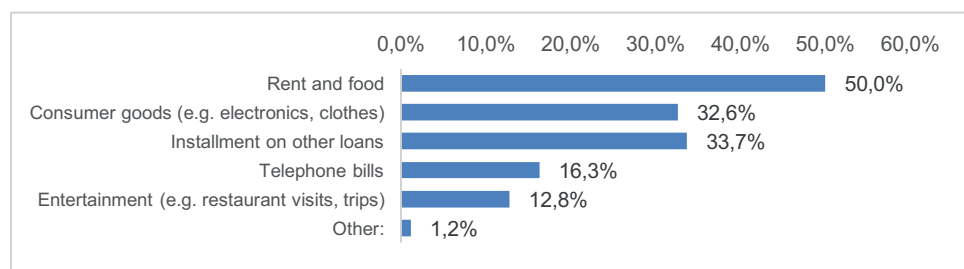
Figure 2.10b: "What do you use payday loans for? (you can specify several options)".

When asked what they think about payday loans in an open-ended question – whether it is good that they exist or if they are too expensive – the critical responses were clearly prominent. One group felt that they are a good option if one needs cash quickly, but many of them also said that they avoided payday loans. There was also one group that did not know what they were.

Unplanned purchases

For the entire sample, the share of respondents who state they always buy more than planned is relatively high, with 44.8% either stating that it is completely or reasonably true, see figure 2.11.
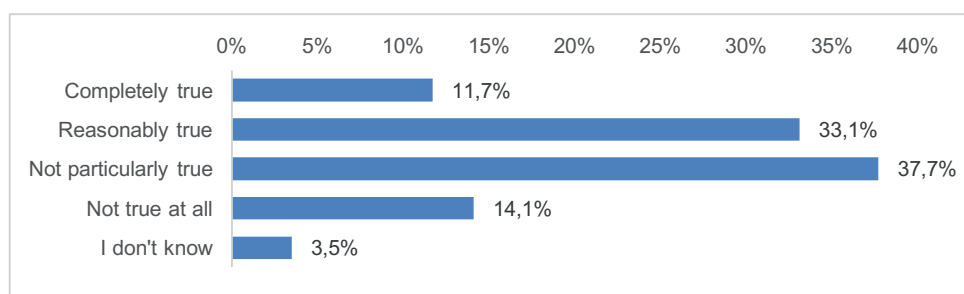
Figure 2.11: "I always buy more than I planned".

Social financial safety net

When asked to what extent it was true that they had friends and acquaintances that would help them if they need money, a comforting share of almost 4 out of 5 either stated that it was completely (40.8%) or reasonably (37.6%) true, see figure 2.12.
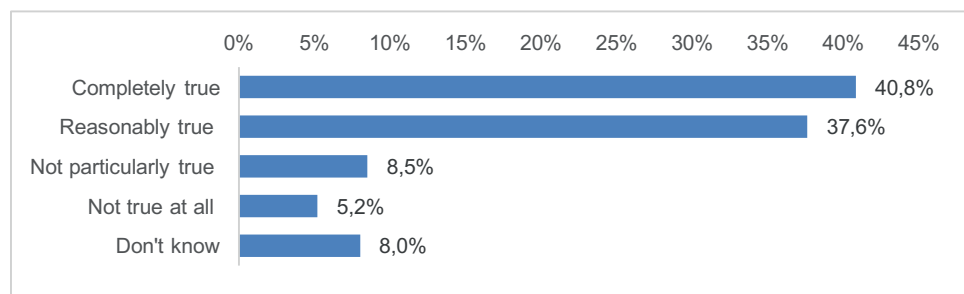
Figure 2.12: "I have friends and acquaintances who will help me if I need money".

People to talk to about financial problems

When asked to what extent it was true that they had a good social network to talk to when they had financial problems, 70.5% either stated that it was completely or reasonably true, whereas 13.5% responded that it is not particularly true and a small group of 6.5% stated that it is not true at all, see figure 2.13.
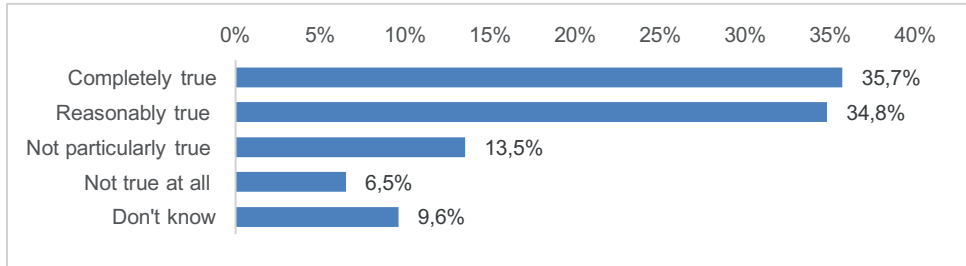
Figure 2.13: "I have a good network that I can talk to when I have financial problems".

Friends' awareness of financial situation

When asked to what extent the respondent's friends are aware of the respondent's financial situation, the share stating that they are not is quite large, where 13.5% says it is completely true and 35.9% states that it is reasonably true, see figure 2.14.
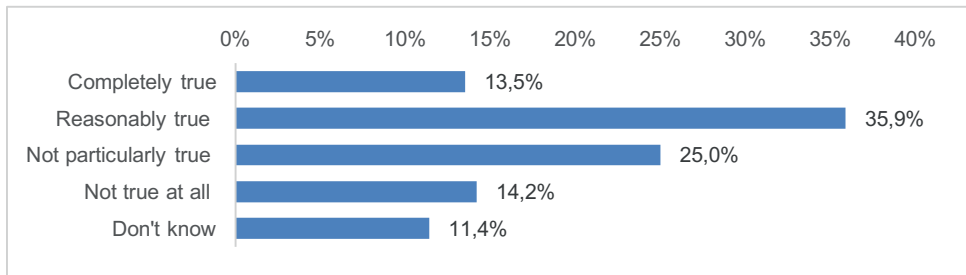
Figure 2.14: "My friends are not aware of my financial situation".

Experienced recurring payment problems

From the perspective of indebtedness and vulnerability the question of the ability to pay bills is key:

> *How often over the past year have you experienced not being able to pay one or more of the following bills on time?*[9]

      We asked them to rate how often this had occurred for a number of types of bills in order to see to what extent the respondents experienced repeated problems – an indication of a weak financial situation – and whether this concerned some types of bills more than others. As mentioned, a similar definition is used in a recent Danish report from *Forbrugerrådet Tænk,* where young adults are defined within a range from 18 to 30 years old (Böcker Jakobsen et al., 2015). In addition, we agree with the Danish study on the importance of researching *the social and relational aspects* of risks for payment problems and over-indebtedness. This is also the reason we have replicated some of the questions in their survey: to be able to draw from the Danish study in the analysis of Swedish young adults. This particularly concerns the definition of payment problems as having experienced problems paying bills two or more times the past year, as well as questions concerning to what extent the respondents have social networks to talk about financial problems with and friends to borrow money from, and more.

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[9] ”Hur ofta har du under det senaste året upplevt att du inte haft möjlighet att betala en eller flera av följande räkningar i tid?”
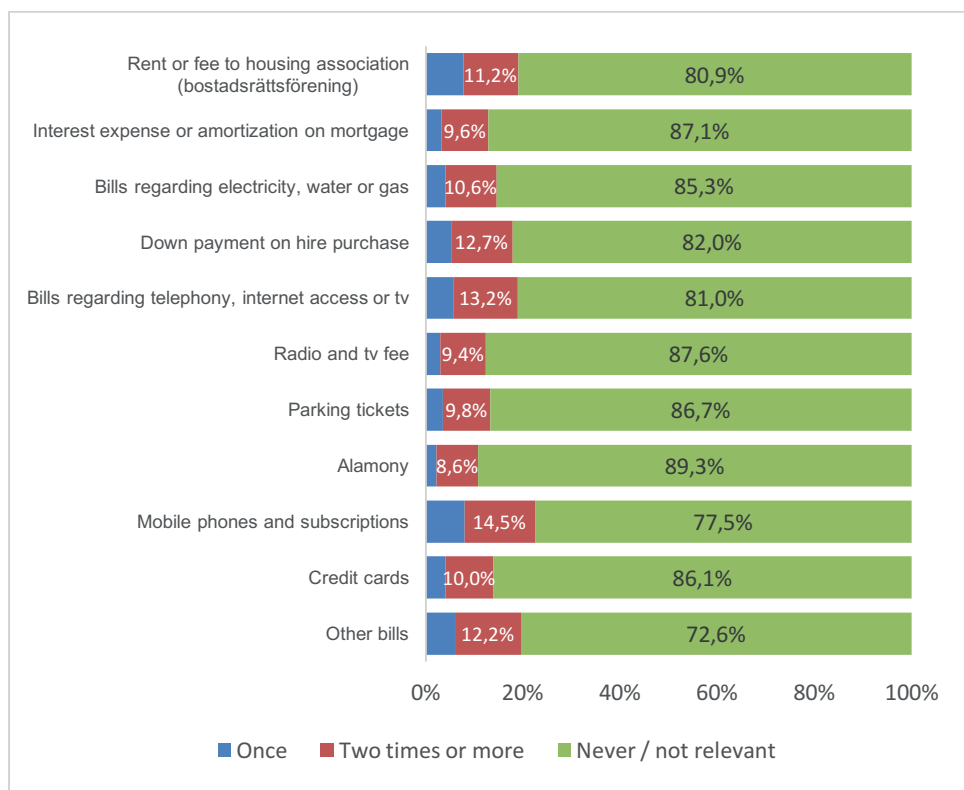
Figure 2.15: Experienced payment problems the past year. "How often during the past year have you experienced that you have not had the opportunity to pay one or more of the following bills?".

To be able to clearly define the risk group of *experienced recurring payment problems,* we have specifically separated those that have experienced payment problems *two times or more* during the past year with *at least one of the following five types of bills*: 1. Rent or fee to housing association; 2. Interest expense or amortization on mortgage; 3. Electricity, water or gas; 4. Down payment on hire purchase; 5. Telephony, Internet access or TV (the five at the top of figure 2.15). The bill types respond to what we regard as extraordinarily significant types of bills, and the analysis based on these five bill types is the primary analysis for our results on the characteristics of the group with experienced recurring payment problems. The selected bill types also correlate well with the definition in the Danish study, which is why some comparison is possible.

There is a risk that we could miss a group that have recurring payment problems with other bills than the ones we have selected, for example, a group for which an emphasis on costs related to housing is not relevant. For this reason we have made an analysis that also includes those that have experienced payment problems two times or more during the past year with all of the 10

surveyed bill types (except "other bills"), see figure 2.15. This includes 6. Radio and TV fee; 7. Parking tickets; 8. Alimony; 9. Mobile phones and subscriptions, and; 10. Credit cards.

First of all, the choice of bill type *could be* very relevant for the results, depending on what the distribution amongst the respondents looks like. However, a large majority of 86% of those who have recurring payment problems are already to be found in the group who have problems with the five bills. This means that the extra bill types add to the analysis but are still to a large majority referring to the same individuals with recurring payment problems.

Experienced recurring payment problems, overall

When analysing who has experienced recurring payment problems in any of the five types of bills – rent or fee to housing association; interest expense or amortization on mortgage; electricity, water or gas; down payment on hire purchase; telephony, Internet access or TV – we found that this concerns 18.8% of the respondents, see figure 2.16. This would equal approximately 194,000 Swedish 18-25 year olds. Even if we defined recurring payment problems as two or more, we have still chosen to distinguish between those who had not experienced any payment problems the past year (77.0%) and those who experienced it once (4.2%). Even if missing only once by itself is too weak a measure of financial difficulties, it can serve a purpose in relation to the other two categories in aiding in the analysis of payment problems as a sort of "warning flag", or to show risk groups.
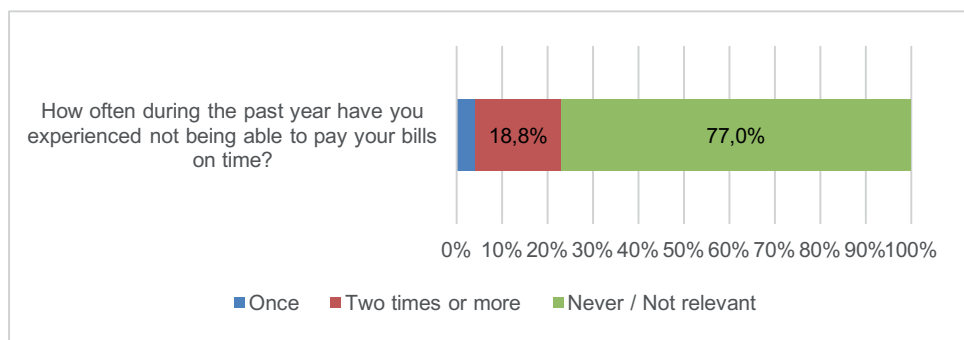
Figure 2.16: Share of respondents' of experiences of payment problems the past year in any of five listed types of bills.

When performing the same analysis but also including the remaining five types of bills – radio and TV fees; parking tickets; alimony; mobile phones and subscriptions; credit cards – an expected increase occurred, to 21.2% having

recurring payment problems, see figure 2.17 (3.9% for "once" and 75.0% for "never"). One could expect an increase due to it being likely that some of the respondents have experienced recurring payment problems with the latter five bill types without having experienced it with the first five types of bills. The increase, however, is rather small, meaning that a large majority of the respondents with recurring payment problems are found in the first five types of bills, even if they may have problems with the other five as well. In other words, the lack of a larger increase confirms that there is no large group not included in the first set of bills that can be found for the other types of bills.
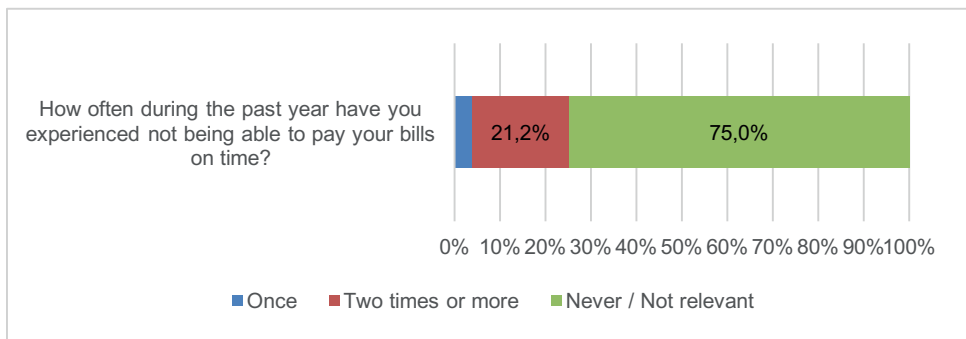
Figure 2.17: Share of respondents' of experiences of payment problems the past year in any of 10 listed types of bills.

Therefore, we can conclude that a share of young adults that experience recurring payment problems is likely to be found in the span of 18.8% to 21.1%. This would equal an amount in the span from 194,000 to 219,000 Swedish 18-25 year olds experiencing recurring payment problems.

This can be compared to results from a recently published Danish study from *Forbrugerrådet Tænk* where 13.4% of young adults between 18 and 30 were found to have recurring payment problems (Böcker Jakobsen et al., 2015) in a similar study. The difference in figures between the two studies can more likely be found in the difference in how strictly the studies interpret repeated problems of payment, and in how the surveys have been performed. The important question here is how to deal with the fact that 1 out of 5 has these payment problems in this age group.

