*Edited by*

Jeanette Carlsson Hauff · Tommy Gärling

Ted Lindblom

# Indebtedness in Early Adulthood

## Causes and Remedies

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# Preface

In Sweden several governmental reports have expressed concern that young adults are at risk of over-borrowing, in particular owing to their increased use of credit cards and unsecured instant loans at high interest for purchases of consumer products. Housing shortage driving up prices furthermore forces many young adult families into expensive mortgages.

The concerns about young adults' increasing indebtedness attracted attention from our interdisciplinary research group at the Centre for Finance (CFF) in the School of Business, Economics and Law at the University of Gothenburg,[1] and we decided to start a research program to identify the problems, their causes and remedies. The group consists of researchers from the disciplines of Accounting, Banking and Finance, Marketing, and Psychology, making feasible an appropriate interdisciplinary approach. This book reports some of the results of our efforts from 2015 to 2018. In addition, the chapters in the book review relevant international research.

We hope the readers will find that the book increases their understanding of young adults' credit use, indebtedness, and over-indebtedness as well as their interactions with lenders. We also hope that the book conveys a sense of how important the problems are and what can be done to alleviate them.

The research reported in the book was financially supported by grants to CFF from Handelsbanken Research Foundations and from the Swedish Agency for Innovation Systems (Vinnova). We thank our

collaborators in the research program and coauthors of the chapters, Viktor Elliot, Amelie Gamble, Patrik Michaelsen, and Jonas Nilsson. We also thank Richard Ahlström, Erich Kirchler, Rob Ranyard, and Greg Udell for comments, Gianni Nicolini for inviting us to participate in a cross-country study of financial literacy, Anders Carlander for co-authoring the chapter on financial literacy and debt, and Foisal Ahmed and Erik Sturén for research assistance.

Gothenburg, Sweden
January 2019

Jeanette Carlsson Hauff
Tommy Gärling
Ted Lindblom

## Note

1. The Centre for Finance (CFF) is one of three national competence centers that were established in 2011 through funding by the Swedish Governmental Agency for Innovation Systems (VINNOVA) in order to support high-quality research on financial institutions and markets with relevance to the finance industry, consumers, and society. CFF is a platform for interdisciplinary cooperation of the type required by the specific research problems. CFF's main focus is "financial intermediation" with a sub-focus on financial consumers.

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**Tommy Gärling** graduated with a Ph.D. in psychology from Stockholm University. After having held faculty positions at Umeå University, he was in 1992 appointed the endowed Professor of Psychology at the University of Gothenburg and is now Emeritus Professor of Psychology affiliated with the Centre for Finance. He is Fellow of the International Association of Applied Psychology and has conducted research in several areas of applied psychology including economic psychology, environmental psychology, and transport psychology. Young adults' borrowing is his most recent research topic.

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PART I

# Introduction to Young Adults' Indebtedness

CHAPTER 1

# Why Study Young Adults' Indebtedness?

*Jeanette Carlsson Hauff,*
*Tommy Gärling and Ted Lindblom*

## 1 Introduction

Household indebtedness is a global phenomenon that has increased dramatically since the mid-1990s (Finocchiaro, Nilsson, Nyberg, & Soultaneva, 2011). In many Western countries, indebtedness is raising to levels constituting a financial risk for individuals and a threat to financial stability (Lusardi & Tufano, 2009). In Sweden, which is the country that we focus on in this book, household indebtedness has over many years grown to become among the highest in Europe (Holmberg, 2013). Like in other countries, the growing household debt in Sweden applies to both consumer loans and housing loans (i.e., mortgages). The latter category represents a significant part of the households' total debt, implying that it constitutes a major financial risk. Heavily indebted households pose a

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major risk to the economy since they are particularly sensitive to exogenous shocks, such as interest rate hikes. Moreover, there is a large and growing academic literature that links excessive borrowing to impaired health, indicating that excessive debt is not only economic but also a social cost.

The importance of increased indebtedness in the Swedish society causes concern at government levels. Authorities and regulators, such as the Ministry of Finance, the Swedish Central Bank (the Riksbank) and the Swedish Financial Supervisory Authority (SFSA), have taken regulatory measures to reduce the increase of households' high debt reliance aimed at mitigating too high exposures to financial risk. These measures, which either have already been implemented or currently being discussed, can be divided into two different categories. The first category includes measures aimed directly at reducing debt in society including:

1. The mortgage cap implemented in 2010 where a mortgage cannot exceed a maximum loan-to-value [LTV] rate of 85% of the market value of the home.
2. Amortization requirements implemented in 2016 where the household must maintain one percent annual amortization if the LTV is more than 50%, and two percent if the LTV is more than 70%.
3. A second amortization requirement implemented in 2018 where an additional amortization of one percent must be made if the mortgage exceeds 4.5 times the household's annual income before tax.
4. A possible future cancellation of the current tax deduction on interest expenses (SFSA, 2018).

The second category includes higher capital requirements (and risk weights) for banks, stricter liquidity requirements, and financial advisory procedures. Measures in this category are primarily aimed at increasing the stability of the financial markets and reducing the risk of future financial crises. However, the measures may also cause the cost of borrowing to increase, thereby hampering sound credit growth.

This book is motivated by the fact that many borrowers are young adults, who tend to be less experienced than other borrowers owing to that they often take loans for the first time. It is widely reported by both governments and in current research that young adults are increasingly borrowing both to finance purchases of durable consumer products and buy their first home. In countries like Sweden, the indebtedness of

young adults has followed the general trend of higher debt reliance of households and, thus, increased markedly during the past decades. This may become a significant problem in the long run for individuals as well as for the society. Young adults are in many respects extra vulnerable borrowers. Previous research shows that they are generally more ignorant than older borrowers and, in many cases, have less ability to repay their loans (Kamleitner, Hoelzl, & Kirchler, 2012). The Swedish Enforcement Authority (SEA) reports that young adults are overrepresented among debtors of small loans (Swedish Government Official Reports, 2013). Moreover, compared to other age groups, they have an average higher mortgage LTV ratios and a larger share of unsecured loans (SFSA, 2013a). The overall aim of the research reported in this book is to better understand causes and consequences of young adults' borrowing, as well as to discuss the measures that need to be taken to reduce their indebtedness and possible over-indebtedness.

The book is based on our research program launched in 2015 with the purpose of studying young adults' indebtedness from three perspectives: (i) the perspective of the young adult borrowers, (ii) the perspective of financial institutions that are lenders to young adult borrowers, and (iii) the legislative perspective of regulation lending and borrowing to young adults. The complexity of the problem makes it difficult to isolate one actor or present a solution based solely on changes in one perspective. Hence, the program consists of three projects based on perspectives (i), (ii), and (iii). The first project is focused on young adult borrowers in the ages from 18 to 30 years. In the empirical studies conducted in the project, we have investigated the influences on borrowing of desires of nonessential consumption, lack of liquidity, access to consumer credit (e.g., store instalments), attitudes toward borrowing, and financial involvement and knowledge. In the second project we have investigated the relationship between financial institutions' loan information and young adults' borrowing. In the third project we have analyzed the various regulatory tools and measures, particularly emphasizing how such measures impact on young adults' borrowing. Overall, the three projects of the research program contribute insights about mechanisms that drive the indebtedness of young adults and measures that can be imposed by financial institutions and regulators to encourage more sound borrowing by young adults.

In subsequent chapters, we present and discuss findings and results from the studies in the research program. We also review existing international literature addressing the question of why households and,

particularly, young adults are at risk of increasing debt burdens and possible overindebtedness. The next section of this introductory chapter gives a background to the program and an overview of the various studies in the three projects. In the section that follows, an overview of the book and its structure is presented. A brief summary of the contents of each chapter is also provided. Finally, we discuss remaining gaps of knowledge and future research directions.

## 2 The Research Program

The research program started with a pre-study of a sample of young adult homeowners between the ages of 18 and 29 years. In a survey, the young adults exhibited a lower degree of interest in financial matters than older homeowners do, and also a lesser degree of seeking information about, for instance, mortgage rates on loans with different maturities (Skandia, 2013). We found it reasonable to assume that the young adults' behavior regarding home loans is representative for their behavior regarding consumer loans. In either loan category, the research addressing young adults' borrowing was scarce at the time of the pre-study and, hence, knowledge was lacking regarding the causes of young adults' indebtedness. We therefore considered it essential to acquire an in-depth understanding of young adults' borrowing so that adequate measures could be taken before their indebtedness increases to such levels that it turned into overindebtedness. The complexity of the problem resulted in the intention to initiate the current research program with the ambition to map and analyze causes of young adults' indebtedness, trends in their borrowing, and opportunities to ensure that their borrowing becomes more economically sustainable for both the young adults themselves and for the society.

The research program focused on both consumer loans (including unsecured instant loans) and housing loans. In the first phase of the program, we conducted two pilot studies. The first pilot study aimed at surveying young adults' actual access to and opportunities to take unsecured instant or short-term loans for consumption purposes as well as long-term secured (collateralized) loans or, in other words, mortgages for buying a home, how the marketing of these types of loans to young adults are designed and what loan terms are offered on the Swedish market. The second pilot study focused on developing and testing an instrument for measuring young adults' loan-related

knowledge and involvement to be applied in planned subsequent surveys. The starting point was previous surveys of mathematical/calculation skills and financial literacy of individuals and households (e.g., Lusardi & Tufano, 2009; see also Almenberg & Widmark, 2010, for a Swedish application) and their financial involvement (e.g., Aldlaigan & Buttle, 2001). We then started the main studies in the three projects as described next.

### *2.1 Project 1: Causes of Young Adults' Borrowing Decisions*

The focus of the first project is young adult borrowers and, more specifically, their decisions to borrow to purchases of nonessential consumer products. We broadly considered influencing factors to be aggressive marketing of loans and products, consumption desires, financial deficits, attitude toward borrowing, and financial involvement and knowledge.

In the pre-study referred to above, fear of not being able to consume in parity with their peers appeared to be the biggest source of concern among young adults (Skandia, 2013). In young adults' endeavors to satisfy their consumption desires, credit is likely to play an important role (Bernthal, Crockett, & Rose, 2005). Young adults may then owing to their inexperience borrow in ways that violate principles of sound financial behavior.

The difficulty to postpone satisfaction of consumption desires is believed to be the most important psychological reason for borrowing to nonessential consumption (Webley & Nyhus, 2008). An economic explanation is hyperbolic or present-biased temporal discounting (Laibson, 1997), that is the belief that the utility of a product purchased instantly is higher than if purchased later after money has been saved to cash payment. In the project, we instead proposed that psychological consequences of experiencing financial deficits accounts for the relationship between present-biased temporal discounting and borrowing.

Research in economics and psychology is currently underway to investigate how actual financial deficits (poverty) as well as perceived financial deficits ("scarcity mindset") affect people to act myopically (Mani, Mullainathan, Shafir, & Zhao, 2013; Shah, Mullainathan, & Shafir, 2012). Financial deficits make demands on cognitive resources, thereby reducing the ability to resist temptations. A "scarcity mindset" therefore increases the likelihood that financial problems caused by liquidity constraints in everyday life are solved by short-term loan financing.

In the project, we investigate empirically whether young adults' choices of installment payments to stores are preferred saving to purchases of desired consumer products when financial resources are insufficient. Although installment payments, as well as loans from family, are frequent means for young adults to finance purchases, we found that negative attitudes toward borrowing and financial involvement and knowledge are strong counteracting forces. We still find that attractive installment payments lead to purchases of more expensive consumer products.

### 2.2 Project 2: Effects of Information Format on Borrowing

In the second project, our focus is on the financial institutions as a financial intermediary in the interaction with young adult borrowers. Previous research shows that the level of knowledge about home loans and the consequences of debt in relation to housing purchases are generally low among borrowers, but even lower among inexperienced young adult borrowers (Kamleitner et al., 2012; Lusardi & Tufano, 2009). We therefore chose to study how information to young adults with low involvement and lack of knowledge should be designed to reduce their indebtedness. One strategy focuses on the exchange of information between individuals and financial institutions and, in short, implies that more demands are imposed on information (for a review see, e.g., Swedish Government Official Reports, 2013). In the second project, we examine empirically how different exchanges of information between financial institutions and young adult borrowers could prevent, or at least mitigate, the risk that the young adults enter into a debt trap that may lead to overindebtedness.

The interaction between borrowers and lenders has also been investigated in the SFSA's report on transparency on mortgage rates (SFSA, 2013b). In the second project, we test the effects of increased transparency of loan information with explicit focus on the pitfalls that have been identified, that is, that the transparency strategy may lead to that simplified judgmental heuristics are used by individuals with poor knowledge and low involvement. A more engaging form of information may instead counter simplifications and encourage young adult borrowers to understand the consequences of repayments of the loan. Carlsson Hauff, Carlander, Gamble, Gärling, and Holmen (2014) found that a "narrative" information format increases interest and leads to seeking more

information, especially for recipients with low knowledge. This could possibly be applied to loan information.

The question of how, and to what extent, consumers use intermediaries to increase their level of knowledge has been addressed in previous studies focused on young adult borrowers (Lee & Cho, 2005). Is the higher level of young adult borrowers' uncertainty compatible with, for instance, the observed increasingly automated sales process by financial institutions? Leaving aside the importance of personal interaction, two communication strategies for avoiding over-indebtedness are focused on in the studies in the second project: increased transparency in the exchange of information and use of narratives in the exchange of information.

Finally, we ask whether young adults are able to decode, interpret, and understand the financial information they receive. The starting point is the documented low level of financial literacy (see, e.g., Lusardi & Tufano, 2009). Research has recently provided evidence of the importance of financial literacy for retirement savings (Behrman, Mitchell, Soo, & Bravo, 2012), but also for borrowing (Campbell, 2006). In the second project we pursue this line of research further in studies of how financial literacy influences borrowing.

### 2.3 Project 3: Regulatory Actors and Their Tools

The third project focuses on the regulatory actors, their tools and objectives, as well as the potential impact these tools and objectives have on young adults' indebtedness and financial exclusion. During the initial phase of this project, the regulatory actors, their tools and the regulatory process are mapped out. Thereafter, the tools and objectives of regulators are analyzed in order to find out what measures should be taken to prevent over-indebtedness. During the later phase of the third project, studies are conducted in parallel with some of the studies in the second project to provide a broad overview of the entire loan chain, that is, the interaction between financial institutions and regulators as well as the interaction between financial institutions and the individual young adult borrower.

The regulatory measures that have been taken by Swedish authorities and regulators (see the introduction section of this chapter) are of special interest for the studies in the third project. Minor attention is paid to a possible decision to remove the tax deduction on

interest paid on loans, which is still under discussion, and also changes in tax rates as such measures lie outside the direct control of financial institutions. However, measures concerning mortgages and amortization requirements are channeled through financial institutions, which are primarily represented by banks. This suggests that banks to a certain extent can set their own requirements. For example, the Swedish Bankers' Association recommends that new loans exceeding 70% of the value of the property should be amortized over a period of 10–15 years.

The critics active in the debate have highlighted a number of negative consequences of the Swedish Bankers' Association type of recommendation or action. With regard to measures and direct actions taken by SFSA, it is submitted that these increase the risk that people, and especially young adults, will be excluded from having access to credit and mortgage loans. This is generally known as financial exclusion (see, e.g., Carbo, Gardener, & Molyneaux, 2007). There are also those who argue that SFSA's actions may lead to an inflow of "less serious" financial institutions operating on the credit markets outside the control of SFSA. These institutions can profit from those groups that are subject to financial exclusion and, thus, be closed out from the regulated credit market. As far as the indirect actions are concerned, several researchers and regulators have tried to estimate the social costs of individual regulatory measures, such as Basel III. The results are relatively unequivocal—it will cost, but not nearly as much as a new financial crisis would cost (for an overview see, e.g., Allen, Chan, Milne, & Thomas, 2012).

An argument that has been discussed to a much lesser extent is the problem that can be created if a regulatory norm is established in which certain financial institutions and consumers fit into the "regulatory template", while other institutions and consumers fall outside of it. Savings banks and cooperative banks are typical examples of banks that do not match the model (Ayadi, Schmidt, Valverde, Arbak, & Fernandez, 2009; Elliot & Cäker, 2017; Goddard & Wagner, 2012; van der Steen, 2017). Elliot and Cäker (2015), for example, show how the regulatory burden on small local banks becomes increasingly difficult to handle and that parts of the regulations are in direct contradiction to the Savings Bank Act (1987). The potential consequences of reduced diversity are many including:

- Reduced competition, when smaller financial institutions, who do not have the resources to handle the regulation, are eliminated from the market.
- New start-ups are made difficult by increasing entry barriers.
- Increased financial exclusion, as some customer groups do not fit the regulatory template.

Clearly, this creates opportunities for less serious financial institutions outside the control of SFSA to "utilize" these customer groups (e.g., for institutions offering unsecured instant loans). Another difficulty is that the number of regulations and regulatory actors has become so many at the same time as the interpretation of these complex regulations is not clear-cut, thus suggesting that a regulation can be "translated" differently by different financial institutions. Translation may then endanger the original goal of the regulation. Hence, in the studies conducted in the third project, we have tried to answer the following questions:

- How does the regulatory process work and how do the different actors influence each other?
- How does the regulation affect which customers the financial institutions' target?
- What are the overall objectives of the regulation?
- Is young adults' indebtedness a specific objective and what tools are in that case used to address this objective?
- Are young adults or any other group discriminated or particularly vulnerable in the new regulation?
- What regulatory tools are available, have they been tested in other countries and, if so, with which results?
- Are the tools used compatible or are they likely to conflict?
- What impact do the financial institutions have on the debt and financial exclusion as a consequence of the regulation?
- How does the regulation affect the cost of mortgages?

## 3 The Book's Organization—A Brief Overview

### *3.1 The Structure of the Book*

The structure of the book is presented in Fig. 1. The introductory Part I defines the concept of over-indebtedness (Chapter 2) and describes

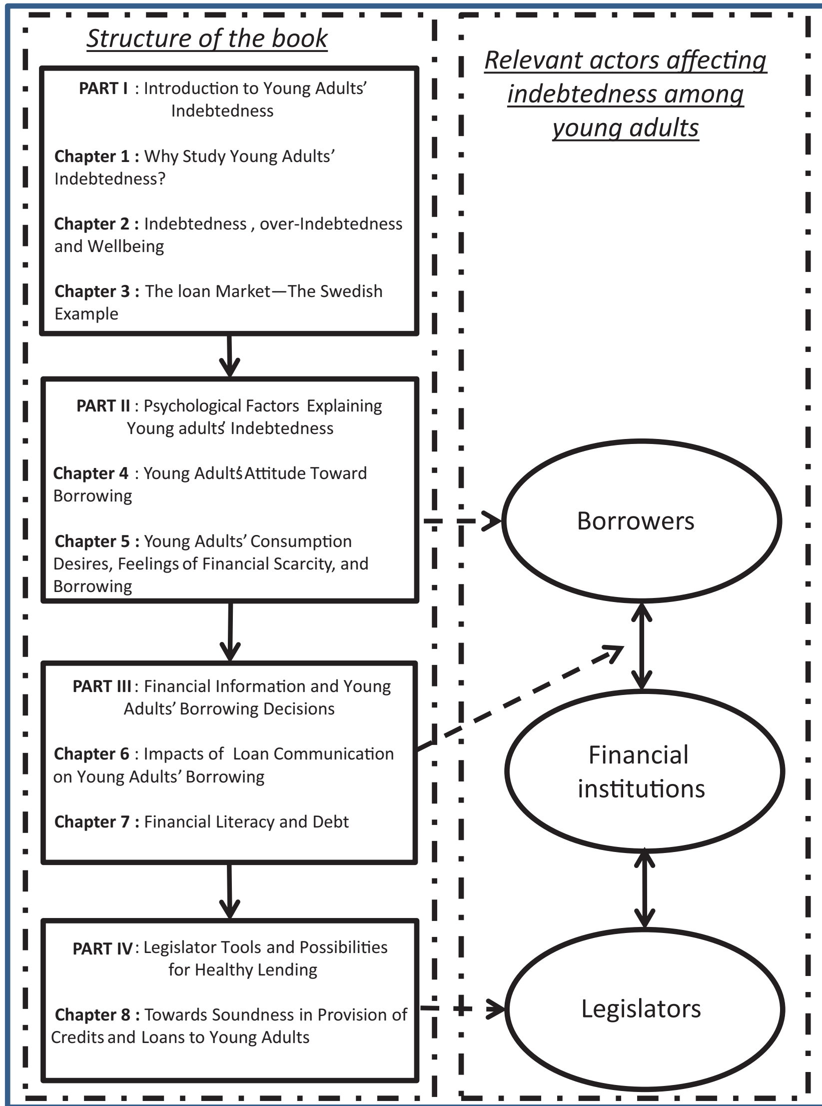


Fig. 1 The structure of the book

the Swedish loan market (Chapter 3). Part II then discusses psychological causes of over-indebtedness with a focus on the influence on young adults' attitudes toward borrowing (Chapter 4) and the relationships between consumption desires, financial deficits, and borrowing (Chapter 5). Part III emphasizes the interplay between financial institutions and individuals by investigating the importance of information disseminated (Chapter 6) and the ability to interpret this information (Chapter 7). Finally, Part IV focuses on what regulatory authorities are doing and need to be doing in order to promote soundness in the providence of credits and loans to young adults (Chapter 8).

### *3.2 Chapter Overviews*

The introductory Part I starts with an explicit focus on the concept of over-indebtedness. It is not an overstatement that over-indebtedness is a global problem with particular importance for the large group of young adults. However, to correctly interpret the magnitude of the problem, and to start elaborating on potential remedies, a clear definition of the concept is needed. This is also where the book begins: In Chapter 2 *Viktor Elliot* and *Ted Lindblom* analyze the various definitions of over-indebtedness. They elaborate on the use of three distinct definitions: (i) the administrative method consisting of administrative records used to collect data about, for instance, number of payment defaults, bankruptcies, and applications for debt restructuring; (ii) the objective method, where a debt burden is calculated based on the household's debt to asset or debt to income ratio; and (iii) the subjective method where household representatives estimate their own perceived abilities to pay their debt. Given this more nuanced picture of the concept of over-indebtedness, the authors are able to more accurately draw conclusions with respect to the implications (and societal costs) of over-indebtedness for the physical and psychological wellbeing of individuals.

In discussing over-indebtedness, importance is ascribed to the environment in which the borrowing decision is made, and the general availability of credit in this particular environment. Although descriptions and analyses of the debt problems in the book are valid for at least most Western economies, a better understanding of the Swedish context is valuable for the subsequent parts of the book. This is the motive for

reviewing the supply in the Swedish loan market, provided in Chapter 3 by *Jeanette Carlsson Hauff*, *Ted Lindblom*, and *Jonas Nilsson*. In their description of the Swedish loan market, with dramatic increases in outstanding loans, a booming housing market, and a plethora of readily available consumer loans, they identify a number of issues, believed to be particularly problematic for the group of young adults. At all being able to enter the housing market is one such concern, effectively pushing young adults to borrow money, and exposing young adults to the aggressive marketing of unsecured instant loans at high interest is another concern. The chapter not only describes the environment in which Swedish young adults make their borrowing decisions, it also enables a discussion of legislative ways to tackle macro-problems such as housing bubbles or high debt ratios. The Swedish legislation has implied a strong focus on macro-prudential initiatives, something that the authors discuss specifically in relation to young adults.

Part II of the book focuses on psychological determinants of young adults' indebtedness. One factor is attitude toward borrowing that if favorable may push young adults into indebtedness. In Chapter 4 *Amelie Gamble*, *Tommy Gärling*, and *Patrik Michaelson* review international research showing that young adults' attitudes toward borrowing are favorable. A recent trend is still that attitudes are becoming less favorable. Furthermore, a positive correlation between attitudes and debt is frequently observed. The examination of the literature also raises questions, such as the nature of causality between attitude and borrowing, what determines attitude toward borrowing, and how to adequately measure attitude toward borrowing. All these concerns are discussed by the authors. In addition, they present some of their results from the research program addressing the measurement question. The authors show that evaluations of utilitarian, moral, and social influence beliefs are unidimensional and positively correlated with a positive–negative evaluation of borrowing. The results further demonstrate that attitude toward borrowing needs to be measured at the same specificity level to yield a correlation with a particular type of borrowing, or at a general level to yield a correlation with the frequency of any type of borrowing.

In the following Chapter 5, *Amelie Gamble*, *Tommy Gärling*, and *Patrik Michaelson* now focus on young adults' consumption desires as a driver of borrowing to purchases of consumer products that improve their material lifestyle. It is argued that if financial deficits are experienced, consumption desires have a strong impact on young adults'

decisions to borrow due to increased attention to present benefits and downplayed attention to future repayments. It is recognized that international research both support and not support this argument. The authors' own studies in the research program provide only weak support for the hypothesized effect of financial deficits on young adults' borrowing to purchases of desired consumer products, most likely counteracted by strong influences of a negative attitude toward borrowing and financial involvement and knowledge. If instalment payments are a common payment mode among young adults, another argument is that a low borrowing awareness reduces the effects of a negative attitude and financial involvement and knowledge. Support is reported in the authors' own studies, showing that combining instalment payments with a discount on cash prices increases spending on consumer products.

The interplay between the financial institution and the individual is the focus of Part III of the book. Acknowledging that financial information plays an important role in this interaction, in Chapter 6 *Jonas Nilsson* and *Jeanette Carlsson Hauff* examine the impact of communication on decisions to borrow. Given that the level of involvement among young borrowers generally is low, ~~clearly becomes problematic:~~ any communication requiring cognitive effort is likely to be less effective. Content and presentation format of the lending information that would increase cognitive effort has not been the focus of many studies. The authors show that a common difficulty for young adult borrowers is to interpret the consequences of a home purchase for monthly payments and the personal economy. They further show that by changing the common fact-based format of information to "narrative", that is, telling a story about a protagonist with which the receiver can identify, positive effects are observed on young adults' borrowing decisions.

In Chapter 7 *Anders Carlander* and *Jeanette Carlsson Hauff* focus on the relationship between financial literacy and borrowing decisions. They review previous international research that has developed standardized measures of financial literacy. Building on this previous research demonstrating, for example, the importance of objective, or fact-based, financial literacy for credit card acquisitions and that subjective financial literacy counteracts risky credit behavior, the authors then use their own data from the research program to assess the impact of both fact-based and subjective financial literacy on several debt-related behaviors. The results show that financial literacy plays a small but significant role even after controlling for gender, age, and education. The authors also report that

young adults score lower than other age groups on tests of fact-based financial literacy.

The book's final Part IV consists of Chapter 8 in which *Viktor Elliot* and *Ted Lindblom* describe, examine, and discuss policy measures adopted by regulatory authorities in the EU and particularly in Sweden to reduce over-indebtedness among young adults. The macro-economic perspective is here imposed on the micro-economic perspective in the other parts of the book. Special attention is paid to what measures are needed to implement in order to accomplish greater soundness in young adults' borrowing without young adults being squeezed out from the loan market. Just as over-indebtedness can result in financial inclusion of those concerned, too restrictive loan regulations can result in undesired displacement of otherwise qualified borrowers and, thus, financial exclusion.

## 4 Concluding Remarks

The review of international research and our own studies have identified several gaps in knowledge. In these concluding remarks, we summarize those gaps of knowledge that motivate additional research.