Characteristics of young adults with payment problems

As seen in figure 2.1 above we asked questions that we consider to be of clear relevance for the financial situation of an individual:

- Q15. *How well does the following statement apply to you?: "I always buy more than I planned"*: (Completely true/ Reasonably true / Not particularly true / Not true at all / I do not know)[10]

- Q18. *How often do you take so-called payday loans?* (Never / Sometimes / Once a month / Do not know what it is)[11]

- Q22. *How well does the following statement apply to you?: "I have friends and acquaintances who will help me if I need money"*: (Completely true/ Reasonably true / Not particularly true / Not true at all / I do not know)[12]

- Q23. *How well does the following statement apply to you?: "I have a good network that I can talk to when I have financial problems"*: (Completely true/ Reasonably true / Not particularly true / Not true at all / I do not know)[13]

We have been particularly interested in what can be said of the group that has recurring payment problems, as displayed in figure 2.16 above. We have compared the group with recurring payment problems with the groups that has not indicated such experiences in relation to each of the listed questions as well as gender and type of living area in order to detect if it is likely that there is a particularly vulnerable group at hand or not. We have also focused mobile subscriptions due to the importance of the smartphone as a tool for internet access and digital consumption as well as to follow up on the sometimes problematic image presented by municipal financial counsellors.

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[10] 15. Hur väl stämmer följande påstående in på dig?: "Jag köper alltid mer än vad jag planerat": (Det stämmer helt / Det stämmer någorlunda / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej).

[11] 18. Hur ofta tar du s.k. snabblån? (Aldrig / Ibland / En gång in månaden / Vet inte vad det är).

[12] 22. Hur väl stämmer följande påstående in på dig?: "Jag har vänner och bekanta som kommer att hjälpa mig om jag behöver pengar": (Det stämmer helt / Det stämmer någorlunda / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej).

[13] 23. Hur väl stämmer följande påstående in på dig?: "Jag har ett bra nätverk som jag kan tala med när jag har ekonomiska problem". (Det stämmer helt / Det stämmer någorlunda / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej).

Unplanned purchases

The results from a cross table analysis indicates that those who experience recurring payment problems to a higher extent agrees with the statement that they always buy more than planned than those who had never experienced payment problems (figure 2.18).
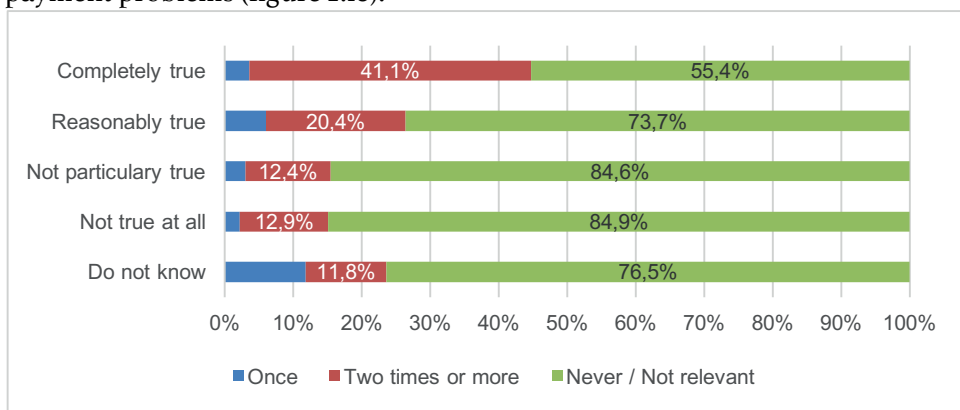
Figure 2.18: "I always buy more than planned", in relation to recurring payment problems (5 bills).

The Danish study confirms a similar result where the group of young adults with recurring payment problems to a higher extent buys more than planned than the group that does not have payment problems (Böcker Jakobsen et al., 2015, p. 34).

These results could be problematised in relation to how to balance the incentives for e-commerce to boost sales, and how to protect vulnerable groups that might have weaker resistance against fine-tuned omni-channel trading or data-boosted online stores. An example can be found in a recent report on e-commerce by Bring, a large transportation company (with a natural interest in a growing e-commerce market since the goods need to be transported), that stated that in Norway and Denmark 3 of 4 online purchases are planned while 1 out of 4 are "spontaneous" (E-handelsrapporten, 2015, p. 15). In Sweden every 1 out of 5 purchase is an impulse purchase. The perspective in the e-commerce report instructs the reader on how to "trigger purchases"[14], for example, when the customer is looking for something else in the online store. Newsletters and targeted marketing are described as good means to increase unplanned purchases. The reports teach us that women and frequent shoppers are more prone to unplanned purchases online. A similar approach is shown with regards to efforts to disencourage customers from aborting purchases. They advise the process to be as simple and lean as possible, to avoid losing the specific sale and to "contact the customer when they are about to cancel the purchase with a relevant offer or discount" (p. 16).

The point here being that there are different perspectives at work, and that the e-commerce industry should possibly be more a part of the work on over-indebtedness. Even if merchants naturally seek to increase sales, it is also in their interest that their customers can steadily remain customers. Over-indebted customers are, in general, bad customers.

Social financial safety net

When comparing the frequency of payment problems in a cross table analysis with the question of to what extent the respondents have friends and acquaintances who would help out financially when needed, the difference was found to be significant. The results indicate that those who have recurring payment problems to a greater extent disagree with having friends that would help them financially than the group that never had payment problems, see figure 2.19.

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[14] "Hur triggar du köp?".
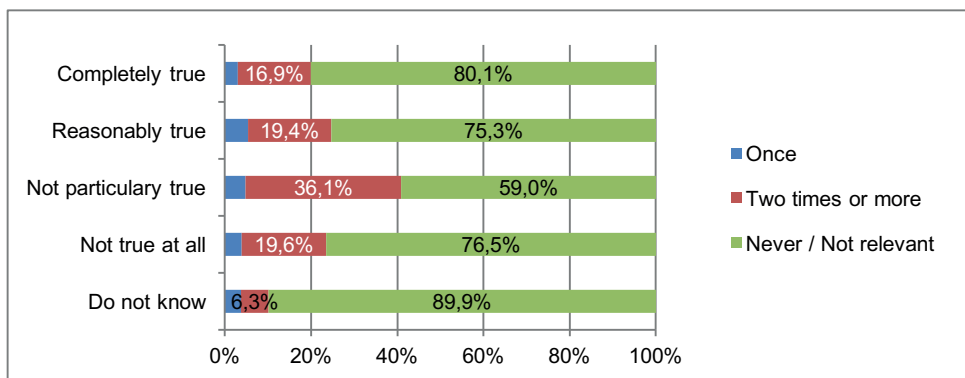
Figure 2.19: Cross table analysis between "I have friends and aquaintances that will help me if I need money" and payment problems (5 bill types).

In other words, the group with recurring payment problems experience less of a financial safety net among friends than the other groups.

People to talk to about financial problems

The analysis indicates that the respondents who experience recurring payment problems to a lesser degree than the other groups feel that they have a good network to talk to if they have financial problems. A cross table analysis between the payment problem index and the question of to what extent the respondents feel that they have a good social network to talk to when they are in financial troubles indicates that those who have recurring payment problems to a greater extent disagree that they have access to a good network to talk to when they have financial problems than the other groups, see figure 2.20.
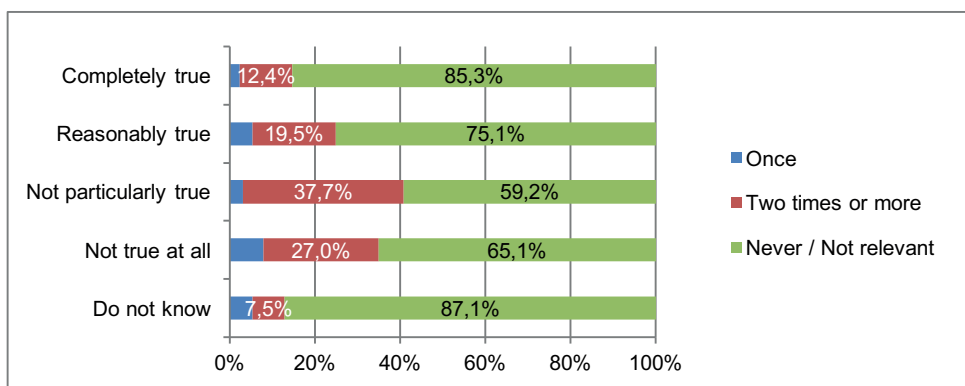
Figure 2.20: Cross table analysis between "I have a good network that I can talk to when I have financial problems" and payment problems.

The Danish study also found that those with payment problems to a lesser degree have someone to talk to about financial problems than the group without payment problems (Böcker Jakobsen et al., 2015, p. 34).

Gender

The analysis of the group with recurring payment problems indicates that it is more common among men than women in this age-group to have recurring payment problems. The analysis shows that 23.2% of the male respondents have recurring payment problems with any of the five bill types, whereas the corresponding figure for the female respondents is 14.4%.
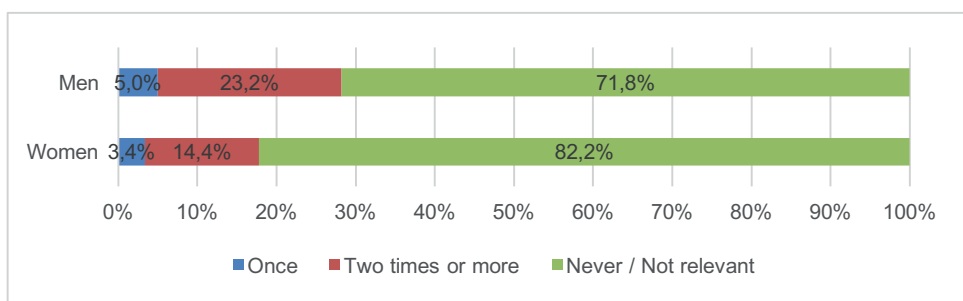
Figure 2.21: Payment problems with any of the five listed bills in relation to gender.

If one regards payment problems as a warning flag for future over-indebtedness, then the young men display a more problematic picture in this analysis. This is however not supported by the Danish study accounted for above which did not find any significant differences between genders (Böcker Jakobsen et al., 2015, p. 26).

Type of living area

With regards to the cross table analysis between living areas and recurring payment problems based on 5 or 10 bill types (see figure 2.16 above), we could not find a significantly reliable result, see Appendix 3 below.

Payday loans

Our analysis indicates that those who take payday loans are almost exclusively those who have recurring payment problems. This is by no means surprising, but still underscores the risk of a vulnerable group reaching for more expensive solutions to their problems than necessary – due to a need for quick fix. Over

time, they may pay more for their credit than other groups, making their vulnerability permanent.[15]
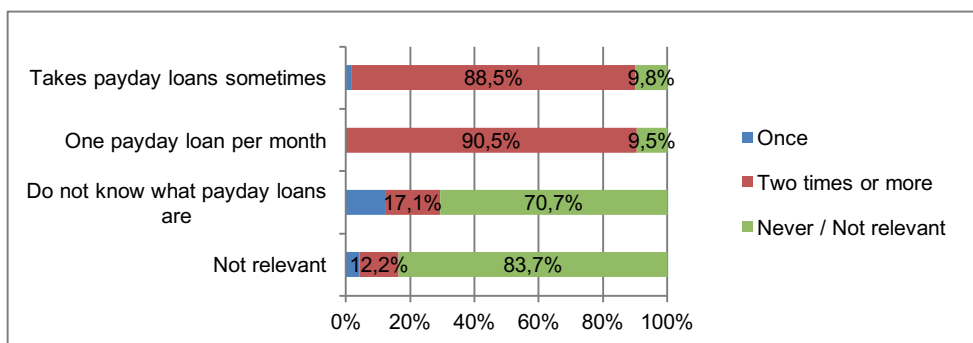
Figure 2.22: Payday loans in relation to payment problems.

Mobile phone subscriptions and payment problems

When conducting the interviews with municipal financial counsellors, accounted for in the following chapter, the role of the smart phone was a debated topic. Particularly the subscription models and the alleged pressure of always having to stay updated with the latest models was discussed and many councellors saw the mobile phone in a problematic way and in terms of a main point of access to credit and instalment payment plans. Therefore, we wanted to test this notion on the data in the quantitative survey, especially with regards to those that have more than one subscription and in what way this group releates to payment problems. As reported above, a majority of 72.4% had only one subscription while 10% had more than one, and 2.8% gave a more qualitative explanation. The share that didn't have any subscription, 14.9%, is much higher than the share that doesn't use smartphones, and therefore, a plausible explanation is that at least around 10% use a smartphone that is formally subscribed to someone else who likely pays for it. In the commentary section there are indications of that this other person is often a parent.

After adjusting for the 2.8% that gave textual replies, the analysis shows that it is more common for those who have more than one subscription to be male (14.5%) than female (6.4%), see Figure 2.23, and more commonly live in

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[15] The regulation of payday loan market is under governmental investigation in Sweden, and the first preparatory work will be reported in the autumn of 2016 (Dir. 2015:43 En mer ansvarsfull marknad för konsumentkrediter).

large cities (Stockholm, Gothenburg, Malmö) or suburbs to large cities (which we found to be significant).
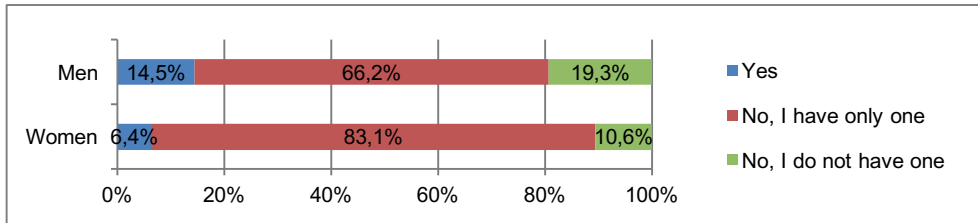
Figure 2.23: "Do you have multiple mobile subscriptions" and gender.

But are the multiple subscriptions an indication on something financially problematic? The interesting results are found in the cross tabulation with payment problems, which indicates that the group with more than one mobile subscription are more likely to have recurring payment problems as well. It seems like young urban male adults is a vulnerable group and that multiple mobile subscriptions can be a sign of financial problems, see Figure 2.24. This is something that would be of interest to study more.
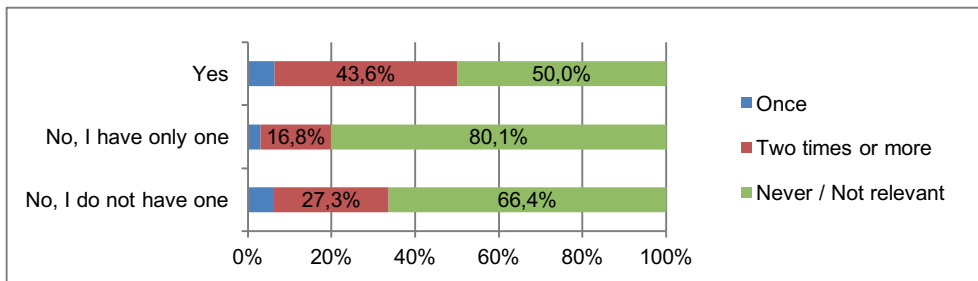
Figure 2.24: "Do you have multiple mobile subscriptions" compared to bill payment problems.