In Chapter 2, the focus is on how to accurately identify, define, and measure over-indebtedness of individuals and households, in general, and what impact such indebtedness is reported to have on their wellbeing. According to prior literature reviewed in the chapter, research conducted about the cause and effect between over-indebtedness and wellbeing generally concerns age groups other than young adults. This seems to be explained partly by the fact that over-indebtedness of young adults is either more difficult to determine or less common in practice, and partly because there is a strong relationship between how long time an individual has been over-indebted and the arising of negative effects on the wellbeing of the individual. The latter implies that many over-indebted young adults get older and become part of another age group before it is possible to discern whether their wellbeing is affected. This suggests adoption of a longitudinal study approach for disclosing eventual wellbeing effects. An avenue for future research is then to make a distinction between *active* or *passive* over-indebtedness. The literature review suggests that the impact of wellbeing depends on whether it is one or the other. Active over-indebtedness is explained by excessive borrowing without any changes in resources, whereas passive over-indebtedness is the result of an unforeseen change in the level of resources/or

expenditure due to an "accident" of life (such as unemployment, separation, illness, etc.). Previous studies have suggested that there is a negative relationship between over-indebtedness and health. However, based on our literature review, we suggest that this relationship exists primarily under conditions of active over-indebtedness. Hence, a hypothesis to test in future research is the following: *Active but not necessarily passive over-indebtedness among individuals has a negative impact on wellbeing.*

If instead the identified over-indebtedness is passive and, thus, caused by an unforeseen change, there are considerable arguments in favor of a more complex relationship. In particular, we can expect that certain types of unforeseen changes, such as illness (i.e., the young adult needs to pay for special medical procedures, which cures the illness but forces her or him into over-indebtedness) and/or separation (i.e., prior to, and during the separation she or he may feel bad, have to buy new accommodation, and feel better once the separation is complete) may have a cyclical recursive relationship. Hence, when it comes to passive over-indebtedness, we propose that future research test two hypotheses: *Poor health has a positive impact on passive over-indebtedness among individuals*, and *Passive over-indebtedness among individuals has a positive impact on wellbeing.*

Chapter 4 reviews a large number of studies that have investigated attitudes. Attitude was historically natural to study because it was assumed to have a close relationship to behavior and was more tractable to measure than behavior. However, the relationship to behavior turned out to not be straight-forward. Since this seems not to have been appropriately recognized in the research on attitudes toward debt (the most frequent attitude object), there is a need for research that more carefully takes into account what is currently known about how to measure attitudes. Chapter 4 provides several guidelines including the definition of the attitude object (loan, debt or borrowing), the level of specificity relative to the behavior measure, and the importance of maintaining the distinction between opinions (beliefs) and evaluations.

Despite the many studies that have investigated attitudes, its role in the affective/cognitive pre-decisional process leading to a decision to borrow has only been specified in a few of these studies. In Chapter 5, we argue that a negative attitude toward borrowing (what we consider the appropriate attitude object) acts as a heuristic or simplified decision to not borrow. Alternatively, a negative attitude may activate financial knowledge, either through an extended search for loan information or retrieval from memory by those who already possess this information.

A positive attitude conversely facilitates the influence of consumption desires favoring immediate credit purchases. In our research it has primarily been possible to investigate the influences of attitudes that are negative. A more stringent test of the proposed role of attitude would be to investigate decisions to borrow in more temptation contexts, for instance internet shopping that nudges consumers to make credit purchases of desired consumer products.[1] Another context that we have investigated (see above and Chapter 5), but still deserves more attention, is that instalment payments (of, e.g., smartphones) or leasing (of, e.g., cars) become as accepted as awareness of borrowing is eliminated or reduced. A negative attitude toward borrowing has then no influence.

Other gaps of knowledge are related to the individual as a decision maker, who is lacking the necessary information-processing abilities. We find, as previous studies have found, that both the interpretation of financial information and the assessment of the consequences of a financial decision are difficult. As discussed in Chapter 6, the view of an imperfect information-processor emphasizes the need for the study of alternative impacting factors, such as for instance the format of presented information (as e.g., a narrative format as tested in the chapter), and norms and recommendation (such as lender recommendations regarding proper amount to borrow). These two impacting factors, together with several other factors, deserve more attention in future research.

In Chapter 7, we also find, as would be expected, that financial literacy has an impact on several measures related to indebtedness. Still another suggestion for future research is to extend the research to study the extreme groups of young adults who are worst at information processing and lowest in financial literacy. Analyses of these extreme groups would contribute further information as to how useful our suggested remedies are for the most vulnerable.

Finally, in Chapter 8, we find that regulators' efforts to slow down the pace of increasing indebtedness in society is foremost driven by the objective of strengthening the stability of the financial system. There is a growing concern for how to design measures that will promote greater soundness in banks' and other financial institutions' lending to young adult borrowers as well as in non-financial business firms' extension of credits to young adults. However, academic research is yet at an early phase and there is demand for more explorative research on how to promote soundness in the providence of credits and loans to young adults.

## Note

1. See the extensive research started by Thaler and Sunstein (2008) prescribing that nudges should be used to influence people to make their preferred or sensible choice, for instance, by making this choice a "smart" default (Johnson et al., 2012; Smith, Goldstein, & Johnson, 2013).

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CHAPTER 2

# Indebtedness, Over-Indebtedness and Wellbeing

*Viktor Elliot and Ted Lindblom*

## 1 Introduction

The indebtedness and possible over-indebtedness of households have attracted attention for a long time in academic research and in society at large. Many studies and authorities report increasing indebtedness among the average household during the past decades in most Western countries (e.g., BIS, 2007; D'Alessio & Iezzi, 2013; Disney, Bridges, & Gathergood, 2008). In the aftermath of the global financial crisis, this phenomenon and its related problems seem to have spread elsewhere, especially to the emerging market economies (Lombardi, Mohanty, & Shim, 2017). Before the financial crisis, studies document a substantial increase in the ratio of household debt to disposable income in Western countries, like the UK. Disney et al. (2008) report that in the six years prior to the crisis (i.e., between 2002 and 2008), British households' secured loan debts to post-tax income increased by nearly

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50%—from around 80% to almost 120%. Statistics also disclose a similar pattern for household indebtedness in Sweden, which is the country of focus in this book. According to an extensive overview made by Bank for International Settlements (BIS, 2016), the debt ratio of Swedish households does in fact belong to the highest in the world. The major part of household indebtedness in Sweden is in the form of secured (collateralized) loans such as mortgage loans (i.e., mortgages). The indebtedness and possible over-indebtedness of young adults are more likely to be in the form of unsecured (non-collateralized) debt in various types of consumer credits, such as card credits, leasing and payday loans.

The current knowledge of indebtedness and over-indebtedness of young adults and the implications for their physical and psychological wellbeing is suggestive at best (Shim, Xiao, Barber, & Lyons, 2009). On the one hand, it is widely documented that there is a relationship between debt reliance and wellbeing (see, e.g., the meta-analysis conducted by Richardson, Elliott, & Roberts, 2013). There is also evidence that young adults rely on debt, as illustrated by Brown, Grigsby, van der Klaauw, Wen, and Zafar (2015), which show that young adults in the US are indeed heavily debt reliant. On the other hand, young individuals' excessive debt reliance seems to go well in hand with Franco Modigliani's well-known life cycle hypothesis suggesting that young adults should be expected to be more indebted relative to their income (Modigliani, 1966). Hence, high debt ratios of young adults do not necessarily mean that they are over-indebted in that 'young families expect their future income to grow and spend more than they earn, thus accumulating debts that they will repay when they are more mature' (D'Alessio & Iezzi, 2013: 3). The crux of the matter is how to define over-indebtedness.[1] According to Betti, Dourmashkin, Rossi, and Ping Yin (2007: 138), '[t]here is currently no general agreement on the appropriate definition of consumer over-indebtedness, on how to measure it or on where to draw the line between normal and over-indebtedness'. This task is far from trivial and, accordingly, Schicks (2013) concludes that there was still no unanimous definition of the concept at the time of her study. In the literature, the following three types of operationalization are commonly used in order to measure and assess the impact of over-indebtedness of individuals and households (see, e.g., Betti et al., 2007; Ferrira, 2000):

1. The *objective approach*, where the debt burden is calculated based on the individual's or household's debt to asset or debt-to-income ratio.

2. The *subjective approach*, which allows individuals or household representatives to estimate their own perceived abilities to pay their debt.
3. The *administrative approach* in which administrative records are used to collect data about, for example, number of payment defaults, bankruptcies, applications for debt restructuring, etc.

In this chapter, we summarize current research on indebtedness and over-indebtedness with especial emphasis on efforts and attempts to derive a more precise and applicable definition of the concept of over-indebtedness. With a more nuanced definition of the concept that can be operationalized in practice, one can make more accurate estimations of the societal costs of over-indebtedness. Particularly important, it makes it possible also to conduct more in-depth studies about the implications of indebtedness and over-indebtedness for the physical and psychological wellbeing of young adults. Relying on the distinction between active and passive over-indebtedness (e.g., Gloukoviezoff, 2007; Ramsay, 2003; Sullivan, Warren, & Westbrook, 2000; Vandone, 2009), we argue that the causality between indebtedness, over-indebtedness and health is not necessarily unilateral.

The chapter is organized as follows. In Sect. 2, we provide a brief literature overview of the increasing debt reliance and over-indebtedness of individuals and households. We also describe and discuss a selection of the various definitions and measurements of over-indebtedness and how these are linked to related concepts, such as financial literacy and financial exclusion. In Sect. 3, we present some descriptive statistics of indebtedness and over-indebtedness in Europe. As several studies indicate that institutional differences matter for the scope and face of over-indebtedness (see, e.g., Raijas, Lehtinen, & Leskinen, 2010; Ramsay, 2012), we zoom in on Sweden at the end of the section. Section 4 then concludes the chapter with a summary and discussion on implications for the studies conducted within the research program.

## 2 A Brief Literature Overview

Household over-indebtedness started to attract attention in the late 1980s (Ramsay, 2012). Since then, household debt in the US has tripled (Harvey, 2010), and similar trends are identifiable across the world (see Krumer-Nevo, Gorodzeisky, & Saar-Heiman, 2017, for an

overview). There seems to be consensus on that the widely observed increasing debt reliance of households can be driven by various factors. According to Johansson and Persson (2007), it is useful to distinguish between two factors, which they believe have played a fundamental role for why the average household has taken on more debt over the past decades. The first factor is related to greater accessibility for consumers to financial markets after the financial deregulations back in the 1980s. The deregulation wave more or less erased existing lending constraints that until then had hampered household borrowing. The second factor brought forward by the authors is the (ever) falling lending rates. The lending rates have in fact continued to fall in the 2010s to historically low levels in both nominal and real terms. In our recent comparison of the development of Swedish banks' mortgage lending and funding rates from 2000 to 2016 (Elliot & Lindblom, 2017), we find that the offered lending rates by the banks were gradually reduced over the time period. After temporary recoil, caused by the financial crisis, the offered rates on mortgage loans with different maturities were in January 2016 down to approximately only one-third of the corresponding rates offered at the beginning of the Millennium.

Anderloni and Vandone (2008) offer a more comprehensive dichotomy by dividing the plethora of causes of the increasing indebtedness into *macro*- and *micro*-level reasons. The former includes general societal trends such as increasing credit supply, labor market structure, household inequality, or housing costs. The latter micro-level reasons include excessive credit usage, favorable credit attitudes, financial illiteracy and various life process events (such as illness or divorce). According to Krumer-Nevo et al. (2017), these two perspectives could be viewed as fundamentally different in the sense that macro-level reasons stress the defective social structures, whereas the micro-level reasons set focus on irresponsible individual behavior and ignorance. The authors argue for a midway explanation, where it is the interaction between personal and systemic hardship that forms the principal cause of what they define as over-indebtedness.

Under the midway framework suggested by Krumer-Nevo et al. (2017), physical and mental health issues are indeed described as a cause for over-indebtedness (see Caputo, 2012). However, it is equally common to view such problems as an effect of identified over-indebtedness (cf., Ahlström & Edström, 2014; Larsson, Svensson, & Carlsson, 2016; Sweet, Nandi, Adam, & McDade, 2013). Larsson et al. (2016)

refer to studies that have shown that observed over-indebtedness may cause an increase in smoking, back-pain and obesity. Sweet et al. (2013) find a strong relationship between what they classify as over-indebtedness among young adults in the US and psychological distress, such as higher perceived stress and depression, worse self-reported general health, and higher diastolic blood pressure. To make matters worse, Kalousova and Burgard (2013) attract attention to the fact that individuals with high levels of debt are also less likely to afford suitable health-care. Moreover, in a recent study conducted for the Swedish Consumer Agency (SCA), Ahlström and Edström (2014: 10) note that over-indebted individuals 'displayed a significantly higher incidence of both suicidal thoughts and attempted suicide, compared with the general population (e.g., 17.6% have attempted to take their own lives, compared with 3.6%, which translates to an incidence almost five times as high)'.

What then is being done about the problem of too high indebtedness? In general, there are two levels of institutional interventions: (i) various public policy measures and (ii) measure where the individual debtor is the target. Policy measures, such as credit market regulation, early identification and prevention, are further discussed in the final Chapter 8 of this book. The individual measures include both motivational and reactive measures.

The motivational measures encompass, for instance, financial literacy aspects and other awareness-raising incentives (see Sect. 2.3 below). The main reactive measures are various forms of either public or private financial advice/counseling and debt reconstruction through negotiations with credit companies (Larsson et al., 2016; Stamp, 2012). Studies investigating the impact of such financial advice generally find that debtors are positive (Orton, 2009; Pleasence & Balmer, 2007; Stamp, 2012). A recent European Commission report (EC, 2013: 13) concludes that 'interviewees tended to report positive outcomes as a result of seeking advice or taking measures to alleviate their difficulties, supporting the finding that most consumers find the experience of over-indebtedness distressing, want to repay their debts, and if they are unable to, want to find an equitable solution to their debt problems'.

In sum, since the 1980 over-indebtedness among individuals and households has attracted increasing attention from both policy-setters and academics, but we still have much to learn about the reasons for over-indebtedness, the implications of over-indebtedness and not least

what to do about it. One area, which is still under debate, is how to actually define and measure over-indebtedness. We will discuss and elaborate on this below.

### *2.1 Definitions of Over-Indebtedness*

To define over-indebtedness, it makes sense to start in the concept of household debt and the household's ability to pay off debt (Krumer-Nevo et al., 2017). The latter is of course vital. The average household's higher indebtedness, in terms of widely reported increasing debt ratios, may seem to imply that a larger proportion of households have become over-indebted. However, average numbers based on aggregate data can often be misleading. Disney et al. (2008: 11) assert that the concept of over-indebtedness 'should certainly not be confused with the existence of high levels of debt in the economy'. Households differ in economic/financial strength and, as Johansson and Persson (2007: 235) point out, the definitions of household tend to vary between surveys since: '[a] household can either be defined as two adults living together (or one adult living alone) with children below the age of 18, or, basically, as the individuals living under one roof'. Referring to the "return-to-scale effect" of living together when it comes to living expenses, the authors clarify that study results will be different depending on the applied definition by giving the following example: 'a 20 year-old male living with his parents may look financially constrained, until one takes into account that his parents are paying for at least some of his running costs' (ibid.: 236).

Clearly, the actual debt reliance of households is likely to be unevenly distributed between different types of households with respect to their capacity and capability to manage instalment and interest payments on their debt. This suggests that one should adopt a balance sheet perspective. The balance sheet perspective implies that we need to consider both the size of household debts ($D$), and the size or, more accurately, the market value of their financial, real as well as intellectual assets ($MV_A$). In principle, these assets' market value is equal to current cash holdings ($CF_0$), that is, their cash flow at time 0, and the present value ($PV$) of expected future net inflow of cash ($E(CF_t)$) in each period $t$. These expected cash flows will primarily consist of net wage income (after living expenses), dividends and capital gains.[2] If $MV_A > D$, the household has a positive net wealth. Hence, if efficient financial markets are accessible

at negligible costs, the individual household (or young adult) would be able to manage its debt in accordance with the life cycle hypothesis as long as the market value of its assets exceeds outstanding debts.[3] However, a positive net wealth of a household does not rule out the possibility that it is over-indebted.

From an economic perspective, over-indebtedness arises when a marginal increase in a household's debt decreases its expected utility or, in other words, when debts exceed the optimal debt level. This theoretical definition falls within the objective approach, but the theoretical model can hardly be operationalized in practice without major modifications and adjustments—if even then. The expected utility of individuals and households is difficult to measure.[4] Moreover, given available data, it is more or less impossible to forecast expected future net cash flows of existing and potential assets with some degree of accuracy, let alone to determine the relevant discount rate(s) of these flows. Adding to the complexity, in real life there are both assets and debts of different types with respect to, for example, time to maturity and varying levels of sensitivity to unexpected events or altered conditions. Nevertheless, the model provides a useful illustration of important relationships and can help us to better understand the nature of the concept of over-indebtedness from an economic perspective. The intuition of this simple theoretical set-up implies that at some degree of indebtedness, the financial risk-taking of a household will be too high and result in a lowered expected ability to pay off its debt. Consequently, there will be a more pronounced risk that the asset side of the balance sheet will not match outstanding debts on the liability side.

Adopting *the objective approach*, Kempson, McKay, and Willitts (2004) divide household debt into two separate concepts. Debt can refer to "normal" debt (also called consumer debt), or it can refer to households that are "in debt", i.e., that have fallen behind on payments and/or household bills. Normal debt includes the essential debts for maintaining an economic balance and smooth consumption over a life cycle, such as mortgage loans, car loans and deferred credit card payments (see also Yoon, 2009). These debts are normalized and held by the majority of the population in most countries. As will be deliberated on in Sect. 3.2, Swedish households are among the most frequent users of these types of debt. However, historically Swedish households have been reluctant to use credit facilities for consumption purposes, but in recent years there has been a quick expansion also in consumer credits (Riksbank, 2017).

As implied by its name, *the subjective approach* leaves to the individuals or households them-selves to define over-indebtedness as they 'are the best judges of their own net debt/wealth position' (Betti et al., 2007: 144). Such a definition is of course barely operational as it may vary substantially between different people on what is believed to be too heavy debt reliance. Furthermore, it is likely that some households have better and others poorer financial understanding. In combination with the objective and/or administrative approach, however, it may make sense to also take into account the view of debtholders to better understand and assess implications and/or possible causes of over-indebtedness (see, e.g., D'Alessio & Iezzi, 2013).

Under *the administrative approach*, over-indebtedness is regarded as an identified personal debt problem or realized problem debt. As such, it includes one or more financial commitments that an individual or a household has been unable to meet. Empirical research documents that over-indebtedness is often a result of credit card debts that are not paid on time. Anderloni and Vandone (2008) note that over-indebtedness includes the inability to pay routine bills (such as taxes, living expenses, or rent) on time. In search for a common operational definition of over-indebtedness, Davydoff et al. (2008) review administrative definitions and measurements of the concept adopted at EU level and in Member States. This review was contracted by the European Commission (EC) and part of a comprehensive assessment of over-indebtedness in Europe. In a subsequent report five years later, which was also contracted by EC, an operational definition of household over-indebtedness is provided in accordance with the administrative approach as follows: 'households are considered over-indebted if they are having—on an on-going basis—difficulties meeting (or falling behind with) their commitments, whether these relate to servicing secured or unsecured borrowing or to payment of rent, utility or other household bills. This may be indicated by, for example, credit arrears, credit defaults, utility/rent arrears or the use of administrative procedures such as consumer insolvency proceedings' (EC, 2013: 21).

While the authors of the report withhold that time may have come to abandon the attempts to further define over-indebtedness, they stress the importance of focusing on tackling the problems related to over-indebtedness. However, the problem of not having agreed upon a definition of the concept materializes when trying to measure the magnitude and economic consequences of over-indebtedness. This is perhaps best

illustrated by two recent Swedish governmental reports, which have tried to put a dollar amount on the societal costs of over-indebtedness. In the first report, the Swedish Enforcement Authority (SEA) relied on a broad definition of over-indebtedness. They estimated that 400,000 people in Sweden at the specific time point were over-indebted at a societal cost of SEK 30–50 billion (SEA, 2008). Only a few years later, the Swedish National Audit Office (SNAO) implemented a narrower definition of over-indebtedness and concluded that approximately 30,000 people in Sweden were then over-indebted at an estimated societal cost of just under SEK 10 billion (SNAO, 2015). This shows that the definition can have a large impact, especially in light of the policy attention and types of interventions that these different estimates could entail. In order to approach a definition of over-indebtedness that can be operationalized in practice, it is useful to discuss two constructs that are closely related to over-indebtedness but are usually treated separately; *financial exclusion* and *financial literacy*.

## *2.2 The Relationship Between Over-Indebtedness and Financial Exclusion*

Over-indebtedness and financial exclusion are generally treated as two rather different concepts, and as such, different research streams. However, as illustrated by Gloukoviezoff (2007), there is a strong link between the two and for the single individual or household there may be a very thin line between being excluded from the financial market (i.e., turned down by the bank or another financial intermediary) and ending up in severe indebtedness.

Financial exclusion is commonly defined as 'those processes that serve to prevent certain social groups and individuals from gaining access to the financial system' (Leyshon & Thrift, 1995: 314). According to Koku (2015: 655), financial exclusion can be divided into five different forms:

- (i) Access exclusion: the restriction of access through the processes of risk management.
- (ii) Condition exclusion: where the conditions attached to financial products make them inappropriate for the needs of some people.
- (iii) Price exclusion: where some people can only gain access to financial products at prices they cannot afford.
- (iv) Marketing exclusion: whereby some people are effectively excluded by targeting marketing and sales.

(v) Self-exclusion: people may decide that there is little point applying for a formal financial product because they believe they would be refused.

The link between financial exclusion and over-indebtedness can be described through these different forms as follows. Consider a borrower that approaches a bank but is denied a loan because she or he is considered too risky (*access and price exclusion*). The borrower still has a need and is, thus, referred to another financial institution, which can be a shadow bank actor with less favorable terms. Not unlikely, the borrower is a young adult that makes purchases by utilizing card credit loans or unsecured instant loans with comparably much higher interest rates than the lending rates on conventional bank loans. Even if the initial debt amounts are often small, as interest rates accumulate, the borrower finds it harder and harder to pay back the debt and, finally, ends up in over-indebtedness. Similarly, responsible lenders may not offer the types of financial products that sensitive borrowers need (*condition and marketing exclusion*). Finally, the borrower may think that she or he will be denied by the bank and, hence, decide to utilize other lenders, with less favorable terms, instead (*self-exclusion*).

In essence, growing outstanding debts can lead to financial exclusion from the traditional banking sector, which forces the borrower to seek help from the nontraditional shadow bank sector and move further into indebtedness problems. The initial small debts can lead to a rapid spiral of additional debts and a loss of hope of ever becoming financially balanced. This makes the borrower end up in severe over-indebtedness, which may finally lead to financial exclusion.

### 2.3 The Relationship Between Over-Indebtedness and Financial Literacy

Several studies investigate the role of financial literacy and knowledge in mitigating over-indebtedness (see Chapters 5–7 of this volume). The basic idea is that if we can educate people to make better financial decisions, they would be less prone to end up in severe financial problems. However, Walker (2012) argues that this idea places too much responsibility on the single individual. Frade (2012) follows a similar line of argument and withholds that severe indebtedness problems cannot simply be resulting from lack of knowledge, but rather that we must account

for structural factors (such as the financial crisis and the demand side of credit as discussed in Chapter 8 of this volume). Rueger, Schneider, Zier, Letzel, and Muenster (2011) add further complexity by acknowledging individual factors such as changes in economic situation following, for instance, illness or divorce.

### 2.4 Measuring Over-Indebtedness in Practice—An Illustration

From the literature reviewed in this chapter, we recognize that it is a very real challenge in practice to accurately identify, measure and determine over-indebtedness of individuals and/or households. As we have already stated, our rather straightforward theoretical model, based on ordinary discounting techniques, cannot be directly applied to determine at what level of indebtedness an individual or a household has borrowed too much and, thus, is to be classified as over-indebted. Given the many dimensions/aspects of individuals' and households' excessive debt reliance, and the obvious uncertainty embedded in estimations of future cash flows, such a model could at best indicate over-indebtedness or the risk thereof. Based on their literature review and analysis of the most commonly applied models and approaches to measure over-indebtedness, D'Alessio and Iezzi (2013) arrive at the conclusion that a definition of the concept that can be operationalized in practice must be multidimensional. They find that recent literature seems to agree upon a "common set of indicators", which can be used to assess over-indebtedness. At the same time, they cannot find that the literature converges on which indicator is to be regarded as superior when it comes to capturing the actual over-indebtedness of an individual or a household. For different reasons, like lack of access to valid and reliable information, uncertainty and asymmetric information, each indicator has its pros and cons. Hence, they adopt a multi-indicator approach reflecting four aspects of household over-indebtedness: The household (i) makes high debt repayments in relation to disposable income, (ii) is in arrears, (iii) relies too heavily on debts, and (iv) perceives debt as a burden in daily life.

In the remaining of this section, we briefly present the measurement model adopted by D'Alessio and Iezzi (2013) to illustrate a systematic and well-founded multi-indicator approach on how the four aspects can be operationalized in practice to assess and measure over-indebtedness of households. In this model, each of the last three aspects is supposed to be captured by using only one indicator, respectively. The second aspect

falls under the administrative approach. The authors use an indicator by which they seek to identify "structural arrears" related to failed repayments of secured loans, such as mortgages, and unsecured consumer loans including bills with over two months overdue. The third aspect is covered with an indicator by which too heavily debt-reliant households can be distinguished. In accordance with Kempson (2002), who distinguishes a high correlation between individuals' debt problems, such as being in arrears, and their number of loan engagements when adopting the UK Department of Trade and Industry (DTI) "Task Force on Tackling Over-Indebtedness", D'Alessio and Iezzi (2013) classify a household as over-indebted, in their main analysis, if the household has at least four loans.[5] Due to lack of information, the fourth (subjective) aspect—a household's subjective perception of burdensome debt in daily life—could not be directly captured by the authors with a specific indicator. Instead they use households' answer on a question whether the monthly income was considered as sufficient for "making ends meet" as a benchmark for assessing such an indicator. Households that answered they managed to make ends meet "with difficulty" or "with great difficulty" were then classified as perceiving their indebtedness burdensome and, thus, over-indebted.

The first aspect of household over-indebtedness—the extent to which a household makes high debt repayments ($P$) in relation to disposable income ($Y$)—the authors cannot capture by just one indicator ($I_P$). Hence, they use three different indicators to assess this aspect, which sorts under the objective approach. The debt (repayment)-to-income ratio ($I_P = P/Y$) is then chosen as one indicator. In their main analysis, the authors use a threshold of 30% debt repayment of disposable income to single out possible over-indebtedness.[6] Because of the heterogeneity of households, with respect to levels of income and wealth, the debt repayment-to-income indicator is in turn separated into three sub-indicators in the analysis. The second indicator used to cover part of the first aspect could be referred to as a "below the poverty line" indebt indicator. The authors use this indicator to classify an indebted household as over-indebted if the poverty line exceeds disposable income after debt repayments. Finally, the first aspect is also partly assessed with what may be called an unsecured debt repayment indicator. In their main analysis, the authors identify households that use over 25% of their income for repaying unsecured debts. In addition to their main analysis, the authors

conduct sensitivity analyses in which alternative thresholds are used for the various indicators.

The division of the debt repayment-to-income indicator ($I_P$) into three sub-indicators to more accurately assess whether a household is making too high debt repayments, in relation to disposable income, is being motivated by the fact that for some households, like high-income households, a 30% threshold on this indicator would barely have any impact on their way of living. Accordingly, wealthier households may easily manage high debt repayments by resorting to their savings or selling some of their other financial short-term and/or long-term assets. The first sub-indicator ($I_{P1}$) takes into account that a household can possess short-term financial assets ($A_F$), which it may use to partly or fully payoff outstanding debt ($D$). In the latter case, $I_{P1}$ will equal zero. In the former case, the selling of a financial asset will generally ease the burden of debt repayment implying that $I_{P1}$ is less than $I_P$. The reverse is highly unlikely and would require that the selling of the financial asset leads to a substantial income loss ($Y_{AF}$) in relation to its sales value ($A_F$). Just as selling a financial asset can be used to reduce debt, the income forgone will be deducted from the disposable income. The following formula applies:

$$I_{P1} = \frac{\max(0, D - A_F)}{D} \times \frac{P}{\left(Y - Y_{A_F}\right)}.$$

The other sub-indicators take into account that a household may also have real assets that may be sold. The second sub-indicator ($I_{P2}$) differs from $I_{P1}$ in that it also includes long-term fixed assets other than homes ($A_R$). As such assets may generate income $Y_{AR}$, the following formula applies:

$$I_{P2} = \frac{\max(0, D - A_F - A_R)}{D} \times \frac{P}{\left(Y - Y_{A_F} - Y_{A_R}\right)}.$$

There may also be a possibility for a household that owns a home to sell it for its net market value ($A_H$). The third sub-indicator ($I_{P3}$) takes this possibility—if existing—into account. In the unlikely case, this will lead to foregone income, any income foregone is included in $Y_{AR}$. Hence, the third sub-indicator ($I_{P3}$) is determined accordingly with the following formula:

$$I_{P3} = \frac{\max(0, D - A_F - A_R - A_H)}{D} \times \frac{P}{\left(Y - Y_{A_F} - Y_{A_R}\right)}.$$

In the normal case, $I_P > I_{P1} > I_{P2} > I_{P3}$. Given the same household disposable income $\Upsilon$, the same threshold may be used to capture the impact on the individual household whether or not it possesses any kind of sellable assets. To accurately compare the true impact on households with low and high income would suggest the use of different thresholds.