Brief commentary

The old saying of "the poor pay more", utilised by the sociologist Caplovitz (1963) may serve a point here in terms of that those who take payday loans to a large majority experience recurring payment problems in this age group. If you add the results regarding that those with recurring payment problems also tend to experience that they have few to talk to and lend from in their social environment, the poverty is not only a result of lack of income but likely also linked to social structures. Given that this group tend to more commonly buy more than planned, there could also be of relevance to discuss financial literacy or more psychological features that sometimes are discussed in terms of self-

control. Furthermore, which would require further studies to be fully validated and better understood, the study indicates that young males are a particularly vulnerable group for recurring payment problems, and having more than one mobile subscription – which are more common among urban males – may indicate financial problems. For a richer summary, see the introduction of the report.

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3. Municipal Financial Counsellors View of Over-indebted Young Adults

Introduction

Several studies have pointed out young adults as being a particularly exposed group with regards to economic vulnerability (Autio et al. 2009; Lachance 2012). At the crossroads between childhood and adulthood, members of this group may not yet have found the economic security and stability needed to establish themselves in society. As they often lack the savings and fixed capital that older generations may have, an unpaid bill or an expensive loan may, for young adults, turn into long term insolvency, postponing or even prohibiting them from establishing themselves as independent adults. Bearing this in mind, it is particularly worrying that the accessibility of consumer credit in different forms seems to be continuously increasing. The de-regulation of the credit-market in most Western countries has opened up for various kinds of borrowing, such as instant loans or payday loans, often with expensive or otherwise disadvantageous conditions for repayment. Furthermore, various digital technologies such as the Internet and mobile phones have become important tools for consumption and other financial activities. In general, these online venues for both consumption and credit handling are more accessible and have fewer, or at least new types of, gatekeepers controlling usage. Young adults, who often lead more or less digitized lives, are thus exposed to a more available and complex consumer and credit market, without necessarily having the proper skills for handling its specific conditions. In fact, previous research indicates that the level of financial literacy is low in this particular group (Lusardi, Mitchell & Curto 2010). Given this situation, it is possible to assume that young adults are in need of support and counselling with regards to their personal finances, which in turn invokes questions regarding the quality and adjustment of such services to the requirements of this particular group. To explore how financial counsellors perceive of the financial behaviour of young adults in a digital age, especially those with explicit financial problems, is thus of interest in

order to gain knowledge about how financial counselling works (or does not work) for this particular group.

Aim and Research Questions

This study forms part of a larger research project which aims to gain knowledge about the consequences of the digitalization of society for the financial behaviour of young adults. *The specific purpose of this sub-study* is to explore municipal financial counsellors' experiences of young adults as clients, both in order to gain knowledge about problematic financial behaviours in this group in a digital age, and also to form an understanding of how municipal financial counselling may (or may not) work for young adults. Given the qualitative and empirical approach in this sub-study we do not utilize as strict a definition on payment problems and over-indebtedness as in the quantitative sub-study presented in chapter 2 above (see pp. 15-17 for a discussion on over-indebtedness). The focus here is instead on the the municipal financial councellors' understanding of young adults and their financial behaviours.

In order to accomplish this purpose, the chapter seeks to answer the following research questions:

1. What is the municipal financial counsellors understanding of the causes of problematic financial behaviours among young adults?
2. What (if any) roles does digital technology play in these behaviours?
3. How can municipal financial counselling counteract the financial problems of young adults in a digital age?

Previous Research

The causes of over-indebtedness concerns researchers, whether the basic causes for these changes can be found at the micro or macro level, as does understanding the contextual relationship between the state, the market and the individual. The impact of the financial crisis on the individual's everyday economy, as well as the increased responsibility and the increased level of knowledge, with regards to financial literacy, that a deregulated consumer credit market requires of the individual are aspects of the same question.

The significance of financial literacy for the prevention of over-indebtedness is another area that is explored in a number of articles (see f.ex., Chlouba, Simková & Nemcova 2011; Reifner & Herwig 2003; Tomasková, Mohelská & Nemcová 2011). Financial literacy is defined as the knowledge and skills required of the individual to actively perform in a market of financial products. A mutual starting point for the articles is the increasing need for this

type of knowledge and skills in conjunction with the consumer credit market, as well as the market for private financial solutions in general, having grown increasingly complex. Some researchers adopt a critical perspective to financial literacy (see, f.ex., Walker, 2012). The argument is that this perspective places too much responsibility on the individual, since a lack of knowledge, or problematic consumption patterns, are considered overly simplistic explanations for severe indebtedness (ibid.; Frade, 2012). Rather, structural factors, such as the financial crisis and the changing consumer credit market, as well as less value-laddered individual factors such as changes in economic situation following death or divorce, should be taken into consideration (Rueger et al., 2011). Physical and mental ill-health are also noted as causes of over-indebtedness. However, these factors are also mentioned as an effect of a life-style burdened with severe financial problems. For example, Rueger et al. (2013) show links between over-indebtedness and health problems related to increased smoking, Ochsmann et al. (2009) find connections to back pains, while Münster et al. (2009) link over-indebtedness to obesity. In several studies and reports young adults have been pointed out as a particularly exposed group with regards to economic vulnerability (Autio et al. 2009; Lachance 2012; The Swedish Enforcement Authority, 2012; 2013, p. 31; SOU 2013:78, pp. 198f.).

Furthermore, in a Swedish governmental strategy against over-indebtedness, published in September 2015, a more "resourceful financial counselling" is asked for.[16] As part of this work, an in-depth study of municipal counselling was conducted by the Swedish Consumer Agency, which concluded that the extent and quality of the municipal counselling varies, and that the service itself is relatively unknown to the public (Heneryd et al., 2015).

Various perspectives on the causes and consequences of over-indebtedness emerge in the literature. No links are thus made between changing consumption patterns in digital society and over-indebtedness, and/or problematic indebtedness in private individuals. One explanation, of course, could be that research on over-indebtedness and research on digital development and its consequences are both conducted within different disciplines that share few points of contact.

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[16] http://www.regeringen.se/artiklar/2015/09/strategi-for-att-motverka-overskuldsattning/ (last visited 29 January 2016).

Theoretical Framework

In this study a focal point of departure is the interdependency between digital technologies and the financial practices of young adults. A central aspect is the knowledge and competences required to perform these practices, in particular, the ability to understand and interpret financial information and to use the (often digital) tools needed to access that information. As indicated above, financial literacy is a quite well researched topic, but in previous research it is often perceived as a generic competence, independent of context. In the present paper we connect financial literacy to the research area "New Literacy Studies" (see also Bay et al. 2014) and thereby address it as a situated competence dependent on context and situation. Literacy, from this perspective, is understood as specific for a particular time in history and as being shaped in relation to social practices (Gee 2008, see also Bay et al. 2014). Hence what constitutes financial literacy may change over time and according to social setting and situation (Bay et al. 2014). We also understand financial literacy as a socio-technical phenomenon, meaning that technologies and artefacts contribute to how financial literacy is configured in different social settings. In a contemporary society, where digital technology plays an increasingly important role, we assume that these technologies contribute to shaping what constitutes financial literacy, which particularly affects young adults who spend their lives more or less online.

This project is theoretically based on viewing alienation as an exclusionary process, not only at an individual or group level, but perhaps primarily at a structural power level (Stigendahl, 1999). Power entails vulnerability for some groups, although they may not themselves experience the (perceived vs. structural) vulnerability. Vulnerability can, from this point of view, be constituted by social factors such as economic, family, social life and health. This makes this project an opportunity to understand exclusion and vulnerability from a multidimensional perspective, linking conditions, experience and emergence. Emergence can be understood as a counterforce to exclusion and vulnerability (Nussbaum, 1994). Wilkinson, for example, believes that health, and the health of a society, are determined by social factors (see above economics, family, social life and health), and therefore, a systematic work on exclusion and vulnerability is important to create not only social sustainability, but also an economically sustainable society. Social conditions can be measured in tangible terms which become extremely important when dealing with the developed countries and the risks of exclusion (Wilkinson, 2004). From this theoretical perspective, exclusion is a risk factor for victimization, poorer health but also lower financial literacy. As a consequence, the concept *vulnerability* becomes useful since it "is posited as the characteristic that positions us in relation to each other as human beings and also suggest a

relationship of responsibility between the state and individual" (Fineman, 2011 p. 255).

With a focus on the state and its institutions, as well as privilege and disadvantage, the vulnerability paradigm calls on assessments to be receptive to claims that look beyond identity, and to scrutinize the distribution of assets and the possibilities of resilience that suggest structural disadvantage and/or privilege. When adopting a vulnerability approach, the task is not to explore the intent behind the actions of individual employees, educators, landlords, and so on. Individual intention is not the issue, nor is discrimination. Because the shared, universal nature of vulnerability draws in the whole of society – and not just a defined minority – under scrutiny, the vulnerability approach might be deemed a "post-identity" analysis of what sorts of protection society owes its members. By recognizing that privilege and disadvantage migrate across identity categories, we are forced to focus not only on individuals, but also on institutions—the structures and arrangements that can almost invisibly produce or exacerbate existing inequality. (Fineman, 2011 p. 275).

Method

This study is based on ten in-depth, semi-structured interviews with municipal financial counsellors in Sweden. An interview guide was used based on different themes intended for the informant to discuss. Each interview was recorded and then transcribed before analysing. The interviews took place at the counsellors' offices and took approximately 1-2 hours. All the interviews were conducted by one of the researchers. The counsellors come from different municipalities in the south of Sweden. After transcription, the interviews were analysed and sorted into categories connected to the theory.

Results

One of the most significant results is that young adults as a group are an uncommon group among the financial counsellors' clients. The counsellors describe the average client that visits their office as a middle aged man that has for some reason found himself in a life crisis. This could be due to divorce, disease or perhaps to having lost his or her job. The person has tried to solve the situation himself, often for a period of approximately ten years, but without success, and has only become more indebted. Most of the informants experience over-indebtedness as very shameful and describe their over-indebtedness as a big failure. Some of the counsellors report that it seems to be more shameful to be over-indebted than to be a drug-user or alcoholic.

They often meet young adults accompanied by someone else; sometimes together with relatives such as their parents, or perhaps a social worker from the social services, or someone from psychiatric or general health care. The financial counsellors describe a situation where someone has been helping the young adults for quite a long time, but has reached a point when their social circle presses the young adult to contact the financial counsellors. However, it remains important to remember that this group is an uncommon one at the financial counsellor's office.

An analysis of the financial counsellors' descriptions of the young adults produces four general, different categories:

1. *The Heir*
2. *The Unable*
3. *Due-to-Others*
4. *The Criminal*

The Heir

The financial counsellors describe how they recognize a pattern of social inheritance. In these cases, the parents of the young adult is sometimes already known to the financial counsellors or the social services due to their own economic situation, or need of economical benefits from the social services.

The Unable

This group is unknown to the authorities. They do, however, lack knowledge of financial literacy. According to the financial counsellors, these young adults have never had the opportunity to learn how to handle and think economically.

Due-to-Others

A third group recognized by the financial counsellors are the young adults that have become over-indebted due to others. These young adults have in one or another way been exploited and used by another person. That person could be, for example, a former boy or girlfriend who has taken a loan or bought goods on instalment payments in the client's name, without the over-indebted person having had access to the money or the purchased goods.

The Criminal

The last group identified by the financial counsellors is a group of young adults that have become over-indebted due to a penalty or a fine. This group consists of young adults that have committed some kind of crime that imposes a penalty in the form of a fine. When the young adult in unable to pay a penalty the penalty will be submitted to the Swedish Enforcement Authority for enforcement or collection. If the penalty also includes civil damages, which is often the case, the damages may also be submitted to the Swedish Enforcement Authority. This also means that the penalty and the damages will be publicly registered as debts. The credit companies may utilize the information about the damages in their credit reports.[17]

So, if over-indebted young adults are not found at the offices of the financial counsellors, where are they? Based in knowledge and experience the financial counsellors tell us that it takes time to become over-indebted. They estimate that the average time period is between 10 and 15 years.

> *"It takes ten, maybe fifteen years, before the bubble bursts"*
> *(Counsellor 1)*

From that point of view, it is easy to understand why over-indebted young adults are not a visible group among the financial counsellors' group of clients. If they try to solve their financial problems themselves, their situation will not become unsustainable until they reach the age of roughly 35-40 years old. The financial counsellors are very meticulous in telling the client that it will take at least as long to solve the financial problems as it took to get into that financial situation. It is not unusual for the client to get frustrated and demand that their financial situation be solved faster. In this phase, the client sometimes chooses to end their contact with the financial counsellor. Some of the clients explain very clearly that taking the step to contact the financial counsellor is such a big step that the step in itself should be considered a sufficient effort. They really want the financial counsellor to take care of and solve all the problems. In other words, they want to hand things over to someone else for a quick fix.

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[17] The credit bureau's may not use fines in their credit reports. In a criminal case, the accused can however be sentenced to pay *damages* to the plaintiff. The claim may be brought outside the criminal case, whether the accused is charged and convicted or not. The claim for damages, which are civil law, becoming an own case at the Enforcement Authority, can lead to payment defaults and poor credit at credit companies.

Another big issue for over-indebted people is the shame they experience by not being able to manage their own money themselves. Common sense dictates that everybody should be capable of handling his or her own finances. From the perspective of the financial counsellors, the experience of shame also makes parents or other relatives more eager to help the young adults with money instead of forcing them to seek advisory help to solve their situation in a more sustainable way. When help arrives from outside and solves the immediate problem, the actual situation becomes invisible.

When reflecting over patterns of consumption and digitization it is the counsellors' impression that the first credit becomes both a point of access and a door opener to over-indebtedness. They fairly often refer to the cell phone and the subscription connected to that as their first credit. They also state that young adults often have more than one subscription, because that gives them the possibility to always have the newest phone model, not to mention the cell-phone also provides access to the Internet. Having a smart-phone is mandatory, at least in a social and cultural sense. One of the counsellors describes an image of young, unemployed men having nothing better to do, so online shopping becomes a pastime for them.

> *"You can understand that they have nothing better to do than shop online" (counsellor 5)*

These young adults could be categorized in both "the Heir" and "the Unable" group. In both cases, the fundamental problem is their lack of financial literacy. They do not have the knowledge to handle their money, and they lack financial literacy.

How do they spend all that money then?

The financial counsellors see that the young adults that visit them spend their money on shopping, gaming, loans and every-day expenses. Some of the spending is a part of social interaction, for example gaming or dating. Some of the impressions the financial counsellors have describe young adults with an inability to think and handle economically. They show a picture of a generation that has access to all the corners of the world to mirror and relate to, and the possibility to quickly access credit through digitalized society (they have digital literacy), but lacks the financial literacy to handle the situation.

> *"Buying a New Year's gown (to wear just once) for 5,000 SEK on an instalment plan of 50 SEK a month for 5 years when your only income is student aid should be a deterrent, but it is not." (Counsellor 3)*

Another picture that emerges is that much credit is used for daily expenses. This is not a case of a luxury trap, it is a case of daily life having become the debt trap. The counsellors reiterate that it is the lack of financial literacy that is the cause.

> *"It is the expenses of everyday life that makes them become over-indebted, because they lack basic knowledge of household finances." (Counsellor 5)*

In this case, almost every single interviewee wished for more time and the possibilities to work with preventive work, especially in mandatory schools.