In their analysis, D'Alessio and Iezzi (2013) found that there was little overlap between the five nonsubjective indicators adopted (i.e., not taking into account the natural overlap between the debt repayment-to-income ratio indicator's three sub-indicators). Only one out of four households that were classified as over-indebted by one of these five indicators was classified as over-indebted by at least two indicators. In that respect, the indicators seem to be complementary rather than substitutes. However, the authors report that even when the indicators are joined together, they did far from completely coincide with the households' perceptions of having financial difficulties. Kept separately, most of the indicators poorly matched households' perceptions. A household that was classified as over-indebted according to the first indicator did only match every second time with the household's answer that it perceived it as difficult or very difficult to make ends meet each month. A corresponding classification by the second arrears indicator did only match every fifth time. The apparently low concordance between the indicators and benchmark adopted led D'Alessio and Iezzi (2013: 18) to conclude that 'it is worth critically assessing both the existence of alternative indicators and the use of different cut points from those commonly used'.

When testing different thresholds for the various indicators, the authors detect that the "below the poverty line" indebt indicator is the indicator most in line with the households' perceptions of having financial difficulties. Not taking the poverty indicator into account, the third sub-indicator ($I_{P3}$) and the unsecured repayment debt indicator with a 15% cut point are shown to best fit with households' perceptions. Although there is far from "full concordance" between the adopted indicators and households' perceptions, which possibly could be explained by the fact that the households' answers are just being used as a benchmark indicating their perceptions of financial difficulties, the multi-indicator approach seems still reasonable to use to operationalize the

concept of over-indebtedness for assessing and measuring it in practice. In comparison to the theoretical net present value (NPV) based model, the multi-indicator approach can take into account the market value of (financial and real) assets currently possessed by an indebted individual and/or household (i.e., assets "in place"). The market values of neither intellectual assets nor expected investments in future assets are captured. However, provided there are no dramatic changes in wages and asset holdings in the future, the multi-indicator approach appears to have great potential to capture individuals' or households' over-indebtedness if combined with accurate measurements of perceptions of financial difficulties. In case of young adults' possible over-indebtedness, however, dramatic changes of wages and future asset holdings make more or less a prerequisite for the life cycle hypothesis. This suggests that also the multi-indicator approach adopted by D'Alessio and Iezzi (2013) needs to be modified in order to assess and measure possible over-indebtedness of young adults.

## 3 Indebtedness and Over-Indebtedness in Numbers

This part of the chapter uses the discussion from previous sections in order to illustrate the changing face of household indebtedness and possible over-indebtedness. We do so primarily from a European perspective by presenting some descriptive statistics of the European situation with special attention to Sweden.

### *3.1 Descriptive Statistics of European Households*

As noted in the introduction, the world has seen ever-increasing consumer indebtedness-levels since the deregulations of the financial markets in the 1980s. Betti et al. (2007) note that this led to increasing concern among economic analysts and policy makers about negative consequences thereof. Accordingly, many developed countries are since long collecting and publishing data on indebtedness and consumer credit on a regular basis. Relying on such data, Betti et al. (2007) adopted the subjective approach to measure over-indebtedness in their survey of EU Member States in 1996. They document extensive variation between these countries when it comes to household consumer debts (not accounting for mortgages). At the high end, as much as 30–48% of the average households were found to have consumer debts in Denmark, the

UK, Luxembourg, France, Ireland and Finland. At the other low end, the corresponding debt of the average households in Italy, Greece and Portugal was estimated to be between 8 and 13% only. Hence, in the remaining countries, the comparative statistic shows average household consumer debts in the range between 13 and 30%. At the same time, the reported levels of over-indebtedness (as a percentage of total households) ranged from 11% in Italy to 49% in Greece. This shows that over-indebtedness was indeed a significant problem also back in the mid-1990s. An interesting result is that over-indebtedness seems to be more severe in countries where credit is more restricted.

Even though Betti et al. (2007) offer extensive support for the use of subjective measures of over-indebtedness, government agencies generally tend to rely on the administrative approach. In particular, arrears (i.e., money that is owed and should have been paid earlier) are commonly used. Jumping ahead to 2011, EU-SILC survey data shows that across the EU area 11.4% of those surveyed had been in arrears with payments over the previous 12 months on rent/mortgage, utility bills and/or hire-purchase/loan agreements due to financial difficulties (EC, 2013).

Despite the time gap of 15 years between the two surveys and that they rely on different measures, the results are quite similar in terms of what countries have a high (low) tendency toward over-indebtedness, with Italy being an exception. The EC report shows that the majority of Member States have experienced a growing level of arrears during the surveyed time period between 2005 and 2011. The increase in arrears is particularly pronounced after the financial crisis.

It is submitted by the EC (2013) report that there is a general agreement among different stakeholders in most Member States that debt-related problems of households had continued to escalate during the past five years. In Germany, just below half of the households (49%) reported that they were over-indebted and/or found it significantly more difficult to meet their financial commitments compared to five years earlier. However, it should also be noted that one of four of the German households (23%) stated that their debt-related problems had increased only moderately.

It does not appear as if household over-indebtedness is concentrated and only applies to a particular social group. Clearly, the risk of entering into financial difficulties that may lead to over-indebtedness is very high in low income households with one or more unemployed persons. This is particularly true for young adult households with children, irrespective

if they are tenants living in a rental apartment or have bought their own home partly financed by mortgages. However, other income categories are also affected. Almost every second stakeholder acknowledged a significantly worsened situation in the past five year. Here, middle income households and homeowners with mortgages are reported to be among those that experienced an increasing level of financial problems.

The most frequently reported reason for entering into high indebtedness and financial problems by consumers and other stakeholders interviewed were increasing living costs caused by higher utility costs, housing costs, daycare costs and other general living costs including food and transportation.

Figure 1 shows that the percentage of identified arrears for the average household in Europe has been slightly decreasing over more recent years, but it remains still at around 10%. This means that across Europe, one in ten households is consistently in arrears with payments on rent/mortgages, utility bills and/or hire-purchase/loan agreements.

As shown in Fig. 1, the statistics concerning the average household in the EU hide significant variation among Member States and do therefore only give an indication of the size of the problem. While the documented levels of arrears in Germany, Sweden and the UK are

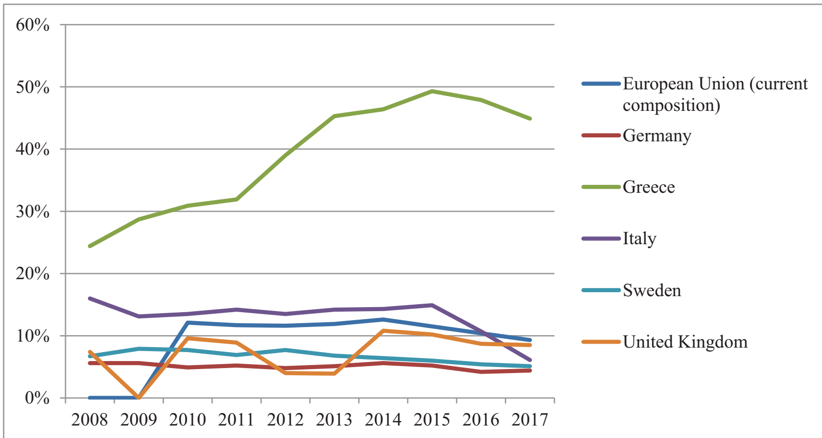


**Fig. 1** Arrears on key commitments (mortgage or rent, utility bills or hire-purchase) in the EU (2008–2017)

below the average EU-level, the reported levels of arrears in particularly Greece and, until 2015, also Italy are substantially higher. The situation in Greece is exceptional and a reflection of the many years of serious financial difficulties at an aggregate country level. Figure 1 displays that the level of arrears in Italy was, on average, not so far below the one in Greece at the beginning of the period.

According to D'Alessio and Iezzi (2013: 2), the indebtedness of households in Italy began to reach worrisome levels at the of the global financial crisis: 'for many years the significant increase in household debt did not give rise to concern for several reasons: the initial level of household indebtedness was particularly low by international standards; the increase recorded in recent years has only filled part of the gap; the growth in indebtedness has been seen as reflecting the reduction in both nominal and real interest rates as a consequence of the increase in competitiveness in financial markets, which has reduced the cost of debt and the cases of credit constraints'. The authors acknowledge that the Italian government imposed a new consumer bankruptcy law, because of the harsh economic conditions in Italy that followed the crisis.

As described in Sect. 2.4, D'Alessio and Iezzi (2013) adopted a multi-indicator approach in their attempt to increase our general knowledge of how to accurately measure (Italian) household over-indebtedness and financial difficulties and, moreover, examine what household categories are likely to enter into financing problems caused by over-indebtedness. In so doing, they used detailed data from the Italian Survey on Household Income and Wealth (SHIW) conducted in 2010 on Italian households' income, debts and financial and real assets in place, as well as on these households' wellbeing and perceived financial difficulties reflected by the constructed subjective benchmark. Starting in 1965, this survey is with some exceptions made every second year by the Bank of Italy. Information is gathered on the financial status and behavior of approximately 8000 Italian households. Thus, SHIW covers other data beyond income, debt and financial and real assets of the households, like their demographics and their consumption and savings behavior. According to SHIW 2010, 3.1% of the Italian households exhibited a debt (repayment)-to-income ratio ($I_{\mathrm{P}}$) greater than 30%. Also taking into account the households' financial and real assets, the correspondent percentage was only 1.1% measured by the third sub-indicator ($I_{\mathrm{P3}}$).

Using the "below the poverty line" indebt indicator, the authors identified about six percent of the households as poor. Each of the remaining

three indicators classified the households as over-indebted by around or less than one percent. Considering the indicators' overlapping, 8.2% of the Italian households were identified as over-indebted by at least one of the adopted indicators. In aggregate, about 3.5 times as many, or nearly 30% of all households, perceived that they were struggling to make ends meet every month with difficulty or great difficulty. Broken down on age groups, young adults (≤30 years old) were the ones experiencing financial problems to the greatest extent (37.3%). However, almost three of four households (74.8%) with the lowest income (1st quintile) perceived financial difficulties. This implies that relatively large numbers of the households regard themselves as over-indebted without this being captured by any of the indicators used.

As already commented upon in Sect. 2.4, there were also many households that did not perceive themselves to have financial difficulties, in terms of managing to make ends meet every month with difficulty or great difficulty, despite being identified as over-indebted by one or more indicators. This suggests possible financial exclusion and that many households with very low income were not regarded as qualified to get any loans. With no loans, these households are rarely identified as over-indebted by commonly adopted indicators.

Table 1 shows arrears for different types of households in the EU from 2010 to 2017. It is quite clear that households with dependent children are overrepresented among the high level of arrears. At the same time, arrears in the EU seem to be decreasing in all types of households.

In fact, while it is relatively accepted in the academic literature that unsecured credit is positively associated with the likelihood of arrears, it has been much more difficult to establish a relationship between levels

**Table 1** Arrears for different types of households in the EU from 2010 to 2017

| *Household characteristics* | *2010* | *2011* | *2012* | *2013* | *2014* | *2015* | *2016* | *2017* |
|---|---|---|---|---|---|---|---|---|
| Single person | 8.7 | 8.7 | 8.1 | 8.6 | 9.2 | 8.7 | 8.3 | 7.5 |
| One adult younger than 65 years | 11.5 | 11.6 | 10.6 | 11.3 | 12.4 | 11.6 | 11.1 | 9.9 |
| One adult 65 years or over | 4.6 | 4.6 | 4.5 | 4.9 | 4.8 | 4.7 | 4.5 | 4.3 |
| Single person w. dep. children | 23.1 | 22.7 | 20.5 | 19.8 | 25.4 | 22.7 | 20.8 | 17.1 |
| Households w.o. dep. children | 8.0 | 7.9 | 7.8 | 8.2 | 8.6 | 8.2 | 7.6 | 6.9 |
| Households w. dep. children | 16.0 | 15.3 | 15.5 | 15.6 | 16.6 | 15.0 | 13.2 | 11.8 |
| Total | 12.1 | 11.7 | 11.6 | 11.9 | 12.6 | 11.5 | 10.4 | 9.3 |

of mortgages and levels of arrears (EC, 2013). There are two competing explanations for the relationship between unsecured consumer credit and arrears: either higher levels of such credit put households in a riskier financial position, or households with lower income are more likely to take on unsecured consumer credits in order to pay arrears on housing and/or utility.

As is discussed next, the apparent low relationship between mortgages and arrears levels may, on the one hand, be positive for Swedish households as the vast majority of household debt in Sweden constitutes of secured loans (i.e., mortgages). On the other hand, and as noted earlier, unsecured consumer credit has been growing quickly in Sweden in recent years making Swedish households more exposed to future potential over-indebtedness.

### *3.2 Estimations of Societal Costs and Wellbeing Related to Over-Indebtedness in Sweden*

The two earlier mentioned governmental reports (see the end of Sect. 2.2), which were conducted on the behalf of the SEA and the Swedish National Debt Office (SNDO), respectively, are examples among a small collection of attempts made by Swedish authorities to estimate societal costs associated with individuals' and households' over-indebtedness defined according to the administrative approach. The divergent outcomes of the estimations, ranging from SEK 10 billion up to as much as SEK 50 billion per year, demonstrate how difficult it is to make consistent estimates of such costs in the real world. However, even if SEK 10 billion/year represents only a 20% fraction of SEK 50 billion/year, apparently it still represents a huge societal cost anyhow. That it also represents considerable mental stress and negative wellbeing among those identified as over-indebted is even more indisputable.[7]

In their study on the health effect of individuals' over-indebtedness conducted on behalf of the Swedish Consumer Agency (SCA), Ahlström and Edström (2014) find that over-indebted individuals are feeling significantly less well (and even "dramatically worse") with regard to their psychological and emotional wellbeing as well as physiological condition than those who are not. The longer time they have been over-indebted, the worse they feel. The authors could not distinguish any negative relationship between over-indebtedness and wellbeing among those who had just become over-indebted. They conclude that: '[t]his shows that

over-indebtedness is a complex phenomenon that cannot be explained on the basis of a few variables and that it needs to be studied over time in order to shine light on the effect of over-indebtedness and on the underlying mechanisms' (ibid.: 11). As previously mentioned in Sect. 2.1, they observe that some over-indebted individuals could even become suicidal. This is when they face penalties in the form of fines and find the situation hopeless as they are unable to see how they can ever get back on their feet again. In particular, women were found to have a greater tendency to enter such mode of thoughts after being approached by debt recovery agencies for recovery of debts.

In a related study, also conducted for SCA, Ahlström, Edström and Savemark (2014) investigate the degree of socioeconomic, physical and mental rehabilitation of a subset of individuals that underwent debt restructuring between 2003 and 2008 in accordance with the then existing Debt Clearance Act (SFS 1994:334).[8] Based on their survey conducted in 2011, the authors report that more than half of the participants in their sample (which was about 13% of the total population of individuals that started to be subject to debt restructuring in 2003) had been over-indebted more than ten years. On the one hand, a majority stated that the support provided by the municipality's budget and debt counseling service had significantly affected their self-confidence positively (76%) and, in addition, created order in their economic situation (72%), made it possible for them to be able to move on (42%) and even feel better (46%). On the other hand, almost all stated that their over-indebtedness had negatively affected their wellbeing and more than half acknowledged that the strained economic conditions they had been exposed to and lived under for a very long time had also negatively impacted on their family relationships. Three years after being debt-free, some of them even felt worse than when they were over-indebted. Every second participant did not have a job and every fifth was divorced. These results make the authors question whether the debt restructuring had contributed to any rehabilitation at all. The debt restructuring was considered initiated and carried out far too late.

In reality, only a fraction of those individuals that are defined as over-indebted according to the administrative approach are undergoing debt restructuring and most of them are 55 years old or older (Ahlström, 2015; de Toro, 2016). Using statistics from SEA, de Toro (2016) states that approximately a quarter of a million people in Sweden are over-indebted for a longer time than five years. This means that they have one

or more arrears registered at SEA, which they have not been able to settle in five years or even longer. In general, arrears are first tried to be recovered by the original creditors, who otherwise engage a debt recovery company to do this for a fee. If being unsuccessful, the debt recovery company often turns to SEA at which the debtor and the amount of arrears are registered. For this, SEA charges a fee. As the fee will be recovered only if the debtor finally becomes able to settle the arrears, the debt recovery company is reluctant to turn to SEA when the debtor is short of assets and regarded as insolvent. This implies that the number of arrears registered at SEA is an underestimation of all outstanding arrears. However, even if the arrears withhold by debt recover companies represent over-indebtedness, the arrears registered at SEA are not necessarily underestimating the total number of over-indebted individuals. It is probably the opposite. One should bear in mind that all arrears at SEA do not represent over-indebtedness according to the administrative approach (and most probably not any of the two other (objective and subjective) approaches either. Many registered arrears are on relatively small amounts and are settled by the debtor. However, the registered arrears at SEA can still provide an indication of how over-indebtedness in Sweden develops over time.

Just recently, SEA started publishing official records of private individuals' average indebtedness-levels in Sweden. Data are available from 2015 to 2017. The data shows that in 2015, almost 428,000 people in Sweden had an arrear remark at the SEA, with aggregated debts of around €7 billion. This suggests an average debt of approximately SEK 170,000. In 2016, there were around 423,000, also with €7 billion in aggregated debt, and in 2017 there were less than 418,000 but with an aggregated debt of almost €8 billion suggesting an increased average debt to almost SEK 180,000. (The median debt was less than SEK 55,000.) Thus, while the number of individuals reported to SEA has been decreasing, their debt levels have on average increased. Based on these data, Fig. 2 shows the percentage of individuals in each age category.

Young adults are seldom subject to debt restructuring in accordance with Swedish law, but as shown in Fig. 2 also young adults can sometimes have difficulties to meet obligations associated with credit and loan commitments. Clearly, the arrears of young adults (18–25 years) are neither as many nor as sizable as the arrears of other age groups. At the other side of the spectrum, those individuals that are older than 65 years

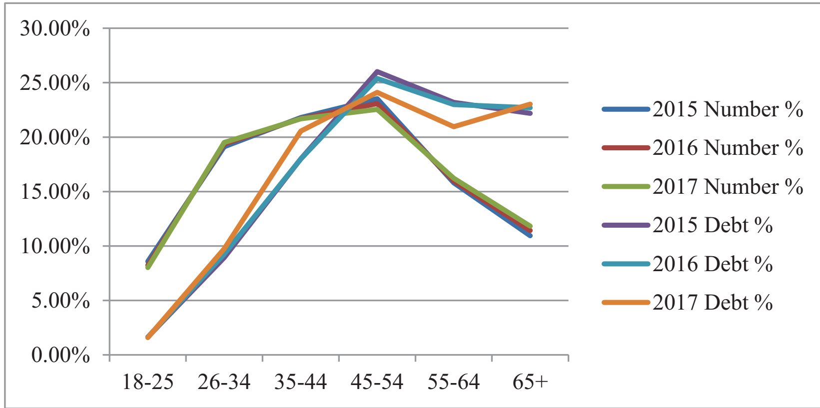


**Fig. 2** Arrears registered at the Swedish Enforcement Authority 2015–2017

are shown to have almost as few arrears, but the size of their debt represents a significantly larger portion of total outstanding debt.

Further analysis of this data (not shown in Fig. 2) discloses that the distribution between the different age groups remains more or less the same for women and men. Women between 35 and 54 years tend to have a relatively larger portion of the registered total arrears of women in comparison to the correspondent portion of men in the same age group, whereas older men (65+ years) seem to have a relatively greater share of registered arrears than women in that age. Making a direct comparison between men and women, men represented about two-thirds of the population of registered arrears at SEA in all age groups. In each age group, men are also overrepresented when it comes to the debt size of the arrears. Men accounted for 71–80% of total registered arrears debt.

## 4 Concluding Remarks

Our brief review of academic literature and public government reports in the EU about household indebtedness and possible over-indebtedness, lays a foundation for our research project described in Chapter 1 and in the remainder of the book. The magnitude of the increasing indebtedness of households is manifested and it is also clear that there is limited knowledge about the indebtedness and possible over-indebtedness of young adults, let alone about reasons behind and effects of

their excessive debt reliance. The review further clarifies the complexity and many dimensions to consider when assessing and measuring possible over-indebtedness. It is indeed far from trivial to derive a definition of the concept of over-indebtedness that can be easily operationalized in practice and, thus, applicable for identifying over-indebted individuals and households, in general, and young adults, in particular. The typical debt-reliant young adult does not possess sizable assets, but she or he could be expected to have positive net wealth when adopting a theoretical definition. This is in accordance with the life cycle hypothesis, which anticipates increasing disposable income over time for most young adults also in practice. The problem is that some indebted young adults are more exposed to the risk of being trapped and enter into severe financial difficulties. These individuals would be hard to detect even if it were possible to accurately define the concept of over-indebtedness in practice. Some may not be identified as over-indebted at all. In the studies conducted within our research project, we have therefore focused our attention on psychological aspects, and as stated in Chapter 1, with an emphasis on 'mechanisms that drive the indebtedness of young adults and measures that can be imposed by financial institutions and regulators to encourage more sound borrowing by young adults'.

## Notes

1. https://ec.europa.eu/info/sites/info/files/final-report-on-over-indebtedness-of-european-households-synthesis-of-fin-dings_december2013_en.pdf.
2. Assuming that expected future cash flows for an asset $j$ occur at the end of each period, and a relevant (risk-weighted) discount rate $r_j$, $PV_j = \sum_{t=1}^{T} E\left(CF_{j,t}\right)\left(1 + r_j\right)^{-t}$ for this asset. Hence, $MV_{\mathrm{A}} = CF_0 + \sum_{j=1}^{J} PV_j$.
3. Betti et al. (2007) demonstrate and explain this analytically adopting an economic theoretical framework.
4. Attempts have been made to develop a theoretical model that take uncertainty into account and also covers the (subjective) view and judgement of those indebted. It is more or less inevitable that such a model will be complex. For further discussions and elaborations about difficulties in operationalizing the concept of over-indebtedness, see Betti et al. (2007) and D'Alessio and Iezzi (2013).

5. The authors acknowledge that this threshold of number of loans may not be of relevance any longer considering the increasing availability of various debt products.
6. A cut point of 30% is commonly used. As referred to by D'Alessio and Iezzi (2013) and Oxera (2004) sets 50% as the cut point whereafter debt repayments are becoming burdensome.
7. Ahlström (2015) estimates the total costs to more than SEK 200 billion on an annual basis after also taking into account costs such as health care, production loss, unemployment compensation, long-term sick leave and disability pension.
8. In 2006 and 2016, the Act was replaced with the Debt Clearance Acts: SFS 2006: 548 and, the present, SFS 2016: 675, respectively.

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CHAPTER 3

# The Loan Market—The Swedish Example

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## 1 Introduction

We will in subsequent chapters of this book discuss the possible causes of young adults' indebtedness, demonstrating the importance of both internal psychological factors and external factors such as, for instance, communication. Part of the problem with young adults' indebtedness also stems from the supply of financial means. Availability of credit and loans is a prerequisite for development of economies over time and also of individual adjustment of consumption over consecutive periods. Hence, the accessibility to credit and loan providers fills a fundamental and critical purpose in contemporary societies. However, increased availability and accessibility of financial means, together with a sometimes strikingly aggressive way of marketing different types of credits and loans may

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act as a temptation, hard to resist for the consumer and consequently a source of both individual and societal problems.

In this chapter, we take a closer look at the market of a few different types of credits and loans relevant to young adults, and we also describe the efforts taken by authorities to curb the effects of a booming housing market. Knowing that the structure and legal framework of credit and loan markets often differ between countries, we start with a brief explanation of the Swedish institutional framework in Sect. 2. Our focus is here on loans, housing market and financial services, in general. In the following Sect. 3, we then provide a somewhat more detailed description of the mortgage market, the market for instalments (i.e., where consumption of goods such as, e.g., electronics is facilitated at the point of purchase), and the market for what we refer to as "instant credit", usually high-interest unsecured loans that are easily accessible (in the US referred to as payday loans since repayment is required next payday). The intention here is not to provide a thorough analysis of each submarket, but to provide a brief introduction for the reader not familiar with the Swedish setting. Thereafter, Sect. 4 presents a quantitative assessment of the levels of indebtedness for a few important types of loans, both in Sweden and in a number of other countries. This comparative section enables an assessment of the level of urgency for changes of the Swedish markets. It also answers the question of whether the recent development of the Swedish loan market is a unique example or if it merely follows an international trend. Finally, we compare indebtedness of Swedish young adults to the population of borrowers in Sect. 5. Section 6 concludes the chapter.

The aim of this chapter is twofold. First, the background information provided opens up for a more detailed discussion to follow in subsequent chapters. Second, our description of the Swedish setting and the efforts taken by Swedish authorities may serve as not only a description of a financial environment, but as a closer look at one way to tackle current societal challenges. The Swedish example, with a booming housing market and strong macro-prudential initiatives, could be seen almost as a stylized example of a legislative way to tackle problems associated with a potential housing bubble and high debt ratios.

## 2 The Swedish Financial Environment

Sweden and the other Nordic countries were not among the worst sufferers of the global financial crisis at the end of the first decade of the new millennium. Sweden and the Swedish economy suffered far more by

the banking crisis in 1992, when the Swedish real estate market crashed after many years of rocketing prices (see, e.g., Lindblom, 1993). Several of the Swedish major banks had for many years been lending aggressively to real estate firms and, consequently, ended up with a highly concentrated loan portfolio towards the real estate sector. Some of the banks had to be bailed out by the Swedish state through the Bank Support Authority (in the general debate referred to as "Bankakuten", i.e., the "Bank Emergency" in English), which was established in 1993 after a Parliament decision at the end of 1992. Because of this and other prompt actions enforced by Swedish authorities and the Government, the Swedish banking industry recovered after some years. Without the intervention by particularly the Swedish Central Bank (the Riksbank), the damage of the 1992 banking crisis would most probably have been much worse. Utilizing experiences from the 1990s, the Riksbank intervened also when facing the recent global crisis by taking measures to prevent the financial market from collapsing and ensuring stability in the financial system. Molin (2009: 133) explains that: '[t]hese measures fall broadly into three main categories: *general measures to improve liquidity*, *liquidity support to individual institutions* and *loan facilities for neighbouring countries*'.

The banking industry as well as the overall Swedish economy managed fairly well in the aftermath of the recent global crisis. Besides the Riksbank's measures, there are also other plausible reasons for this positive post-crisis development. One likely reason is that Sweden has kept its floating currency policy ever since it was implemented in connection to the banking crisis in the autumn of 1992. The floating currency policy functioned like a cushion against the sharp downturn of demand in 2008–2009. Another probable reason is, of course, the stable state of the Swedish economy combined with a fiscal surplus when entering the crisis. For many years thereafter, the Swedish financial environment has been considered strong by the general public. However, as commented upon in Chapter 2, there are concerns about the ever-increasing debt reliance of Swedish households. The clouds that are now showing up in the horizon are to a certain extent darkening the bright skies for both the Swedish economy and the Swedish banking market.

Focusing on the banking market, there are three main categories of operating banks complying under Swedish bank regulation: commercial banks, savings banks and co-operative banks. Four of the commercial banks are dominating the domestic retail (household) market. These banks, frequently referred to as the "big four", have a combined market

share of about 80%. Just as Swedish banks, in general, the big four have experienced a positive development during the past decade in terms of increased profitability, strengthened equity base and, thereby, lowered exposure to financial risk. At the same time, the Swedish financial market has undergone a rather dramatic change over this period. Many new actors, primarily niche actors, have entered the market. This has led to increased competition when it comes to supply of credits and loans to households and, thereby, also to young adults.

We will dwell more into the household debt in subsequent sections, but before that, we will briefly describe the development of the housing market in Sweden over the past ten years. The Swedish housing market has presented some alarming imbalances, including double digit price increases on real estate. Accordingly, the level of household debt has escalated from already high levels a decade ago. In fact, house prices began to climb already in the mid-1990s as the Swedish economy and the banking industry recovered. Since then, prices have continued to rise steadily. Focusing on the largest metropolitan area of Stockholm, prices are up some 450% since 1994, while the price levels in the next largest areas of Göteborg and Malmö are not being too far behind with an average increase of some 380% over the period (Naess-Schmidt, Bjarke Jensen, Heeböll, & Sörensen, 2017). Drivers of this rather dramatic surge in housing prices may be found in the depressed price level directly after the 1992s banking crisis in Sweden, abolition of the market-based taxation of real estate at the beginning of 2008, a continued urbanization and, since the global financial crisis, also an expansionary monetary policy. This development has naturally been a cause of worry, with international observers such as the International Monetary Fund (IMF) pointing at the risk of a potential housing bubble that may burst, and Swedish legislators acting in order to curb the surge of house prices. We will have a closer look at the battery of macro-prudential initiatives that has been introduced lately. Not only do these initiatives have a marked impact on the Swedish average borrower but they also tell a uniform story of the magnitude of risks and legislative concern regarding the housing market in Sweden. Our consumer focus implies that we primarily include the asset-based measures (such as lending restrictions) and leave aside the regulations of overall risk in the financial institutions (such as the implementation of Basel III, an international regulatory framework developed by the Basel Committee on Banking Supervision).