> *"Previously, I always used to visit schools and talk to the pupils about money and how to spend and save. But nowadays there isn't any time for that." (Counsellor 3)*

Only a few of the interviewed financial counsellors work full time as counsellors. It is quite common for a counsellor to work in several municipalities, or only work part-time as a counsellor while working as an ordinary social worker the rest of the time. The financial counsellors see problem solving at different levels in society; and naturally, they have a lot more to say on the subject of the legislation surrounding the loan and credit providers. They feel that the risk assessment and the risks involved should primarily be the responsibility of the providers rather than the individuals. Of course, this point can be debated, but it is a statement that the financial counsellors see this as an abandonment of the welfare state. The financial counsellors often criticised the legislation. They requested legislation that prevented the individual rather than the credit- and loan givers. Within this discussion, ethical questions related to credit rating also came up on the agenda. The financial counsellors had many questions and thoughts on how credit ratings are calculated, and the problems that follow when only looking at income without including the ability to pay. On a meso and micro level they advocate providing information and knowledge at an early age. They also consider that a lack of information can be one reason why young adults do not seek their help. But another, more common, opinion on why young adults do not seek their help is the structure of the Enforcement Authority and the ensuing registration in the system. Being marked in the system not only harshly limits one's possibilities in many areas in daily life, such as getting a contract for an apartment, receiving credit cards or having mobile subscriptions, it is also connected to a great sense of shame. As pointed out earlier, in the counsellors' opinion it is more acceptable to confess to alcohol or drug abuse than to confess

to a payment default that has resulted in a mark in the Enforcement Authority's register.

> *"It's like a red flag. And sometimes we think that the registration system really is counterproductive, because people will do anything to avoid it, they even get themselves into a deeper hole rather than let the consequences of the registration help them break a vicious spiral." (Counsellor 1)*

In some ways, counsellors with long working experience reflecting on the group of young adults with financial problems say they have always existed, and that they are not a product of the digital era. Prior to the Internet they simply got into economic problems in other ways. Borrowing money from friends or mail orders was more common previously and has changed into online shopping using credit and payday loans. One very interesting point that emerges in this picture is that the financial counsellors were able to point out two of the earlier presented categories: the Heir and the Unable. Within a discussion on over-indebtedness, this then becomes no longer a matter of anybody being at risk; on the contrary, there is a specific group at risk and thus is vulnerable from a digital and financial literacy point of view.

One thing that the financial counsellors agree on is that digitalization has made access to credit, loans, and instalment plans faster and easier. They also think that the anonymous processing of consumption and loans leads to more people putting themselves in debt, and among them you will, of course, also find young adults. When there was a measure of systemic inertia which meant that it took some time before the person had the money in their hands, this also created a threshold, in the same way as the personal meeting does. Today, it is possible to sit behind a screen and apply for a loan in the middle of the night and have the money in your account in the morning. Naturally, this makes more people take loans and use credit. Another aspect that was regularly brought up by the financial counsellors was how online shopping always offers instalment plans as a first paying method. They were in mutual agreement on this matter in pointing out that digital technology has made it too easy to access credit without requiring an appropriate level of financial literacy, and that the welfare state has abandoned them by not recognizing and taking responsibility for this group at any level in society.

Discussion

In the introduction of this chapter, the following questions were posed: How do municipal financial counsellors perceive the causes of problematic financial

behaviours among young adults? What (if any) role does digital technology play in these behaviours? How can municipal financial counselling counteract the financial problems of young adults in a digital age?

In summarizing the results, it is clear that the group of young adults that to an alarming extent emerges as over-indebted in the Enforcement Authority's statistics does not seek help from the municipality financial counsellors. A most common perception is that their clients often have tried to solve his or her financial problems themselves for perhaps 10-15 years prior to contacting a municipal financial counsellor. Since the average age of the clients is between 35 and 45 years old, many of them have had economic problems since their early twenties. A common request among the counsellors is to have the possibility to work more preventively through information and increased knowledge, preferably starting at early ages. Most of them do not have the time for that at all in their functions, currently. The financial counsellors are also very critical of the law that allows the risks involved on the part of the credit and loan providers to be treated very leniently. They request not only a discussion on the construction of the law, but also question the ethics that underlie the risk assessments. They harshly implicate the welfare society in having given up on the young adults that fall into over-indebtedness.

The municipal financial counsellors describe the different categories of young adults that visit them. They are almost always accompanied by someone, whether a professional or a relative. The categories consist of the Heir and the Unable – people that have learned a method of handling his or her economy which is combined with great risks and/or lack of the competence needed to handle it (lack of financial literacy); the Criminal who may build a debt based on fines and unpaid damages, which in some cases can lead to payment defaults at the credit bureaus; and lastly, Due-to-Others are the young adults that have been economically exploited by others. Common to these groups is some mutual form of alienation and vulnerability. Therefore, the financial counsellors' statements challenge the myth that over-indebtedness can happen to anybody. Rather, we should understand that it does not happen to anybody, it happens to specific vulnerable groups which we could be able to identify through knowledge about alienation and risk factors. From this point of view, we could then discuss whether the welfare state has given up on them or not.

The municipal financial counsellors identify in digitalization a simplified and automated access to to credits and loans that may lack some of the interpersonal inertia from pre-digital times. This can be a problem for vulnerable groups. The financial counsellors' impression is that in the process, this simplicity has removed some of the systemic friction previously involved when putting oneself in debt. However, based on age and use of digital technology for shopping, using credit and taking loans, they could not distinguish the young adult's actions from the group in general. The debt

counsellors' impression is that easy and fast access to money made possible through various digital forms demands a capacity for abstract thinking to which society is not paying attention.

In this way, one could say that modern credit society takes part in creating indebtedness and, by extension, poses further challenges to the already vulnerable. All the different forms of instalment plans, credit and loans build an impervious web around the individual, and demand well trained skills in abstraction to understand and handle. During this process, one could say that over-indebted young adults become invisible in society. We hide them in our structures, because our image of poverty is based in the lack of money; however, the indebted and over-indebted have money, if only enough to cover their debts. From this perspective, the financial counsellors also discuss the counterproductive effects of payment defaults. The shame of being marked in the Enforcement Authority's register makes people dig their own graves deeper rather than seek for economically sustainable solutions.

One common opinion is that the mobile phone is the main point of access to credit society. For many young adults, it not only means access to the Internet, it is also the point where they accept their first credit or instalment payment plan. In this way, technology challenges our meta-cognitive skills and increases the need for further discussion on the concept of literacy. Young adults today have very high digital literacy, as will future generations. One could say that they are literally born with the Internet in their hands. But the question is, how will we match that skill with equally necessary skills such as financial literacy, and whose responsibility is it?

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4.Reviewing Research on Digital Consumption and Over-Indebtedness

This chapter presents an extensive literature review that seeks to map the current state of research on the effects of the digitization on personal financial behaviour and management, in order to synthesize the findings so far and suggest directions for future research.[18] Particular focus is directed to what is currently known about the effects of digitization on consumer and credit behaviour, insights that can be used to further understand to the implications of digitization for the professional practice of financial counsellors. Two sub-studies were conducted: a bibliometric analysis and a systematic literature review. Findings from these indicate that what is currently known about the effects of digitization on consumer and credit behaviour is primarily based on the perspective of actors involved in commerce and systems development. Hence, there is a need for more research on how personal financial behaviour may change in relation to the development of mobile and digital technology. In particular, the vulnerability of children and adolescents as digital consumers needs further attention. Also potential links between changing credit behaviour in digital society and over-indebtedness and/or problematic indebtedness in private individuals need to be more thoroughly investigated. The findings indicate some directions that financial counseling might take in order to face their clients' digital problems. Firstly, an awareness of the opportunities but also the threats that young adults encounter as digital consumers could help form the advice given to this particular group. Secondly, consumer educators could benefit from an extended notion of financial literacy that takes into consideration the knowledge and skills required by consumers in the digital

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[18] For the report that forms the basis for this chapter, see Carlsson (et al., 2015; cf Carlsson et al., forthcoming).

society. Thirdly, digital measurability makes consumers more exposed and monitored. Policy makers need to be aware of this in order to protect individual privacy through public informing and possibly legislation.

Today, a growing number of people live their lives connected to the Internet, relying on digital technologies for various activities such as socializing with friends, accessing health care information or paying their bills. According to a report from the United States Census Bureau, 74.4 percent of all households in the United States reported Internet use in 2013, with 73.4 percent reporting a high-speed connection (File & Ryan, 2014). In the EU-countries, on average 79 percent of the population between the ages 16 to 79 use Internet on a regular basis (Eurostat, June 2014). As Internet activities continue to increase, also how we consume, borrow money and use credit, and what this entails and requires in terms of skills and knowledge are undergoing rapid change. The spread of digital technologies, especially mobile phones, have produced new venues with lower barriers and fewer gatekeepers for both purchasing and credit handling. Online shopping, online banking, in-game trading in games and apps, instant loans and other forms of easily accessible consumer credit form a new and different landscape for personal financial behaviour and management, generating both new challenges and opportunities for financial counsellors and their clients. These socio-technical changes have gained the attention of scholars from various research fields – stretching from systems development to consumer culture – all approaching the topic from different perspectives, with different questions and knowledge claims. Bringing together these disparate streams of work could help shed light on what is currently known about the effects of digitization on personal financial behaviour, particularly with regards to consumer and credit behaviour. Such knowledge is important for the sake of research but may also have implications for financial counselling practice and for authorities responsible for countering increases in financial vulnerability and over-indebtedness. Hence, the objective of this literature review is to map the current state of research on the effects of digitization on personal financial behaviour and management, with particular focus on consumer and credit behaviour, in order to synthesize the findings so far and suggest directions for future research.

Background

The main motive for this literature review is the high rate technology-related social change currently at hand, which affects all part of society including personal financial behavior and management. Although the structural and technical architecture of the Internet is several decades old, it remains in constant and rapid transformation (cf. Larsson, 2015). It should be noted that the

level of Internet usage has not increased drastically over the last few years, but how we are connected has changed dramatically. The Internet has become an integral part of everyday life across diverse parts of society and the development of new forms of digitally mediated consumer and credit behaviour can be seen as part of this transformation. Today, shopping online is a regular experience for most Internet users in the United States (57%) and in many parts of Europe (The World Internet Project, 2013). One can here distinguish between online shopping and digital purchases. The former is similar to traditional mail-order purchases, where the consumer buys a product on a website which is later delivered to his or her home address. The latter refers to purchases of digital products, such as music files, smart phone applications or media streaming. As E-commerce – the umbrella concept used for describing different forms of digitally mediated trading – continues to grow, a number of new technical solutions for purchases and payments online have entered the market, such as electronic invoices, a number of intermediary solutions such as Apple accounts, Paypal etc., and different subscription services (e.g. Spotify and Netflix) linked to debit or credit cards. The growth in smart-phone use have supported this development and opened for a new world of technologies for various types of purchases and payment transactions, where the mobile phone is the lowest common denominator. One could also point to purchases integrated into certain digital games, suggesting that credit-based consumption can reach children relatively seamlessly. Many of these payment forms are linked to instalment options, or unsecured loans, often with high interest rates. Consumers are thus faced with an intricate set of payment and credit options whose terms and rules are not always easy to comprehend. Hence, as alternatives for purchases and credit become more customized online, financial decision-making becomes more opaque and complex.

From this follows that consumers in digital contexts are faced with new and different challenges. In Sweden, a country with a high degree of Internet use and where online shopping is quite common (Findahl, 2014), The Swedish Enforcement Authority (2012) has noted that one of the more common reasons for payment orders concerning people between 18 and 25 years are invoice purchases, and that a large portion of these relate to e-commerce. Young people and women are overrepresented among outstanding payment orders in e-commerce in comparison to other types of debt (The Swedish Enforcement Authority, 2013). This indicates that e-commerce might lead to individuals entering into precarious financial situations, even over-indebtedness. Financial counsellors are thus faced with clients with problems of new origins, suggesting that new professional knowledge and skills might be required. As stated above, this literature review seeks to shed light upon what is currently known about the effects of digitization on personal financial behaviour and management, insights

that can be used to further understand to the implications of digitization for the professional practice of financial counsellors.

Scope and Procedure

In order to fulfil the purpose of the present study two sub-studies were conducted: a bibliometric analysis and a systematic literature review. Both sub-studies focused on research themes related to personal financial behaviour in digital contexts, albeit with somewhat different approaches, in order to provide as comprehensive and accurate a description as possible. The details of the two methods are further described below.

Bibliometrics

Bibliometric analysis is fundamentally concerned with quantitative and statistical analyses of the characteristics of texts and text collections. Today bibliometrics are primarily associated with research evaluation using publication statistics, and the extent to which these are cited as indicators of scientific productivity and impact. However, the method can also be used to identify different structures within a research field by analysing various properties of the literature within that field. Studying statistical relationships between terms is one way of identifying various themes within a research field or field of interest. And the analysis of the journals publishing the research, and of the journals the articles are referring to, can be used to explore in which research fields a given object of study is examined; as well as to what extent the results are communicated in-between research fields.

In order to conduct these analyses, data that can be gathered in an efficient and structured manner is required. Research databases contain different types of literature – different types of publications (e.g., journal articles, monographs, chapters from anthologies, conference proceedings) and publications in various languages. There are also large differences in the quality of metadata. This means that depending on which database is used, different aspects of a field's research literature will be analysed. For the purpose of the present study, the Web of Science databases (WoS) produced by Thomson Reuters were selected for the bibliometric analysis. WoS is a set of databases that lists international research literature, in particular literature published in the form of English language journal articles. The WoS also has the advantage of gathering content rich information, which enables many types of analyses, as well as enabling efficient compilation of data. The disadvantage is that the focus on international journal articles runs the risk of omitting research published in

other forms, for instance in books, which is common within the social sciences and the humanities. Hence, the results of the analyses come from only a portion of the complete corpus of research literature under analysis and must be viewed with this in mind. Still, if one wishes to gain an understanding of the different aspects within a research field, the advantages of the WoS database continue to outweigh.

In order to gather literature relevant for the study at hand, a number of keywords were identified to formulate search strings for the WoS databases (Science Citation Index, Social Science Citation Index and Arts & Humanities Citation Index, as well as the Conference Proceedings Citation Index) The search strings, presented in the Findings section of this paper, were formulated according to two main themes, and are reported separately:

1. Indebtedness in digital contexts

2. Consumer culture and consumer behaviour in digital contexts

The searches were limited to literature published between 2005 and 2014. The information on the publications identified in the WoS searches was downloaded for further processing and analysis using the software Bibexcel (a program used for processing data and bibliometric analyses) (Persson, 2015; Persson et al., 2009), VOS viewer version 1.6.2 (a program for visualizing bibliometric analyses, the initials VOS standing for Vicinity Of Similarities) (van Eck & Waltman, 2010; VOSviewer, 2015), and MS Excel.

In order to map the research fields, that is, to study the effects of digitization on personal financial behaviour and management, focus was on detecting journals that publish this type of research as well as journals cited in the identified corpus. In the former analysis, the object of study was the distribution of articles between various fields. In the latter, the object of study was the cited references that link to the articles being studied, and in particular, the cited journals (McCain, 1999). The reference lists (the "Cited Reference" field in the WoS data) for the articles was limited to the journal titles. Thereafter followed an analysis of how often the cited journals appeared concurrently in the reference lists. In the findings section of this paper, the analyses are represented as maps where journals that are frequently cited are represented as larger units on the maps, while journals that are often cited together are placed in close vicinity to each other, thus forming clusters representing different research fields.

To identify the themes addressed, the terms that appear in the literature were analysed by studying the title, abstract and keywords. The fields in the WoS data that contain such information were compiled in a text file using

Bibexcel, and then analysed in the VOS viewer (van Eck & Waltman, 2011). Initially, the program used an algorithm to identify relevant terms and weed out insignificant words such as "And," "Or" etc. Once the relevant terms were identified, the analysis focused on how often these terms occurred and, not least, how often they occurred together. Similarly to the cited journals, the terms are presented in map form in the findings section, where frequently occurring terms are marked as larger units on the maps, and terms that frequently occur concurrently are placed closer to each other. This implies that larger collections of terms that frequently occur concurrently form clusters, which will be further illustrated in the findings section.