As mentioned in Chapter 2, a loan-to-value (LTV) requirement of 85% of the market value of the house for mortgages (i.e., secured loans) was implemented already in 2010 with the explicit purpose of enforcing a mandatory down-payment. The imposed LTV requirement implied that the remainder, that is, 15% of the property had to be financed by either savings or another, unsecured loan, with often a substantially higher interest rate. This LTV requirement was followed by an amortization requirement implemented in 2016, where households were obliged to amortize 2% of their loans if the LTV was above 70%, and 1% if the LTV was above 50%. More recently, in 2018, a stricter amortization requirement has been introduced that forces households with a debt-to-income (DTI) ratio over 4.5 to amortize an additional one percent. The two latter amortization requirements have had the effect that Swedish households now pay off debt to a higher extent. According to the Swedish Financial Supervisory Authority (SFSA), the percentage of household amortizing increased sharply already after the first amortization requirement introduced in 2016, with the percentage of young adult households (with on average higher LTV and DTI ratios) amortizing as high as 92% (SFSA, 2018a).

## 3 The Swedish Loan Market

### *3.1 Mortgage Loans*

Secured loans in the form of mortgages constitute by far the largest subset of the total loan market in Sweden accounting for approximately 82% of the total outstanding debt in the country (SFSA, 2018a). As reviewed above, the prices of houses in Sweden has been rising steadily for some 20 years, having as one consequence an increasing amount of outstanding mortgage loans. For the individual, the rise in mortgage loans implies an increased risk to the extent that the SFSA now regards the relation as problematic. This is visible in the various measures aimed at increasing households' resistance to loan-induced vulnerability.

A large part of outstanding mortgage loans in the Swedish market have variable interest rates, making the individual vulnerable also to fluctuations in interest-rate levels (SFSA, 2017). The proportion of variable rate loans to total loans has been increasing for two decades and in the beginning of 2017 amounted to as much as 73% (SFSA, 2017). The combination of the large number of variable-interest-rate loans and

the fact that the Swedish market normally does not contain loans with longer time span than ten years, the average maturity on the Swedish mortgage market is very low in an international perspective.

Elliot and Lindblom (2017) find that the officially offered variable-interest-rate (3 months) of the largest banks on their mortgages varied substantially between the highest and lowest rate (up to 85 basis points difference) between 2000 and 2007, but that these mortgage rates barely differed in the years thereafter until April 2015. The medium-term fixed-interest-rate (2 years and 5 years) mortgages displayed a similar pattern, whereas the banks' long-term fixed-interest-rate officially offered on 10-year mortgages differed more or less over the whole period. This seems to suggest greater price competition on short- and medium-term mortgage rates. However, after April 2015, the officially offered mortgage rates of the banks began to deviate considerably irrespective of interest rate maturity. This is likely to be explained by an implementation of a new law, shortly thereafter, stipulating banks to disclose the average mortgage rate actually paid by customers on a monthly basis. Banks are generally known to give discounts on their official mortgage rates offered to customers. The authors' analysis suggests that such discounts could vary between a few up to fifty or even more basis points. On average, the highest discounts were given on 3-month variable-interest-rate and 2-year fixed-interest-rate mortgages.

### 3.2 *Other Types of Consumer Credit*

Although the total outstanding consumer debts are much smaller than the mortgage market, it has grown both in Sweden and internationally. Adhering to the vocabulary of the SFSA, all loans issued without security are referred to as consumer credit, or consumer debt. Instalment payments to regular stores for consumer purchases are thus also included among these loan types. This broad classification is hence comparable to an aggregation of the subclasses usually referred to as revolving credit (i.e., credit cards), loans without security but with fixed repayment schedule and loans tied to purchases of, for instance, consumer durable goods. Within this group of consumer credit a certain type of unsecured instant loans with, in many instances, high interest rates may be identified. The vocabulary when describing these loans is mixed: sometimes they are referred to as payday loans as in the US (the term stemming from the loans' initial function as a payday advance), sometimes they

are named after the channel through which the loan is obtained, such as online or text messages to smartphones referred to as sms loans in Sweden. In subsequent chapters, we will use the term unsecured instant loans when referring to this type of instantly obtained credit.

The total consumer credit market is limited in size, hence creating less of an aggregated stability problem. For individuals, and especially for vulnerable individuals, the increased availability of credit may however be a problem. Sweden was an early adopter of unsecured instant loans, implying that these loans have been available since 2006. Even today borrowing from banks other than the house bank or taking unsecured instant loans is much more marked among the Nordic countries (in Sweden this proportion is 16% and in Denmark and Finland it is even higher) than in Europe at large where the average is around 10% (Intrum Justitia, 2017).

The historical increase in consumer loans is cyclical, with a marked increase prior to the financial crisis of 2008, a bit lower during the crisis years, and lately up again to an annual increase of 7% (SFSA, 2018b). The proportion of loan payments (both payments of interest and instalments) stemming from this subset of the loan market is substantial, due to higher interest rates and shorter repayment periods. The market for consumer credit is also more diverse than the mortgage market, presenting a larger variety of both credit arrangements (concerning interest rates, repayment schedules and more) and lenders.

### *3.3 The Market for Unsecured Instant Loans*

The amount of unsecured instant on-line loans has increased markedly during the last few years. The 25 main operators in the market had a total lending volume of over SEK 600 billion in 2015. Generally, these loans are of smaller magnitude and are typically often paid off quickly. The high effective interest rates on the loans, and the inadequate credit controls performed by the lenders many times, have resulted in an increasing number of individuals ending up at Swedish Enforcement Authority (SEA). Figures from 2014 show that almost 60,000 individuals have unpaid unsecured instant loans, and they are as a result being investigated by the authority (SEA, 2015).

The increase of problems associated with unsecured instant loans has for a long time been a concern to legislators. In distinct legislative changes during the last decade, the SFSA has obtained a tighter grip on this part of the market. In 2011, the lenders became obliged to perform

a credit check, and in 2018 a cap was introduced on the interest rates allowed for the lender to take out. The effects of this last introduced measure still remain to be assessed, but compared to the initial phase the control has clearly increased.

The effect of a regulatory tighter grip is visible when dividing the individuals ending up at SEA by age group (SEA, 2015). We may observe that the group formerly at the top of the list, the youngest group defined as individuals between 18 and 25, has decreased markedly—most likely due to credit checks of the lender now being compulsory. This has had the implication that the youngest age group, formerly comprising almost 40% of SEA investigation now only accounts for 20% of new investigations. Apart from this very young age group, probably ending up getting fewer unsecured instant loans, we may observe a clear age pattern in the SEA data: 32% of newcomers to SEA are comprised by individuals between the ages 26 and 35, whereas the corresponding figure for individuals in their mid-50s and 60s lies around 5%.

## 4 An International Comparison

The Swedish loan market is in this section illuminated from an international perspective. We provide below comparisons for the total market and then separately for the mortgage market.

### *4.1 The Total Loan Market*

Beginning with the accumulated total loan market, the Swedish Bankers' Association (SBA) documents that the volume of outstanding debt in Sweden amounts to some SEK 3500 billion (SBA, 2017). Elliot and Lindblom (2017) report that banks active in the Swedish market tripled their lending to households, businesses and other organizations every year between 2000 and 2015, with exception of 2009. On average, the overall loan portfolio of the banks' operations in Sweden increased by nearly as much as eight per cent per year. The debt-to-income ratio of Swedish households, defined as total debt to disposable income (see Chapter 2), has been rising steadily for at least the past 20 years. In the late 1990s, the debt-to-income ratio was approximately 100, that is, the average household had then as much debt as disposable income, whereas the current figure is about 180 implying almost double as much debt as income.

The European Union presents a diverging picture regarding household debt ratios in the member countries (ECB, 2018). The dispersion is substantial: from the very low ratios of Lithuania and Latvia to the highly indebted Netherlands, Cyprus and Luxemburg. Sweden is somewhere in the highest quartile, well above the European average.

The US statistics are more centred around accumulated debts as a percentage of disposable income, and less on balance sheet calculations such as discussed above. The US debt service ratio is at 9.91% (2017) and has declined due to lowered interest rates during the last decade. The American statistics also include household debt as per cent of GDP, and by calculating backwards, the ratio of household debt to disposable income is about 99%, thus, above the European average but below the Swedish debt ratio.

### *4.2 The Mortgage Market*

In many other countries, including Sweden, a large portion of outstanding debt stems from mortgage loans, that is, loans taken with the purpose of buying a house. The share of mortgages to total debt in Sweden, amounting to 83%, is at the European average. Note, however, that the system with two homes is rather uncommon in Sweden. Compared to data for European mortgage debts related to the household main residency, the comparable figure decreases to 63%, which is well below the Swedish 83% (Ehrmann & Ziegelmeyer, 2014).

During the 2010s, the average household with mortgages has risen steadily from a level around SEK 750,000 in 2010 to a bit above one million SEK in 2017 (Blom & Van Santen, 2017). Another way of illustrating the debt burden of households with mortgages is to look at the debt-to-(disposable)-income ratio of only households with mortgages. Compared to the ratios of 160–180 discussed above, the ratio of mortgage-holding households raises to 340 (mean) or 275 (median) (Blom & Van Santen, 2017). This again illustrates the importance of mortgages for the total debt structure of households, which is further verified by the Swedish Financial Supervisory Authority (SFSA, 2016). SFSA documents an almost doubled share of households exhibiting a debt-to-income ratio greater than 450% in only five years between 2011 (approximately 35% share) and 2015 (approximately 60% share). The surging price levels on properties mentioned earlier are likely to be an important explanatory factor for this development, but it is to some extent also explained by an

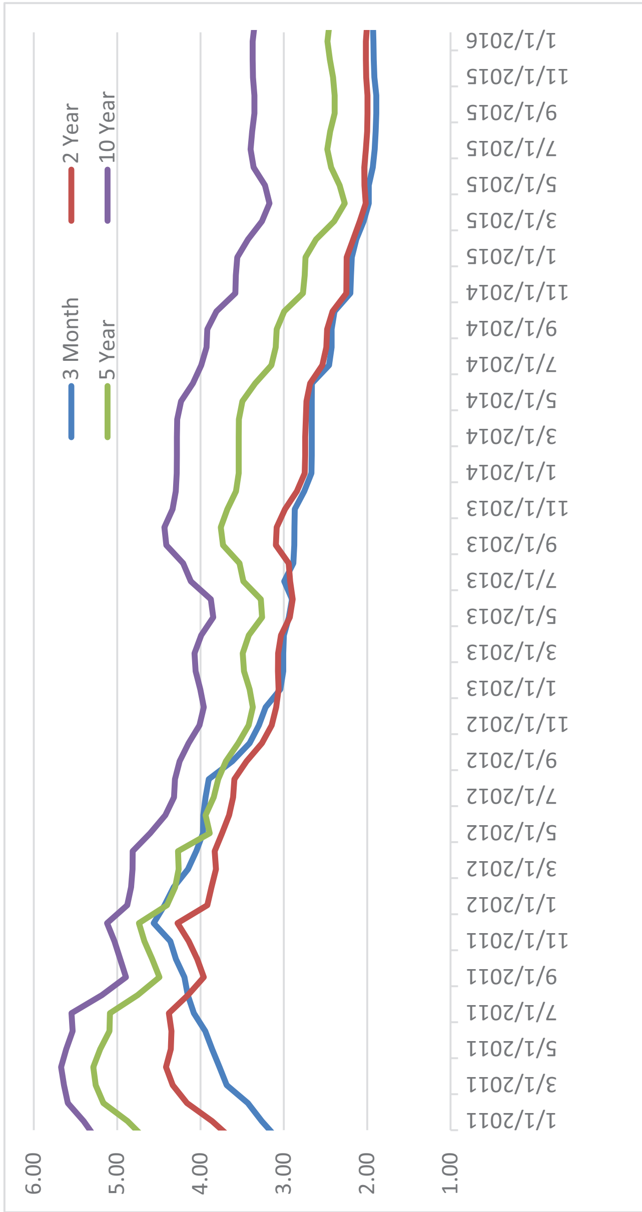


**Fig. 1** Average official mortgage rates offered by Swedish banks between 2011 and 2015

increase in contemporary conversions of tenement houses into condominiums in primarily the greater areas of Stockholm, Göteborg and Malmö, as well as by historically low interest rates on ordinary bank loans, in general, and on mortgages, in particular. The Riksbank's repurchasing/repo rate was more or less constantly lowered during the period and has since early 2015 been negative.[1] Elliot and Lindblom (2017) accordingly find that this pressed down the banks' mortgage rates as also interest rates became negative on short-term treasury bills and more long-term government bonds with maturities over two and five years, respectively. This is shown in Fig. 1, which presents the monthly movements of the average interest rates on variable (3 months) and fixed (2 years, 5 years, and 10 years, respectively) mortgages officially offered by the major Swedish "mortgage" banks from 2011 to 2015. After temporally "high" rates in early 2011 (which were not particularly high from a historic perspective), all mortgage rates declined over the period with approximately 1.5–3%.

## 5 Age Differences Among Borrowers

Debt may be a problem at all ages, but it is particularly serious in the age of young adults. The debt-to-(disposable)-income ratio for households with mortgages, discussed above, has been increasing for households in all ages, including those of young adults. However, the young adult borrowers start at a higher debt ratio, making the increase during the last few years more worrying (SFSA, 2017). Levels of almost 400 for the young adult cohorts can be compared to the Swedish average of 270 (median) and the levels of below 200 for the groups of borrowers above 60 years old. The US picture is different from the Swedish: mortgages are taken later in life (peaking at 40–45 years of age), whereas the loans taken at early ages are primarily student loans.