Systematic literature review

The systematic literature review that forms the basis of the second sub-study is a compilation of relevant literature within a specific area of study. The collection method for such a review is based, as the name suggests, in a carefully developed and systematic methodology for literature searches. For the purpose of this paper, the method's most obvious merit is that it includes a qualitative dimension where much of the systematised literature is read (although mainly delimited to abstracts) and evaluated. This provides a somewhat deeper understanding of the type of research being published, as well as a good opportunity to highlight significant publications, whether quantitatively representative or not. As such, the systematic review is a good complement to the bibliometric analysis.

In brief, the systematic search method can be described as a three-stage process consisting of searching, screening and analysing. Various databases are selected, preferably based on their relevance to the search and/or the literature review. Since the subject of this research review is by nature broad and can be researched within a number of disciplines, the searches have in this case been confined to so-called general databases, rather than discipline-specific ones. Moreover, focus was on international scientific databases in, since the aim here was to specifically identify the international state of research on the effects of digitization on personal financial behaviour and management. The Academic Search Complete and Scopus databases were chosen for the search. The Academic Search Complete indexes approximately 23,000 scientific journals, which cover a broad spectrum, stretching from anthropology to engineering and science. Scopus indexes roughly 22,000 scientific journals and also has a broad coverage of fields and disciplines.

The systematic search method has both strengths and weaknesses. An important strength, in particular for the present research review, is the ability to capture the breadth of the research field and provide as comprehensive a

description as possible. A further advantage is the repeatability of the search method. Since the search strings are clearly defined, it is possible to repeat the same search at a later time and thereby note any changes within the research field. This approach, however, entails limits, which have implications for the sub-study results. When conducting a broader search, the accuracy of a more targeted search is to some extent lost. Furthermore, the selected databases index a specific selection of publications, generally conference proceedings and articles in peer-reviewed journals written in English. Hence, other types of publications containing relevant findings of interest for the research review are excluded from the scope of the search.

The present systematic literature review is based on three search strings, which correspond to three different searches. The first string (hereafter, search 1) was used to capture hits containing the search term "over-indebtedness", which initially generated 45 hits in the *Academic Search Complete* database and 64 hits in *Scopus*.

overindebt* OR over-indebt* OR (over AND indebt*)

The purpose of this search was to produce a comprehensive overview of the frequency of the term "over-indebtedness" in the scientific publications indexed by the databases, as well as to provide an indication of how the term is used in the publications generated by the search.

The second string (hereafter, search 2) was used to capture hits that combine the main search term "digital" with "consumer" and "indebtedness." This search initially generated 1,411 hits in the Academic Search Complete database and 828 hits in Scopus.

(debt* OR overindebt* OR over-indebt* OR loan* OR
borrow* OR lend* OR credit* OR mortage OR invoice)
AND (Digital* OR online* OR electronic* OR cyber*
OR internet* OR virtual* OR wired OR e-*)NOT Librar*
AND (buy* OR shop* OR consum* OR purchas* OR
retail* OR merchandi* OR marketing)

The third search (hereafter, search 3) was used to capture hits that combine the main keyword "mobile" with "consumer" and "indebtedness", which initially generated 661 hits in the Academic Search Complete database and 828 hits in Scopus.

(debt* OR overindebt* OR indebt* OR loan* OR lend* OR credit* OR mortage OR invoice) AND (mobile OR cell phone OR Iphone OR android OR application* OR app OR smartphone) NOT Librar* AND (Buy* OR shop* OR consum* OR purchas* OR retail* OR merchandi* OR marketing)

In all three searches, the time-span was delimited to between 2000 and 2014. All results was saved and systematized in the reference management system Zotero. In the second step of the systematic method, the scanning process, the searches from the respective databases were merged, followed by a screening for any duplicates. Thereafter, the remaining matches were examined manually in order to exclude any that were not of topical relevance. Screened hits might, for example, focus on indebtedness at the state and supranational level, micro-loans in developing countries, or other subjects that were clearly irrelevant to the present research review. After the screening, 44 hits were deemed relevant in Search 1; 483 hits in Search 2; and 105 hits in Search 3. After a second screening for duplicates, 166 peer-reviewed publications remained, which form the basis of the analysis in sub-study 2. The third step of the systematic method, the analysis, was conducted via repeated close readings of the publications' abstracts. Based on these readings, the articles were coded, and the publications were systematised according to the categories presented in the findings section.

Findings

Results of sub-study 1: Bibliometric analysis

The two themes studied in the bibliometric analysis – indebtedness in digital contexts and consumer culture, and consumer behaviour in digital contexts – are presented in separate sections. Search strings are also included in the presentations, as well as other delimitations to the searches.

Indebtedness in digital contexts

In order to identify research on indebtedness in digital contexts, the following search string was used in the "Topic Search" field in the Web of Science database, which resulted in 1,472 articles that were then downloaded for processing and further analysis:

(debt* OR indebt* OR overindebt* OR loan* OR borrow* OR lend* OR credit* OR mortage OR invoice)

AND

(Digital* OR online* OR electronic* OR cyber* OR internet* OR virtual* OR wired OR mobile OR cell phone OR Iphone OR android OR application* OR app OR smartphone)

AND

(Buy* OR shop* OR consum* OR purchas* OR retail* OR merchandi* OR marketing OR e-shop* OR e-consum* OR e-purchas* OR e-retail* OR e-merchandi* OR e-marketing*)

NOT

librar*

In order to study which fields research on indebtedness in digital contexts can be identified within, two different types of analyses were conducted. The first analysis focused on which research field the articles were published within. It is represented by the topic categories used by WoS to describe journals that publish the articles indexed in the databases (Figure 4.1). Of the research fields that have published more than 100 articles, two main fields dominate: Computer science – represented by "computer science", "engineering" and "information systems" – and economy and trade, represented by "economics", "management/operations research" and "business/finance." Within the range of roughly 50-100 published articles, the technical perspective recurs in "telecommunications", but we also find "environmental sciences" and "mathematics", the latter probably reflecting a methodological aspect of the research rather than empirical studies of indebtedness in digital contexts. In general, the most prominently featured research fields in the analysis indicate that research on indebtedness in digital contexts – as represented by the WoS databases – focus on a systemic perspective rather than a consumer or client perspective. The main concern seems to be how to develop systems and business strategies to protect business owners from losses incurred from insolvent consumers, rather than to research consumers who have become indebted due to over-consumption in a digital context and the impact this may have on their lives. Had this been more visible, it would have been represented by, for example, sociology and other research fields with a greater focus on the behavioural-sciences.
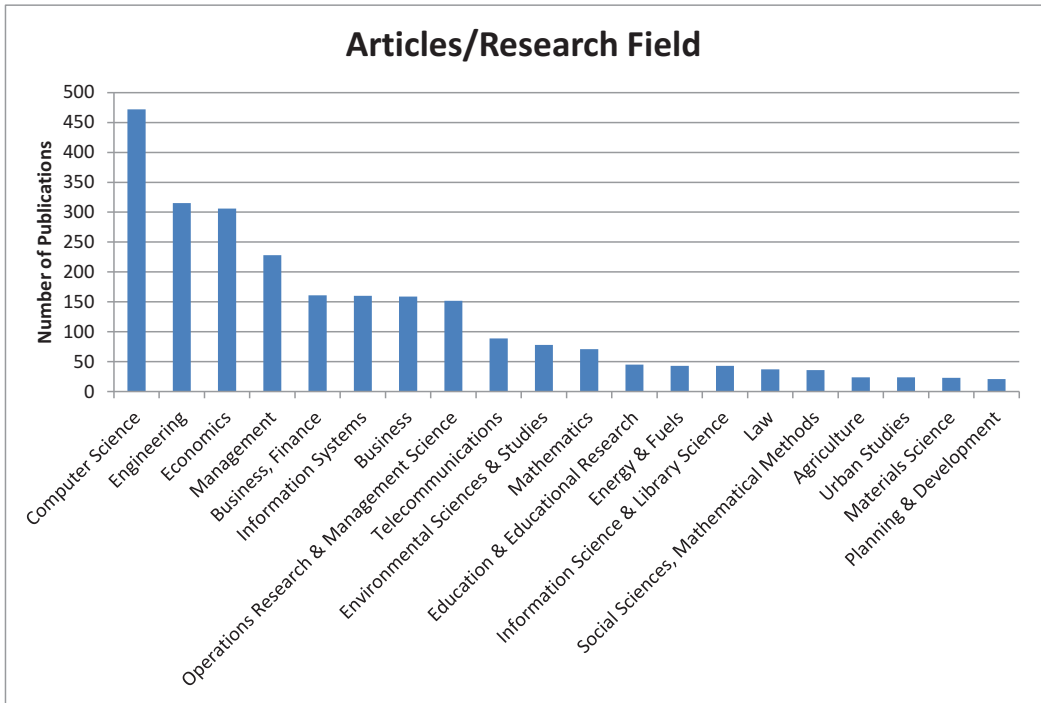
Figure 4.1. Research fields in which articles on debt in digital contexts have been published, defined as WoS categories of journals. 20 research fields with more than 20 articles (n = 122 WoS categories).

The second analysis of research fields that analyse indebtedness in digital contexts concerns the cited journals, and thereby the scientific context that the authors of the articles place themselves within (Figure 4.2). In addition to positioning the journals' vicinity based on how often the journals are cited concurrently, these co-citation frequencies are also used to form a statistical cluster analysis, which results are represented by different colours for various clusters (McCain, 1999). This way, we find a dark blue and a yellow cluster focused on economics and finance in the lower section of the map, represented by journals such as the Journal of Financing ("J Finance") and the American Economic Review ("Am econ rev"). On the right side of the map, we see a green cluster of management, marketing and consumption research journals, such as the Journal of Marketing ("J Marketing"), Management Science ("Manage sci") and the Journal of Consumer Research ("J consum res"). At the top of the map, we see a red cluster of journals that are oriented toward computer science and system development, such as Decision Support Systems ("Decis support syst") and Communications of the Association for Computing Machinery ("Commun ACM"). So far, the analysis corresponds well with the results of the analysis of the dominant journal categories to have published the analysed articles. However, it should be noted that the presence of journals that focus on

consumer research might indicate a more consumer-oriented research than could be seen in the analysis of journal categories. This perspective is made particularly salient by the two smaller clusters in the co-citation analysis: A purple cluster of sociological journals between the blue economy cluster and the green marketing cluster, and a small orange cluster of psychology oriented journals immediately below the green marketing cluster. Moreover, there is also a light blue cluster representing legal journals in the bottom right corner, which were represented to a lesser degree in the analysis of journal categories.
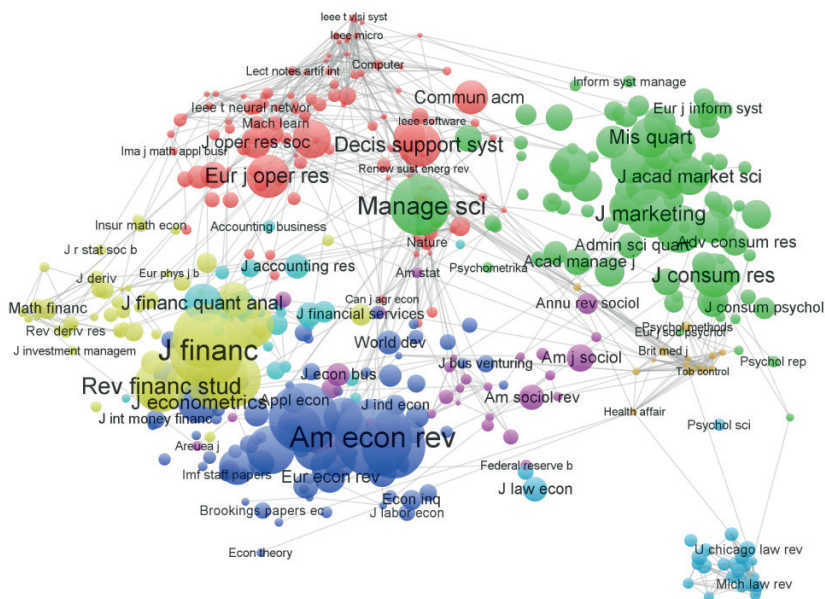
Figure 4.2. Research fields that the author of the article links her or his research to, represented by cited journals. Co-citation analysis, based on the names of journals in the "Cited Reference" field. 501 journals that have been cited 6 times or more. Lines represent 1,000 individual citation links or more.

What conclusions can be drawn from this? The economic/business-perspective appears to be dominant in both analyses, in conjunction with a more technical, system-oriented perspective. The consumer perspective, however, only becomes apparent in the analysis of the journals that are cited together. The question is to what extent this actually involves research from the consumer's perspective, or whether it rather concerns more system or market oriented research that, to a certain extent, uses findings from consumer behaviour research? To answer this question, it might be useful to more closely study the actual terms used, and to

describe the contents of the actual articles; i.e., not only study which field is conducting research on debt in digital contexts, but also examine what is actually being said.

In order to study the themes that emerge in articles on indebtedness in digital contexts, the article titles, and abstracts were analysed, as well as the subject terms used to describe the articles. Similarly to the co-citation analysis, this analysis is then represented by a map of terms where words that frequently occur together are positioned closer to each other than terms that occur together less frequently. This regularity of concurrent use of terms was also analysed using a statistical cluster analysis (Figure 4.3).

Figure 4.3. Terms in articles on indebtedness in digital contexts, based in frequency of concurrent use of terms in titles, abstracts and keywords. 930 terms appearing five times or more.

As was shown in the analyses of research fields, the main focus would again appear to be on the business perspective, although based partly in a technical perspective and partly in a business and financial perspective. The terms largely reflect issues concerning how to evaluate creditworthiness and how to avoid outstanding payments. However, few terms appear to address research on the consequences for consumers, or cases of them falling into indebtedness.

There are two main clusters on the map, both represented by darker red fields. To the left, we find a cluster oriented toward commerce with a quite strong focus on infrastructure, business processes, and technology solutions for commerce and payments in digital contexts (Figure 4.4). Among other things, one can note that "trust" occupies a relatively large space. However, it largely

appears to concern how to create reliable and secure trading systems from a technical perspective, rather than a more comprehensive concept of trust that would include a consumer or client perspective.

Figure 4.4: Cluster of terms related to commerce. Detailed zoom in map of terms in Figure 3.

The second cluster on the right side of the map contains terms strongly related to risk assessment and management, not least in regards to credit assessment (Figure 4.5). Here, too, the focus is largely a business perspective, rather than any sort of client or consumer perspective; i.e., "risk" mainly implies the risk that the businessman and the lender runs of not receiving payment, rather than the financial risk of digital consumers.

Figure 4.5. Cluster of terms related to risk management and credit assessment. Detailed zoom close up displayed in the term-map in Figure 3.

In order to find terms related to a consumer perspective, one need to zoom quite far into the map to find terms that are used relatively infrequently. Even there, the focal point on the consumer perspective is linked to the use of technical systems, rather than to the effects of e-commerce on consumers.

In other words, the analysis of the terms used in research on indebtedness in digital contexts supports the analysis of journal categories as defined by the research fields that conduct such research, rather than trends in the co-citation analysis that appear to point to a more consumer-oriented perspective.

Consumer culture and consumer behaviours in digital contexts

To identify research on consumer culture and behaviour in digital contexts, the same search string used in the "Topic Search" in the WoS database was again used, a search that resulted in the download of 3,020 articles for processing and further analysis:

> (Digital* OR online* OR electronic* OR cyber* OR internet* OR virtual* OR wired OR mobile OR cell phone OR Iphone OR android OR application* OR app OR smartphone)
>
> AND

(Buy* OR shop* OR consum* OR purchas* OR retail* OR merchandi* OR marketing OR e-shop* OR e-consum* OR e-purchas* OR e-retail* OR e-merchandi* OR e-marketing*)

AND

(consum* NEAR (cult* OR behav*))

NOT

(librar* OR energy*)

This search differed from the previous search for articles on indebtedness in the respect that the previous analysis was based on searches for articles in all the WoS databases, while this search – regarding consumer culture and consumer behaviour – was limited to the Social Science Citation Index (SSCI) and the Arts & Humanities Citation Index (A&HCI) (and their corresponding database conference proceedings: CPCI-SSH), while the Science Citation Index (SCI and CPCI-S) was omitted this time. This is due to initial searches, which included results from the SCI resulting in the search string leading to too many irrelevant results, and therefore, further delimitation became necessary.

Business, management and economic research dominate in over half of all articles (Figure 4.6) in journals that publish articles on consumer culture and behaviour in the WoS database categorization. Within the span of journals containing between 200 and 400 articles, we mainly find research in psychology, computer science, and library and information science. This is followed by a number of various research fields that vary between everything from education sciences to sociology. However, this can mainly be interpreted as there being three dominant orientations conducting research on consumer culture and behaviour:

1) Economic and commerce-oriented research;
2) Technical research on, and how to use, systems for e-commerce;
3) Behavioural research.

Therefore, the general structure is comparable to research on indebtedness in digital contexts, with the exception that behavioural research is more salient than in research on indebtedness.
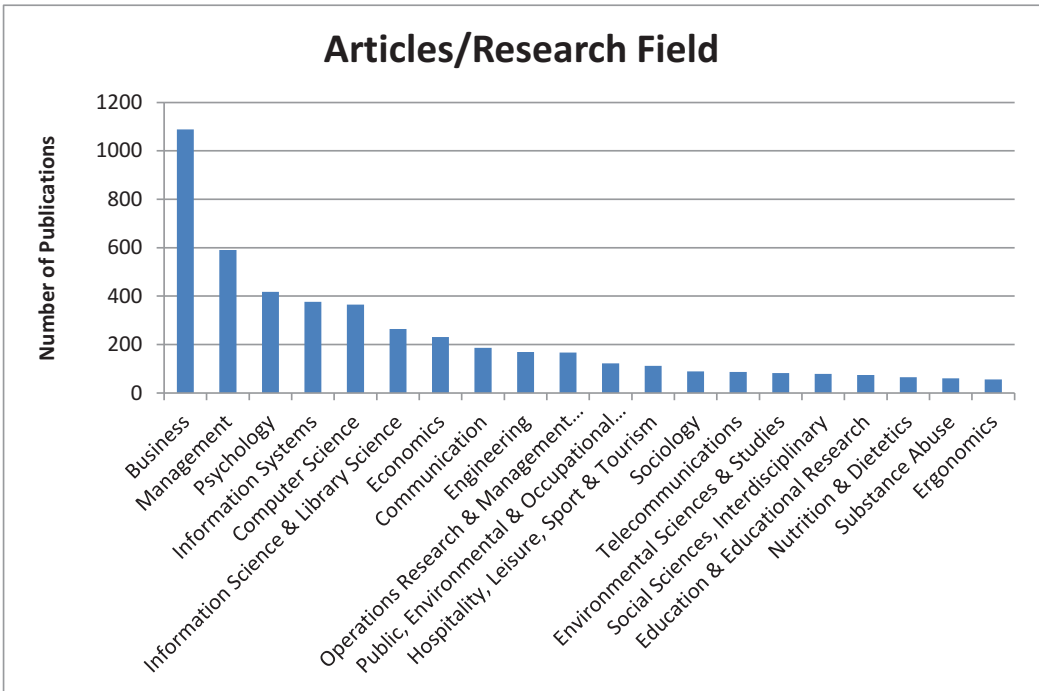
Figure 4.6. Research fields which publish articles on consumer culture and behavior in digital contexts, defined as WoS categories for journals. 20 research fields containing more than 55 articles (n = 117 WoS categories).

Switching focus to research fields that study consumer culture and behaviour using the WoS categorization of the journals publishing the articles, as well as the journals cited by these articles, the results match relatively well with the results of the analysis of journal categories (Figure 4.7). Management, economy and marketing are found in the middle of the map, represented by a yellow and a green cluster, where the green cluster in the map's lower section represents journals that focus on marketing, while the yellow cluster in the map's upper section has a stronger focus on management and economic research. On the left side of the map we find a cluster that focuses on information systems, which, when compared to the cited journals in the corresponding analysis of debt issues, is more focused on information systems that specialize in management and decision-making functions. On the right side, we find a red cluster with a strong focus on psychology journals, while the sociological perspective which is found both in the analysis of journal categories on cultural and behavioural issues, as well as in the analysis of cited journals that address debt issues, is absent.
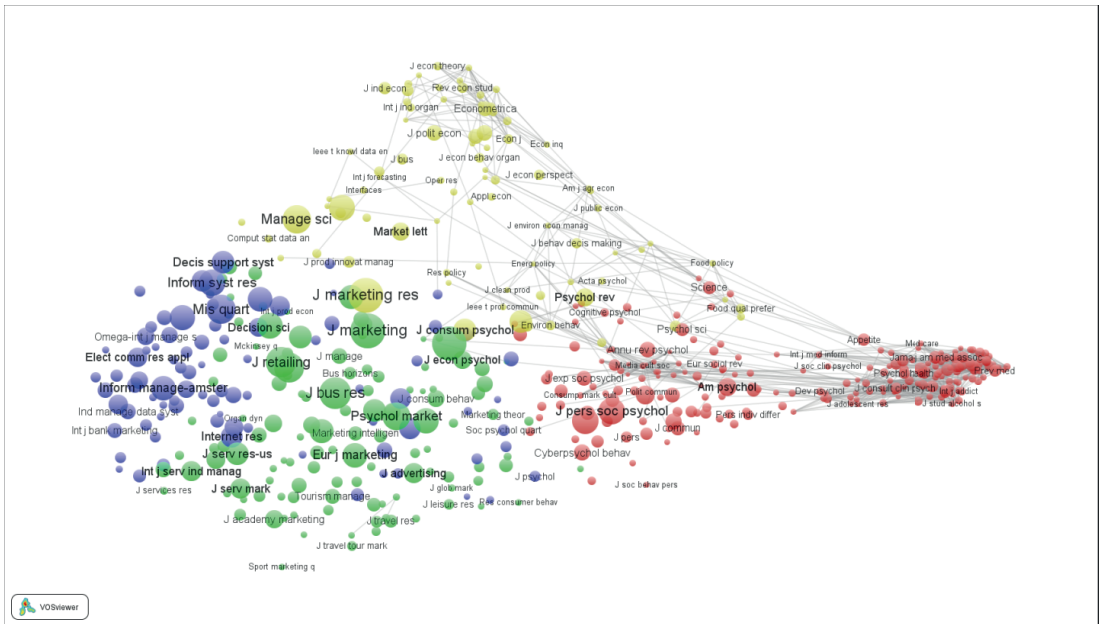
Figure 4.7. Research that the authors of the article relate their research to, represented by Cited Journals. Co-citation analysis based on the journal name in the "Cited Reference" field. 501 journals were cited at least 18 times. The lines represent 1,000 individual citation links or more.

Similarly to the findings on research on indebtedness in digital contexts, we find clear economic perspectives as well as research on technical aspects within research fields that address issues of consumer behaviour and culture. Further, a more apparent behavioural science perspective emerges, and in particular a psychological perspective (based on cited journals).

In order to explore what is actually being said within research on consumer culture and consumer behaviour, the terms used in the titles, abstracts and keywords of the articles that the analysis is based on were analysed again, (Figure 4.8). The terminology map that emerges consists mainly of two sides:

- On the left hand side, one which is linked to a systems perspective, with a focus on consumer trust in commerce and technology, as well as issues concerning technology acceptance and consumers' actual use of e-commerce and payment systems.

- On the right hand side, one that is more oriented toward general issues on consumer behaviour, and where not the least risk-behaviour is an important component.

Figure 4.8. Terms used in articles on consumer culture and behavior in digital contexts, based on the concurrence of terms in titles, abstracts and keywords. 1,989 terms that appear five times or more.

The amount of research that adopts a consumer and client perspective but continues largely to focus on the opportunities for electronic commerce is striking. For example, in matters concerning trust, the focus is largely on creating acceptance and trust in the commerce and payment systems. Within the cluster collection of more general cultural and behavioural terms, a remarkably high portion of these can be linked to issues concerning risk and addiction-related behaviours, while more general questions on differences in consumer cultures and behaviours – for example, among different groups in society such as age groups, or electronic commerce compared to traditional commerce – are decidedly less visible.

Summary of Sub-study 1

Studies of international research on effects of digitization on consumer and credit behaviour, as represented by articles indexed in the WoS databases, demonstrate some relatively clear characteristics. Firstly, focus is on computer systems and commerce rather than on consumers and consumer behaviour, which suggests that an economic/business-oriented perspective is dominant. These findings are further supported by the terminology-analysis, which indicates an emphasis on research concerning foremost technical, commercial and financial aspects such as assessment of creditworthiness and avoidance of outstanding payments. Secondly, the amount of research on consumer cultures and behaviour in digital contexts, which largely focuses on the opportunities for

a well-functioning electronic commerce, is striking. This suggests that to the extent that research on consumers and their behaviour can be identified, it generally addresses risk behaviours. The focus appears to be on questions such as, "How do we design systems for e-commerce?" or "How do we avoid not getting paid?". Hence, research on the effects of digitization on consumer and credit behaviour, approached from a consumer perspective, is largely lacking.

Results of sub-study 2: Systematic literature review

In order to present the results from sub-study 2 in a perspicuous manner, the included articles have been divided into eight categories, each of which deals with a research topic predominant in the corpus. The first category "over-indebtedness" is based solely on Search 1, while the other categories are based on search 2 and 3. Table 1 indicates the number of included publications per search for each category, as well as the aggregate number of results after having screened for duplicates. This is then followed up by a summary of the category's most prominent research themes with illustrative examples of arguments and results in the included articles.

Over-indebtedness

As mentioned in the methods section, the purpose of a general search for the term "over-indebtedness" was to form a comprehensive understanding of the term's prevalence in the scientific publications indexed by the selected databases. Furthermore, the opportunity to obtain an understanding of how, and in which situations, the term is used in the articles and conference proceedings was of interest. Thereby, the purpose was to gain an understanding of whether, and if so, to what extent, digital development and consumption patterns in digital society are linked to over-indebtedness issues in contemporary international research. Listed below are four search themes that recur in the material: 1. The changing consumer credit market; 2. causes of over-indebtedness; 3. financial literacy; and 4. over-indebtedness and health issues.

The positive and negative impacts of the changing consumer credit market on the individual consumer's financial situation are addressed in the majority of the articles. In particular, they address the European markets and EU laws and regulations surrounding consumer credit. Differences between EU countries in managing increasing over-indebtedness problems are also emphasized. Ramsay (2012) highlights, among other things, the differences between the responses in the UK and France to what he describes as a marked increase in over-indebted individuals in both countries from the mid-1980s onwards. He notes that the differences in the countries' responses can largely be explained by historical factors, ideological differences and how much influence

is allotted to the various interest groups in the problem management process. Over-indebtedness is also depicted from a Finnish perspective (Raijas, Lehtinen & Leskinen, 2010), whose focus is on finding instruments to both prevent and manage over-indebtedness issues.

One issue that pervades these and other publications that address the changes in the consumer credit markets concerns the cause of over-indebtedness. In particular, this concerns whether the basic cause for these changes can be found at the micro or macro level, as well as understanding the contextual relationship between the state, the market and the individual. The impact of the financial crisis on the personal financial behaviour is mentioned, as well as the increased responsibility and the higher degree of knowledge, with regards to financial literacy, that a deregulated consumer credit market requires of the individual.

The significance of financial literacy for the prevention of over-indebtedness is an area that is explored in several articles (see, f.ex., Chlouba, Simková & Nemcova, 2011; Reifner & Herwig, 2003; Tomasková, Mohelská & Nemcová, 2011). Financial literacy is defined as the knowledge and skills required of the individual to actively perform in a market of financial products. A mutual starting point for the articles is the increasing need for this type of knowledge and skills in conjunction with the consumer credit market, as well as the market for private financial solutions in general, having grown increasingly complex. One theme found in the articles that concerns how different e-tools can be used to teach financial literacy online (Chlouba, Simková & Nemcova, 2011) is of particular interest for this research review. There are also some articles that adopt a critical perspective to financial literacy (see, f.ex., Walker, 2012). The argument is that this perspective places too much responsibility on the individual, since a lack of knowledge, or problematic consumption patterns, are considered to be overly simplistic explanations for severe indebtedness (ibid.; Frade, 2012). Rather, structural factors, such as the financial crisis and the changing consumer credit market, as well as less value-ladened individual factors, such as changes in economic situation following death or divorce, should be taken into consideration (Rueger et al., 2011).

Physical and mental health issues are also noted as causes of over-indebtedness. However, these factors are likewise mentioned as an effect of a life-style burdened with severe financial problems. For example, Rueger et al. (2013) show links between over-indebtedness and health problems related to increased smoking, Ochsmann et al. (2009) find connections to back pains, while Münster et al. (2009) link over-indebtedness to obesity.

Various perspectives on the causes and consequences of over-indebtedness emerge in the corpus. However, no links are made between changes in consumer behaviour in digital society and over-indebtedness, and/or problematic indebtedness in private individuals, which is of interest to this

literature review. Explanations for this may, of course, be found in the study's methodological limitations and / or in the absence of actual empirical links. Based on the results of the bibliometric study, a more probable explanation is that research on over-indebtedness and research on digital development and its consequences are conducted within disciplines that share few points of contact. This is reinforced by the results of the searches directed specifically towards the terms "digital" and "mobile", as presented below.

Economy, finance and management

The topics covered in the articles categorized under this heading address online banking, digital processing of loan applications, mobile payment models and management of credit risk in relation to e-commerce. In all cases, the perspective is that of private commerce, banks or other lenders. Although potential customers and debtors are included within the focus of research, the consumer perspective is not the object of study. Articles that address online banking do, however, study bank customers' trust in these services, as well as factors that influence customers choices in purchasing a service or not (c.f. Zhou, 2012). However, the main focus is the bank's potential profits from Internet services, which include financial, organizational and marketing aspects. This also applies to the example of research on digital processing of loan applications (Malm, 2005) included in the materials, and management of credit risks in relation to e-commerce (Huang, Chen & Wang, 2007; Wang, Li & Lin, 2013). In addition to these themes, there are also studies with a more systems development-oriented focus, such as the following example, which focuses on whether so-called mobile banking services (e.g. the bank as a mobile application) can be integrated with existing banking systems (Moloo et al., 2010).

The mobile payment models that are addressed in the category's articles provide one interesting clue that may indicate new directions in research on changing consumer behaviour in the wake of digital technology. Polasik et al. (2012) and others explore whether mobile payments can be considered as efficient as cash payments and concludes that they in fact can. Thair, Luo and Summons (2010) demonstrate that e-commerce consumers accept mobile payment systems to the same extent as traditional online payment systems such as PayPal, while an older article (Herzberg, 2003) identifies the security of mobile payments as high.

Also included in the materials is an article entitled "New Architectures for Financial Services" which provides a more comprehensive overview of the new business opportunities that have been developed as a result of financial and credit market changes. These changes are related to globalization, deregulation and the emergence of new information and communication technology (Kumar, 2004). The article primarily discusses the interplay between these changing factors at a more comprehensive structural level. There is a need for more

research on the implications that this interplay has at a micro level in everyday life, with a particular focus on changes in consumer and credit behaviour.

In summary, the research presented in this category confirms the results of the bibliometric review. Research on the opportunities created by digital technology in the credit and financial market rarely adopts a consumer perspective, neither does it link to the emergence of potential, financially difficult situations for the individual in this context.

Systems development and data management

The articles categorized in this section address issues that in various ways focus on technical aspects of digital consumption and credit. A significant number of the articles present solutions for online payment services and for various forms of mobile payment and digital money management systems. The web designs of various e-commerce websites are also studied (see, f.ex., Xiaowen & Gavriel, 2003). Constructing systems or designing web sites that project trust and confidence in digital financial services to potential customers (see, f.ex., Chung & Kwon, 2009; Antonakis & Sfakianakis, 2010) is the topic of a number of articles. In many cases, potential trust and confidence issues are linked to secure data management and secure payment systems for data management. Here, the articles present suggestions for secure systems to counteract fraud (see, f.ex., Chang, 2013; Venkataramani & Gopalan, 2007; Das, Saxena & Gulati, 2005; Wopperer, 2002). One suggestion that deserves special attention concerns so called bio-identification, "biometrics" (Gordon & Sankaranarayanan, 2010).

Another prominent research theme in the articles categorized in this section is the various opportunities created by digital technology to analyse customer behaviour and customer credit. The majority of the authors note that competitive advantages can be created by large-scale analyses of the digital traces consumers leave behind at various sites, so-called "data mining" (see, f.ex., Kruppa et al., 2013; Blake, 2006; Hsieh, 2004). The massive amount of data generated by their traces, often known as "big-data", is described as a good basis for credit assessments (Huang, Chen & Wang, 2007). However, a more critical perspective of this form of data use is sorely lacking. Little attention is here paid to privacy issues; rather, "data-mining" and "big data" are addressed primarily as new opportunities to create competitive advantages and new profit possibilities by mapping customers and/or borrowers' online behaviour.

The absence of a more critical perspective of "data-mining" and "big-data" can be explained by the fact that in this category too, the majority of studies clearly adopt the perspective of the businessman, the bank or of some other lender. The stated primary driving force for building secure e-commerce systems and creating attractively designed websites for e-commerce and information architecture is to increase this form of commerce. The negative

effects of increasing digital commerce for the consumer are not discussed to the same degree.

Marketing and consumption

The articles categorized under this heading address new online consumer behaviours in various customer groups. There is also some research on "credit card behavior", i.e., how various consumer groups manage and use credit cards. For example, Fagerstrøm and Hantula (2013) study credit card debt in college students in the United States. In their study, a group of students chose between 1) saving a substantial sum of money to buy a new, more desirable, well known brand of mobile phone, or 2) buying the phone on credit and receiving it directly in-hand, but at a high credit rate (almost 40%). The study demonstrates that students who are more accustomed to credit cards more frequently chose the latter option. However, the researchers conclude that the option to directly gain ownership of a much-awaited product was the primary driver for the students to accept credit at a very high interest rate.

Jahankhani (2009) studies how consumers manage various perceived risks in e-commerce situations, such as identity theft and so-called "phishing." The author states, however, that online consumer behaviour is still a fairly meagrely researched area which needs additional academic attention. This is also pointed out by Rahman, Rezaul & Hossain (2009), who explore how consumers' trust in e-commerce influences their online purchase and consumer behaviour. It should be emphasized that both articles were published in 2009 and therefore cannot be said to provide a precise overview of the current state of research. The results generated in the present sub-study, however, confirm their findings. Only a few articles included in the material specifically address online consumer behaviour, which may, of course, be a result of the study's limitations.

It can be noted that the results of the bibliometric study are once again confirmed. Issues such as financial difficulties linked to e-commerce or consumer or credit behaviour in digital contexts receive little attention in any of the included articles.

Law

The materials contain only two articles that can be said to deal with matters of a legal nature. One possible explanation for this is that research within this field is published through other channels than those indexed in the databases used in the study. "Law" is specified, however, as a specific subject area included within the Academic Search Complete.

In the first article (Hector, 2011) the author notes that mobile technologies and the Internet are increasingly used as tools to collect debts, and also identifies a number of problems that emerge in the wake of this development, including privacy issues and new forms of fraud. As such, the article

demonstrates the problems that may arise when law falls out of pace with technological developments in various debt issues.

The second article "To Be or Not to Be Electronic Money, That's the Question" (Schudelaro, 2003) problematizes the definition of electronic money, as defined by The European Electronic Money Directive. The focus of the study is on whether mobile phone credit can be said to constitute electronic money. Since the article was published in 2002, it is possible that this specific directive is no longer applicable; however, the issue of how electronic money should be defined continues to be of interest.

Medicine and psychology

Despite the name of this category the majority of the articles categorized under this heading address issues related to psychology. One interesting example is an article by Xiao et al. (2011), which examines the psychological processes that may explain so-called risky credit behaviour in young adults in the United States. Although, the definition of "psychological processes" is somewhat unclear, the conclusion drawn by the authors is that parental norms and socio-economic status are important factors that affect young adults' credit behaviour. It is further concluded that subjective financial literacy is a better prevention for risky credit behaviour than objective financial literacy. An additional example is demonstrated in another study that explores the relationship between cognitive ability and the ability to make deliberated decisions in one's personal finances (Agarwal & Mazumder, 2013). Not surprisingly, the conclusion is that those respondents with higher results on the cognitive tests in the study also made fewer mistakes in their personal finances.

In summary, there are few results to report in this category, and therefore it is difficult to conclude more general features.

Social work and welfare research

Only a small number of articles have been placed in this category, which means that it is difficult to describe more general features. One possible explanation for why so few articles were retrieved is that research conducted within this category is published through channels that are not indexed by the databases used in the study.

The three articles placed in this category address debt settlement or debt counselling (Xiao & Wu, 2008), credit card use among tomorrow's elderly (Apostolova & Gehrt, 2000), and how information on financial support is searched for online (Doyle 2002). Of particular interest is the article by Xiao and Wu (2008), which examines factors that influence whether a consumer completes a debt settlement or not. Their study shows that the consumer's personal attitude and intentions have great importance to the outcome of the process. A consumer with a positive attitude who intends to complete the

process does so to a greater extent than consumers with the opposite attitude. Similarly, they also find indications in the material that the debt counsellor's attitude as well as the consumer's perceived control of the situation also affects the process outcomes.

Doyle's article "Playing the Numbers: Searching for Help" is of interest from a digital research perspective. The author explores how searches for financial support in Google conform to as well as depart from authorities' and other organizations' official timelines for applications for financial support. The issue concerning the interaction between access to, and understanding of, online personal financial information and financial literacy could be developed further.

Financial literacy

The articles categorized in this section have already been mentioned in relation to the research themes discussed above. Therefore, they differ thematically, but share in common that they highlight the importance of financial literacy. Xiao's et al. study (2011) is discussed in the section headed *Medicine and Psychology*. This study examines the psychological processes that could explain so-called risky credit behaviour in young adults in the United States. One conclusion the authors draw is that so-called subjective financial knowledge, i.e., knowledge acquired through one's own experiences, is better equipped to prevent risky credit behavior than objective financial knowledge, i.e., knowledge acquired through various training programs. The article by Agarwal and Mazumder (2013) was also mentioned in the section *Medicine and Psychology*, and demonstrates the links between good mathematical knowledge and a higher degree of financial literacy. The section *Over-indebtedness* references Chlouba, Simková & Nemcova (2011). Their article presents a study of digital interactive training in financial literacy, which aims to teach consumers how to act in certain personal financial situations that may arise.

Summary of sub-study 2

With regards to the international research on the effects of digitization on consumer and credit behaviour, as represented by articles and conference proceedings indexed in the Academic Search Complete and Scopus, a number of strengths and weaknesses can be identified. Firstly, over-indebtedness appears to be a relatively well-researched phenomenon. However, there is little research on links between changing consumer behaviour in digital society and over-indebtedness and/or financial vulnerability in private individuals. Secondly, technical aspects of digital consumption and credit, such as online banking, digital management of loan applications, online payment services,

management of credit risks in e-commerce and mobile payment models and systems also appear to be well researched. However, the perspective is usually that of the businessman, bank or other lender from which follows that more critical perspectives on the impact of digitization on personal financial behaviour and management are lacking. Thirdly, legal research, research in medicine and psychology, and financial literacy do not occur to the same degree in the analysed corpus. This could partly be explained by limitations of the databases used for the search.

The results of sub-study 2 confirm the results of the bibliometric study. Research on consumer and credit behaviour and research on digital development are often conducted within different disciplines that share few points of contact. One consequence of this is that research on the opportunities created by digital technology in the credit and financial markets is not linked to personal financial difficulties. The relationship between these areas, therefore, deserves further attention from the scholarly community.

Conclusion

The purpose of this literature review is to map the current state of research on the effects of digitization on personal financial behaviour and management, with particular focus on consumer and credit behaviour. The findings from both sub-studies reveal weaknesses as well as strong areas in this field of research.

Consumer behaviour in digital society

The bibliometric as well as the systematic analysis show that technical aspects of digital consumer and credit behaviour – such as online banking, digital management of loan applications and online payment services, credit risk management in relation to e-commerce, and mobile payment models – are well researched phenomena in the international research literature. To a large extent, this research focuses on how to create systems for commerce, which technically are reliable and secure and as such encourage online shopping. In relation to this, much focus is directed to trust in the context of e-commerce. However, a broader concept of trust that also includes a consumer perspective is largely lacking (cf. Larsson & Runeson, 2014). The conclusion to be drawn from these findings is that what is currently known about the effects of digitization on consumer and credit behaviour is primarily based on the perspective of actors involved in commerce and systems development. Hence, there is a need for more research on how personal financial behaviour may change in relation to the development of mobile and digital technology.

In particular, the vulnerability of children and adolescents as digital consumers needs further attention. Young adults are repeatedly mentioned as particularly susceptible to the effects of digitization both as consumers and borrowers. This group is thus suggested to be in need of special financial training (Lusardi, Mitchell & Curto, 2010). At the same time, young adults are pointed out as being empowered as consumers due to digital technology as they are thought of as especially digitally literate (Palfrey & Gasser, 2008). Research on how children and young adults act, as digital consumers could be further developed, both with regards to the potential threats and opportunities that technological development entails for this group.

Credit behaviour in digital society

The literature review indicates that fairly extensive research has been conducted on over-indebtedness. It shows, among other things, that there are many paths that lead into this complex financial situation and that over-indebtedness both influences and is influenced by our health. However, little is yet known about how the changes related to digital society affect the conditions of our personal finances. An important exception is international research on the impact of instant loans and consumer credit on individuals and society. This stream of inquiry indicates that new online credit opportunities via the mobile phone can lead to problematic indebtedness in young adults. In particular, the risks appear to increase for individuals in this group who are already in a precarious financial situation (Autio et al., 2009). Still, instant loans and consumer credit are only a part of the digital credit and consumer ecology. Potential links between changing credit behaviour in digital society and over-indebtedness and/or problematic indebtedness in private individuals need to be more thoroughly investigated.

Suggestions for future research

The results from this literature review give rise to several ideas on how to further develop research on personal financial behaviour in digital society.

- Firstly, there is a great lack of research on the potential links between changing consumer behaviours in digital society and over-indebtedness and/or problematic indebtedness in private individuals. An interdisciplinary approach with the capacity to broadly explore this problem area from several perspectives to complement previous research is needed.

- Secondly, consumer behaviour in digital contexts, in particular, the vulnerability in children and young adults as digital consumers is a field in need of further attention from the scholarly community. Young adults are a group poised to enter adulthood with all its financial obligations and opportunities. At the same time, they find themselves in the epicentre of technological development. To explore the effects of digitization on the consumer and credit behaviour within this age group should therefore be of particular interest.

- Thirdly, financial literacy is central to contemporary credit society. More studies that also take the digital development into account and investigate the new skills required by the digital consumer in credit society is needed to further understand the conditions for personal financial behaviour in digital society.

- Finally, digitization entails a tremendous opportunity for tracing the individual and measuring large quantities of data, such as consumer behaviour, but also credit behaviour and potential, individual credit circumstances. It enables targeted advertising in ways that are more invasive than ever before. Research in the area of digital measurability that relates to over-indebtedness and consumption is predominantly concerned with how useful "Big Data" is for measuring consumer behaviour. However, to what extent this leads to increased vulnerability in the already vulnerable, for example, through "predatory lending", is an area in pressing need of research.

Practical implications

This literature review has shown that more research-based knowledge is needed on the effects of digitization on personal financial behavior. From this follows that further investigations are also required to more fully understand the role and challenges of financial counseling in digital society. Still, the findings indicate some directions that financial counseling might take in order to face their clients' digital problems.

- Firstly, an awareness of the opportunities but also the threats that young adults encounter as digital consumers could help form the advice given to this particular group.

- Secondly, consumer educators could benefit from an extended notion of financial literacy that takes into consideration the knowledge and skills required by consumers in the digital society.

- Thirdly, digital measurability makes consumers more exposed and monitored. Policy makers need to be aware of this in order to protect individual privacy through public informing and possibly legislation.

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5. Appendices

Appendix 1: Survey questions in Swedish

1. Kön (Man / Kvinna / Annat)
2. Ålder
3. Vilket är ditt civilstånd? (Singel, ensamstående / Gift / Sambo / Annat)
4. Hur bor du? (Hos föräldrar / Hos ena föräldern / Ensam / Med kompis / Med sambo, make, maka / Kollektiv / Studentkorridor / Är bostadslös / Annat)
5. I vilken typ av område bor du? (Storstad (Stockholm, Göteborg, Malmö): centralt / Storstad (Stockholm, Göteborg, Malmö): ytterområde/förort / Stad (50 000-200 000 inv.): centralt / Stad (50 000-200 000 inv.): ytterområde / Tätort (mindre än 50 000 inv.) / Mindre ort/landsbygd / Annat)
6. Högsta utbildningsnivå (Grundskola / Gymnasium / Universitet/högskola / Annan eftergymnasial utbildning / Övrigt)
7. Nuvarande sysselsättning (lönearbete / Student / Egen företagare / Arbetssökande / Arbetsmarknadsåtgärd / Annat)
8. Hur ofta använder du Internet? (I stort sett hela tiden/många gånger per dag / Några gånger om dagen / Några gånger i veckan / Någon gång då och då / Aldrig)
9. Har du internetuppkoppling hemma (som inte är mobilabonnemanget)? (Ja / Nej)
10. Använder du en smart mobiltelefon / smartphone? (Ja / Nej)
11. Har du flera smartphoneabonnemang? (Ja / Nej, bara ett / Nej, inget alls / Beror på hur man ser det:)
12. Ungefär hur mycket brukar ditt/dina mobilabonnemang kosta per månad? (0-99kr / 100-299kr / 300-499kr / 500-699kr / 700-899kr / 900kr eller mer / Det beror på..)
13. Från vilka enheter har du handlat varor på internet under de senaste tre månaderna? (Stationär dator / Bärbar dator / Surfplatta / Mobiltelefon / Tveksam, vet ej)

14. Har du någon gång under de senaste tre månaderna använt din mobiltelefon till något av följande? (Tagit emot erbjudande från en butik där du är kund / Gjort research om en vara / Tagit ett foto på en vara/prislapp i en fysisk butik / Sökt efter en närliggande butik / Gjort research om en vara när du befinner dig i en fysisk butik / Kollat lagersaldo innan du gått till en butik / Klickat på en annons/banner / Angett plats och fått information om lokala erbjudanden / Checkat in i en butik via sociala medier / Betalat en vara när du befinner dig i en fysisk butik / Använt Swish för att betala för en vara / Använt Swish för att överföra pengar till en privatperson / Inget av ovanstående / Tveksam, vet ej)

15. Hur väl stämmer följande påstående in på dig?: "Jag köper alltid mer än vad jag planerat" (Det stämmer helt / Det stämmer någorlunda / Det stämmer inte särskilt väl / Det stämmer inte alls / Vet ej)

16. Är du medlem i följande eller använder någon av följande former av kundkort? (Ja, dagligvaruhandel (exv. ICA-kort, CoopMedMera) / Ja, för bensin/drivmedel / Ja, för detaljhandel (exv. H&M Club, Åhléns klubb) / Ja, för resebolag / Ja, för annat: / Nej / Vet ej)

17. Hur ofta har du under det senaste året upplevt att du inte haft möjlighet att betala en eller flera av följande räkningar i tid? (Aldrig / En gång / Två gånger / Tre-fyra gånger / Fem eller fler gånger / Ej relevant) - [i relation till följande kategorier:] (Hyra, eller avgift till bostadsrättsförening / Ränteutgift eller amortering på bostadslån / Räkningar gällande elektricitet, vatten eller gas / Delbetalning på avbetalningsköp / Räkningar gällande fast telefoni, internet eller tv / Radio- och tv-avgift / Parkeringsböter /Betalning av underhåll till barn / Mobiltelefoni och abonnemang / Kreditkort / Snabblån / Andra räkningar)

18. Hur ofta tar du s.k. snabblån? (Aldrig / Ibland / En gång i månaden / Vet inte vad det är)

19. [Bara för de som svarat "Ibland" eller "En gång i månaden" på fråga 18]: Vad använder du snabblån till? (Du kan ange flera alternativ): (Hyra och mat / Konsumtionsvaror (t ex hemelektronik, kläder) / Avbetalning på andra lån / Telefonräkningar / Nöjen ()t ex restaurangbesök, resor / Annat:)

20. [Bara för de som svarat "Ibland" eller "En gång i månaden" på fråga 18]: Varför valde du att ta ett snabblån istället för ett traditionellt banklån? (du kan ange flera alternativ): (Jag har betalningsanmärkning(ar) och

nekas andra lån / Jag har ingen inkomst och nekas andra lån / Snabblånen är snabbare och smidigare att teckna / Annat:)

21. Vad tycker du om snabblån? Är det bra att de finns, eller är de för dyra, etc. - motivera gärna ditt svar.

22. Hur väl stämmer följande påstående in på dig?: "Jag har vänner och bekanta som kommer att hjälpa mig om jag behöver pengar": (Det stämmer helt / Det stämmer någorlund / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej)

23. Hur väl stämmer följande påstående in på dig?: "Jag har ett bra nätverk som jag kan tala med när jag har ekonomiska problem". (Det stämmer helt / Det stämmer någorlund / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej)

24. Hur väl stämmer följande påstående in på dig?: "Mina vänner känner inte till min ekonomiska situation". (Det stämmer helt / Det stämmer någorlund / Det stämmer inte speciellt bra / Det stämmer inte alls / Vet ej)

25. Har du under det senaste året tagit del av den budget- och skuldrådgivning som erbjuds av din kommun? (Ja / Nej / Nej, och vet inte vad det är/har aldrig hört talas om det)

26. Är det något ytterligare du vill tillägga eller utveckla i linje med vad vi har frågat om konsumtion och skuldsättning?

Appendix 2: On sample and implementation of survey

For this survey, so-called Cint panels have been used. This means that a large collection of individuals has agreed to be ready to respond to future surveys, for a small remuneration when they take part in it. In this project, about 30 thematically different panels have been used, meaning that members of the panels for the survey has been acquired in different ways to the panel they belong to. This system leads to that the drop-out rate is much lower than in traditional survey methods where people are randomly selected without being alerted on beforehand.

Country: **Sweden**.
Age: **18-25**.
Implementation month: December, 2015.
Dropout rate: **4.31%** This is the number of panelists that dropped out from a survey. It is calculated by dividing the number of time-outs with all panelists who started the survey.

Estimated incidence rate: **100%.** This is the initial estimate on the expected amount of people who would qualify for this survey.

Actual incidence rate: **93.9%.** This is the actual incidence rate for this target group. It is based on the current number of respondents compared to number of invites.

Respondent statistics
Latest complete: **13 Dec - 21:58**
No. of responded: **1279**
Screenouts: **65**
Timed out: **48**

Quotas on complete:
[Male] 504 of 500
[Female] 497 of 500
[18-22] 667 of 670
[23-25] 334 of 330
[Mellersta Norrland] 24 of 30
[Norra Mellansverige] 84 of 85
[Småland med öarna] 81 of 80
[Stockholm] 228 of 225
[Sydsverige] 148 of 150
[Västsverige] 210 of 205
[Östra Mellansverige] 175 of 175
[Övre Norrland] 51 of 50

Appendix 3: Statistical processing of survey questions

Recurring payment problems based in 5 or 10 bill types

We defined respondents with recurring payment problems as those who reported that they had experienced payment problems on two or more occasions in connection with at least one of the five following bill types:[19] 1. Rent or fees to their housing association; 2. Interest costs or amortization of real estate loans; 3. Electricity, water or gas bills; 4. Installment payments; 5. Bills for fixed telephony, Internet or TV. To be able to address questions on the respondents'

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[19] As discussed and motivated on pp. 15-17 and 21-22. See also figure 2.15 for bill types.

recurring problems with paying bills, we established an index based on 5 bill types as well as an index based on the first five bill types *and* the remaining 5 bill types. These additional bill types include: 6. Radio and TV fee; 7. Parking tickets; 8. Alimony; 9. Mobile phones and subscriptions, and; 10. Credit cards. The latter index, based on 10 bill types, was used as a reference point enabling a comparison to the results based on 5 bill types, further corroborating the results of how large the group of young adults with recurring payment problems are. As indicated above, there was also a risk that we could have missed a large group of respondents that have recurring payment problems with other bills than the five first selected. The analysis of the 10 bill types would reveal this.

The index itself is meant to work as an indicator of a larger phenomenon, in this case the respondents' experienced payment problems. The index is a summary measure in quantitative analysis that can be used as a sort of data reduction in order to simplify the analysis (cf Ejlertsson, 2005, pp. 92-93). The index is thereby a collected variable based on a number of indicators. We have utilised it as a means to merge the different bill types, as indicators on experienced payment problems, to a single variable of experienced payment problems. Together, they measure the latter, and the way to merge is through an index. Arguably, the individual indicators are on their own not as valid measures of recurring payment problems as when merged. The index provides enhanced validity of the data in that several indicators are used to cover more aspects of the phenomenon we study.

The index is constructed by coding the respondents' answers concerning which bills they have had problems paying during the last year into a number. ("Once" = 1, "Two times or more" = 2, and "Never/Not relevant" = 3). As an example for 5 bill types index, a respondent's answers could be represented as shown below:

> Rent: Once = 1
> Interest rates: Two times or more = 2
> Electricity bills: Never = 3
> Installment payments: Two times or more = 2
> Telephone bills: Once = 1

Following that, the mean value for the respondents' replies to how many times they have had problems paying the 5 or 10 types of bills are calculated. This is accomplished by creating a new variable where the respondent's answers are summarized and divided by 5 (or 10, respectively) and then submitted to the new variable. In the example above, we would receive the following results:

> (1+2+3+2+1)/5 = 1.8

The index spans from 0 (meaning that the respondent has not answered any of the questions, which we treat as "system missing" in our calculations) to 3 (meaning that the respondent has answered "Never/Not relevant" to all questions). Should the result for a respondent be, for example, "1.00", then that would represent a response of "Once" to all questions, while "2.00" would represent a response of "Two times or more" to all questions. However, often the results are similar to the example above. At this point, the respondents are placed in the appropriate response category ("Once", "Two times or more" and "Never/Not relevant").

In order to establish the boundaries for grouping the respondents, we need to know how the respondents are distributed in the three response categories for payment problems ("Never", "Once", "Two times or more") in relation to the 5 or 10 bill types the indexes are based on.

By conducting a standard frequency analysis of the indexes we can extract the number of respondents for each mean value. We can also find out the share of the total number of respondents that each mean value represents. Additionally, there are also cumulative percentages where the shares are summarized and rounded up to 100%. By studying the cumulative process, we see the mean value at which the respondents correspond to the mean value of each response category, in relation to the questions that the index is based in. At this point we delimit the mean values in the index which shall be assumed to belong to the response categories "Once", "Two times or more", and "Never/Not relevant." The variable is coded to indicate that the span between two mean values has now been grouped to a response category. Now, the index matches the share of respondents covered by our conceptual definition.

In order to test the reliability in relation to "recurring payment problems" of the indexes created from the 5 and 10 bill types we used Cronbach's Alpha. It provides a value between 0 and 1, where the higher the value, the higher the reliability. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group, and is considered to be a measure of scale reliability. A value of 0.700 is sufficiently reliable for an index. The value for an index of 5 bills is 0,939 and the value for an index of 10 bills is 0,967, which means a high realiability. Even if bill types would be removed from any of the indexes, it would not lose reliability, shown in Figure 5.1 and 5.2.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Hyra, eller avgift till bostadsrättsförening	4,63	7,016	,794	,932
Ränteutgift eller amortering på bostadslån	4,70	7,159	,832	,926
Räkningar gällande elektricitet, vatten eller gas	4,68	6,895	,876	,917
Delbetalning på avbetalningsköp	4,63	6,834	,819	,928
Räkningar gällande fast telefoni, internet eller tv	4,62	6,641	,862	,920

Figure 5.1.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Hyra, eller avgift till bostadsrättsförening	10,29	32,107	,791	,965
Ränteutgift eller amortering på bostadslån	10,36	32,124	,864	,963
Räkningar gällande elektricitet, vatten eller gas	10,34	31,679	,887	,962
Delbetalning på avbetalningsköp	10,29	31,601	,830	,964
Räkningar gällande fast telefoni, internet eller tv	10,28	31,169	,872	,962
Radio- och tv-avgift	10,37	32,303	,845	,963
Parkeringsböter	10,36	32,094	,856	,963
Betalning av underhåll för barn	10,39	32,332	,879	,962
Mobiltelefoni och abonnemang	10,23	31,288	,819	,964
Kreditkort	10,35	32,095	,847	,963

Figure 5.2.

However, given the definition of recurring payment problems that we use – that the respondents only needed to have recurring problems with one of the five (or

10) bills – we needed to remove duplicate answers in order to be able to distinguish unique respondents. That is, since the definition of "recurring payment problems" here relates to *at least one* of the five types of bills listed it is very likely that respondents have indicated more than one of the bill types. This means that those additional indications must be removed for us to know how many unique respondents who have experienced recurring payment problems during the past year. The important question here is really as much a statistical question as it is a theoretical, can the experienced recurring payment problems for any of the types of bills be said to speak of experienced recurring payment problems as such? Through our definition, argued for above, we take this stance.

Frequency in 5 bill types

Following the screening for duplicates, a frequency analysis was carried out in order to establish the share of respondents that fit our definition of recurring payment problems. In total, 41 respondents reported having experienced payment problems once, 185 respondents reported having experienced *recurring* payment problems and 756 respondents reported that they have never experienced any problems related to the *five types of bills*. This equals 982 unique responses, meaning that the distribution of respondents is as follows:

> Payment problems once: 41/982 = 4.17%
> Recurring payment problems: 185/982 = 18.83%
> Have never had payment problems: 756/982 = 76.98%

Frequency in 10 bill types

Once the screening for duplicates had been done, a frequency analysis was conducted of the 10 bill types in order to establish the number of respondents that fit within the definition of payment problems. We could conclude that a large majority of 86% of those who have recurring payment problems for the 10 bill types are already to be found in the group who have problems with the 5 bill types. This means that the additional bill types admittedly do add to the analysis but are still to a large majority referring to the same individuals with recurring payment problems within the 5 bill types.

There are 1,013 unique responses for the 10 bill types. 41 respondents report experiencing payment problems once, 214 respondents report having recurring payment problems two or more times, and 758 respondents report never having had payment problems with any of the bill types, which results in the following distribution of respondents:

Payment problems once: 41/1013 = 4.05%
Recurring payment problems: 214/1013 = 21.13%
Never had any payment problems: 758/1013 = 74.83%

Mean analysis

We have conducted mean analysis for all variables listed below, independent samples t-test for gender and ANOVA for the rest, which shows that all averages except for the question of residential area is significant.

Cross-table analysis and significance testing

When we perform cross-table analysis, we need to know if it is possible to generalize our observed associated with the larger population which we drew our random sample from. The Pearson Chi2 tells that all cross-table analyzes performed (except for residential areas) have shown a value of 0.001 or 0.000, i.e. a chance in a thousand or less, that we would have observed the relationship between the variables in our sample group, given that they are not found in the large population, only because chance. When the value is so low it is unlikely that the relationship we observed in our sample group only depends on chance. If it is unlikely that the values observed only because of the chance it is also possible to generalize the relationship to the population which we drew our sample group from.

As mentioned, the only cross-table analysis for which we can not rely on being reliable concerns the residential areas (in relation to payment problems for both 5 and 10 bill types). It is therefore too uncertain for us to be able to make reliable generalizations about the importance of respondents' residential areas in relation to recurring payment problems. When it comes to the strength of the relationship between two variables, we used a measure called Cramer's V, which is at an acceptable level for most of the variables and it is, again, the respondents' residential area that has a weak correlation.

Gender and recurring payment problems

A cross tabulation analysis of the respondents' recurring payment problems and gender shows that the group of recurring payment problems are more commonly represented by men than women. The results are significant (value of 0.000 = less than 1/1,000 chance of observing links between variables given that they are not present among the general population). The link between the variables is reasonably strong.

Unplanned purchases and recurring payment problems

The results are significant (value of 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) for both 5 bill types as well as 10 bill types. The relationship between the variables is reasonably strong.

Social financial safety net and recurring payment problems

The results are significant (value below 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) for both 5 bill types as well as 10 bill types and the relationship between the variables is reasonably strong.

Social network to talk to and recurring payment problems

The results are significant (value below 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) for both 5 bill types as well as 10 bill types and the relationship between the variables is reasonably strong.

Municipal budget and debt counselling and recurring payment problems

The results are significant (value below 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) for both 5 bill types as well as 10 bill types and the relationship between the variables is reasonably strong.

Payday loans and recurring payment problems

The results are significant (value below 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) for both 5 bill types as well as 10 bill types and the relationship between the variables is reasonably strong.

Mobile phone subscriptions, gender and payment problems

The analysis indicates that it is more common for those who have more than one subscription to be male (14.5%) than female (6.4%), see Figure 2.23. The results are significant (value below 0.000 = less than 1/1,000 chance of observing

links between variables given that this is not present among the general population) and the relationship between variables is reasonably strong.

Whether we analyze the five bill types or 10 bill types in relation to those who have multiple mobile subscriptions, it is clear that those with more than one subscription to a greater extent experience payment problems than those with only one or none. The results are significant (value below 0.000 = less than 1/1,000 chance of observing links between variables given that this is not present among the general population) and the relationship between variables is reasonably strong.

References

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