## 6 Concluding Remarks

We have in this chapter of the book provided a general description of the financial environment in which a young Swedish adult will have to make credit and loan related decisions. Our discussions in subsequent chapters will all be more specifically directed towards exploring and analysing, on the one hand, the drivers behind high debt reliance of young adults and, on the other hand, the effect of high indebtedness on their well-being. Since the studies we conduct are based on empirical data all

collected in Sweden, we found it motivated to present a brief overview of the Swedish financial environment in this chapter. In our brief overview, we disclose a number of examples of issues that might be extra problematic for young adults in Sweden and also elsewhere in a similar financial environment. One such issue is the booming real estate market as high property prices create an effective obstacle for young adults to enter the market and buy their first home. Another issue is the tempting availability of instant unsecured loans at frequently high interest rates. Such loans create a particular problem for young adults and, thus, a necessity for tighter regulatory control. Finally, a third issue concerns the fact that Swedish young adults take loans at an earlier age compared to, for example, their US equivalents, and these loans are not restricted to student loans only. All three issues underpin the focus of the book: the loan habits of the young adult generation are different from the population at large. This makes it important to study these habits in order to better understand their causes and implications.

The description of the financial environment in this chapter also serves as an illustration of the chain of stakeholders as described in the introductory chapter of this book. The foundation is here also provided for a subsequent discussion of various aspects of the indebtedness of young adults. The focus in this discussion will be the described interplay between financial institutions creating the availability of credit for young adults, the individual themselves making financial decisions of various sorts, and the legislator creating the regulatory framework of these two actors to co-exist.

## Note

1. At the end of 2018, the repo rate was—0.5%. At its meeting on the 20th of December 2018, the Executive Board of the Riksbank decided to start raising the rate beginning with a 25 basis points increase to—0.25% from 9th of January 2019 (Riksbank, 2018).

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PART II

# Psychological Factors Explaining Young Adults' Indebtedness

CHAPTER 4

# Young Adults' Attitudes Toward Borrowing

*Amelie Gamble, Tommy Gärling and Patrik Michaelsen*

## 1 Introduction

In this chapter and the following Chapter 5, we focus on psychological factors explaining young adults' borrowing to purchases of consumer products.[1] Attitude toward borrowing is one psychological factor that in previous research has been observed to be associated with having loan and being in debt (Ranyard, McHugh, & McNair, 2018).[2] Sociodemographic factors and financial resources are other determinants whose effects may be partially or fully mediated by attitudes.

Before proceeding to a presentation of others' and our own research on young adults' attitude toward borrowing, following Kamleitner, Hoelzl, and Kirchler (2012) we display in Fig. 1 a broader picture of determinants of borrowing and how attitude fits into this picture.

Consumption needs arise because old products are worn out or because of changes in socioeconomic factors. Consumption is also influenced by desires that are strengthened by the marketing of new products

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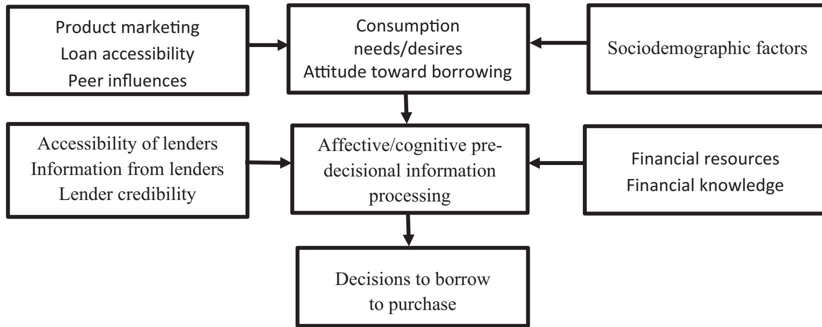


**Fig. 1** Determinants of decisions to borrow

or new models of old products. Peers and access to loans are additional influencing factors. If a product is currently perceived to be unaffordable and attitude toward borrowing is positive, then affective/cognitive pre-decisional information processing may result in decisions to borrow. The process is influenced by the strength of consumption needs or desires, current financial resources, financial knowledge, and accessibility, information and credibility associated with potential lenders. If the product is desired but not immediately needed, saving to the purchase is an option if the attitude toward borrowing is negative; another option is to lower the aspiration level such that the desire is resisted.

In the next Sect. 2, we present different definitions and methods of measuring attitude toward borrowing, loan, and debt. The following Sect. 3 reviews studies of young adults' attitudes toward borrowing conducted in different countries. Thereafter, we describe in Sect. 4 our research in Sweden to measure young adults' attitudes toward borrowing to purchases of consumer products. Finally, Sect. 5 concludes the chapter including a summary of its content.

## 2 Definition and Measurement of Attitude Toward Borrowing

In social psychology, attitude originally referred to a disposition to behave in a certain way toward an object (Allport, 1935). The narrower definition of attitude adopted in current social-psychological research is that provided by Eagly and Chaiken (1993: 1): 'Attitude is a psychological tendency that is expressed by evaluating a particular entity with some

degree of favor or disfavor'. The particular entity or "attitude object" may be everything a person discriminates perceptually or holds in mind. Corollaries include that an attitude is less influenced by situational factors than preferences although less stable than personality traits (Ajzen, 1987), and that the evaluation has several antecedents such as affective (e.g., feelings about the attitude object as measured by, e.g., feeling ratings or physiological indicators) and cognitive (beliefs about the attitude object as measured by, e.g., likelihood ratings) as well as consequences (e.g., behavioral approach-avoidance tendencies measured by observations or self-reports) (Eagly & Chaiken, 1993).

The Theory of Planned Behavior (TPB) (Ajzen, 1991, 2012), which subsumes its forerunner the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975, 2010), dominates current applied and basic research. TRA and TPB are examples of expectancy-valence theories positing that an attitude is the multiplicative product of the beliefs (probability) and evaluations (valence) associated with salient properties or expected consequences of the attitude object. Historically, it was believed that attitude would be strongly correlated with behavior. Research has, however, shown that the correlation is frequently weak (Ajzen, Fishbein, Lohmann, & Albarracín, 2019). Furthermore, a correlation between attitude and behavior does not prove causation even though attitude is measured before the behavior is executed. A verifiable model of the process of how the attitude controls information processing is a requirement for this inference.

A clear distinction has not always been made in previous credit research between opinions (beliefs) and attitudes (evaluations). Exceptions are Sotiropoulos and d'Astous (2013) and Xiao, Tang, Serido, and Shim (2011) (described in the next section), who both adapted TPB (Ajzen, 1991, 2012) in their respective studies of overspending on credit cards. The attitude object has varied, either being borrowing, loan, or debt (Pattarin & Cosma, 2012). Attitudes toward borrowing and loan may, for instance, be more positive than attitudes toward debt and may also be the primary determinants of borrowing. Furthermore, some studies have investigated attitudes toward student loans, others' attitudes toward consumer credit, and still others' attitudes toward loan types (e.g., credit card, installment payments). Chien and DeVaney (2001) also note that, in order for attitude to correlate higher with behavior, the attitude needs to be measured with the same specificity as the behavior. In their empirical study, a general measure of attitude

toward payments by credit card and installment payments was compared to attitudes toward borrowing money for different consumer goods and services (e.g., a vacation trip). An index of the latter had the expected stronger correlation with actual borrowing than the former.

In a pioneering study, Livingstone and Lunt (1992; see also Lunt & Livingstone, 1992) attempted to understand what makes some people borrow more than others. Instead of proposing an integrated model of the factors influencing personal debt, they examined how socio-demographic, economic, and enduring psychological determinants operate in combination. The psychological determinants included social knowledge, locus of control, attitudes, and values. In order to measure attitudes toward credit and debt in their heterogeneous sample, ranging in age from 18 to 82 years, eight statements were presented in a 20-page questionnaire predominantly consisting of other questions. Example statements included "better to borrow to buy what you want now", "better to save up until able to buy", "credit makes life easier", "credit makes life complicated", "debt is wrong and should be avoided", and "debt is normal and not to be ashamed of". That the statements are pairwise opposed was confirmed in a discriminant analysis that distinguished over-indebted participants from those not over-indebted.

In another early study conducted by Davies and Lea (1995), following up on the study by Lea, Webley, and Levine (1993) of a heterogeneous UK sample, the aim was to investigate what factors explain UK students' indebtedness and whether these factors are the same as those in a general population. Attitude was assumed to be one such factor. In measuring attitude, a list of 32 statements about debt was initially compiled. In pilot studies, independent participants rated the statements to be pro or con debt. The shorter list of seven pro and seven con statements shown in Table 1 was then constructed as an attitude scale with acceptable reliability. This "Attitudes to Debt Scale" has been used in several subsequent studies (e.g., Boddington & Kemp, 1999; Norvilitis & Mao, 2013; Norvilitis et al., 2006; Zhang & Kemp, 2009). The reliability of the scale has in these studies not been satisfactory. One reason may be that the scale does not measure a single attitude dimension.

Davies and Lea (1995) essentially assumed that a single "tolerance of debt" dimension underlies the attitude toward borrowing. This was, however, questioned by explorative and confirmatory factor analyses conducted by Haultain, Kemp, and Chernyshenko (2010) on responses obtained from three independent New Zealand student samples. Two uncorrelated attitudes to debt dimensions emerged, one labeled "fear of

**Table 1** Pro-debt and anti-debt statements in the "Attitudes to Debt Scale"

| |
|---|
| *Pro-debt statements* |
| Students have to go into debt |
| It is OK to borrow money in order to buy food |
| Debt is an integral part of today's lifestyle |
| It's OK to have an overdraft when you know you can pay it off |
| It is better to have something now and pay for it later |
| Taking out a loan is a good thing because it allows you to enjoy life as a student |
| Owning money is basically wrong |
| *Anti-debt statements* |
| There is no excuse for borrowing money |
| Banks should not give interest-free overdrafts to students |
| You should always save up first before buying something |
| Students should be discouraged from using credit cards |
| Banks should not be surprised when students incur large debts |
| Once you're in debt, it is very difficult to get out |
| You should stay home rather than to borrow money to go out in the evening in the pub |

*Source* Adapted from Davies and Lea (1995)

**Table 2** Items in two-dimensional Attitudes to Debt Scale

| |
|---|
| *Fear of debt* |
| One of the worst aspects of higher education is being in debt |
| One of the worst aspects of a university student's life is having little money |
| I am seriously worried about the debts I could build up while in higher education |
| Student debt puts people off higher education |
| *Debt utility* |
| I would rather be in debt than change my lifestyle |
| Taking out a loan is a good thing, because it allows you to enjoy life as a student |
| It is better to have something now and pay for it later |
| You shouldn't pay your fees for higher education when you are offered interest-free loans |
| You should take out a student loan whether you need it or not |

*Source* Adapted from Haultain et al. (2010)

debt" and another "debt utility" (see Table 2). Being relatively fearless of debt and believing debt to be useful in attaining important goals appear to be behaviorally important attitude dimensions.

Along similar lines, Harrison, Agnew, and Serido (2015) analyzed data from UK, US, and New Zealand university student samples. Their exploratory factor analysis of agreement ratings of newly constructed

statements yielded four factors labeled "anxiety" (e.g., "I worry that the repayment on my debt will become unaffordable"), "utility-for-lifestyle" (e.g., "I use debt to pay for luxuries"), "utility-for-investment" (e.g., "I have a greater chance of getting a job with a degree"), and "awareness" (e.g., "I feel I have a good understanding of how student loans work"). Awareness was correlated with the other factors which were uncorrelated. The two last factors are related to student loans, whereas the first two are similar to the factors "fear of debt" and "debt utility" in Haultain et al. (2010). It may also be noted that the last factor appears to be a self-report measure of financial knowledge.

Pattarin and Cosma (2012) constructed an attitude scale based on the notion that attitudes have affective and cognitive antecedents and behavioral consequences (Eagly & Chaiken, 1993; Lea, Webley, & Walker, 1995). In semi-automatized telephone interviews, an heterogeneous sample of Italian residents rated on an agreement to disagreement scale 12 statements about credit and debt (affective, e.g., "I do not like borrowing money"; cognitive, e.g., "It is a good idea to have something now and pay for it later"; behavioral, e.g., "It is better to go into debt than to let children go without Christmas gifts"). The distinctions between affective, cognitive, and behavioral were not empirically verified. The reliability was also low for the total scale as well as for the subscales. Differences in the expected direction were still found between participants with and without consumer loans, that income (as a proxy of need of borrowing) had no influence on the favorableness of the attitudes, and that attitudes correlated positively with the motivation to use several different loan types.

In the previous studies, self-report ratings have without exceptions been used to measure attitudes. Although Pattarin and Cosma (2012) and Lea et al. (1995) distinguished affective, cognitive, and behavioral attitude components, as has been made in social-psychological research (Eagly & Chaiken, 1993), they still used self-reports to measure each of these components. In addition, only a few studies (Sotiropoulos & d'Astous, 2013; Xiao et al., 2011) have adopted the self-report methods today widely used in basic and applied attitude research (Krosnick, Judd, & Wittenbrink, 2019). In one method, the attitude object is directly rated on one or several evaluative scales (Albarracín, Zanna, Johnson, & Kumkale, 2005). Another method based on TRA or TPB (Fishbein & Ajzen, 1975, 2010) consists of ratings of salient beliefs about the attitude object with respect to likelihood and positive–negative evaluations

followed by summing the products to an attitude score. Methods not relying on reactive self-reports have also been developed in the attitude research (Krosnick et al., 2019), for instance, when expressing negative attitudes is not socially desirable, or when the attitude is implicit, that is an evaluation made without conscious awareness.

## 3 Review of Previous Studies

### *3.1 Antecedents of Young Adults' Attitudes Toward Borrowing*

A number of studies from different countries have investigated young adults' attitudes toward borrowing. Studies from the 1990s until 2010, conducted in North America, Europe, New Zealand, China, and Saudi Arabia, reveal that young adults have positive attitudes toward borrowing (cited in Lachance, 2012). In the following, we review selectively some of the results.

In the early 1990s, Lea et al. (1993) investigated the relationship between attitudes and debt by comparing consumers with or without outstanding debts to a British supplier of water and sewerages. Based on objective debt records, the participants were classified into three groups, non-debtors, mild debtors, and serious debtors. They were asked questions about the economic, social, and psychological variables. Attitudes were measured with a 12-item scale composed of both pro-debt and anti-debt statements, which Davies and Lea (1995) later developed into the "Attitudes to Debt Scale" described above. On average, participants did not have favorable attitudes toward debt, but young adults were among the high debtors who had more tolerant attitudes. Castellani and DeVaney (2001) conducted an exploratory study of US participants examining factors that correlated with attitude. Agreement to the statement "Do you feel it is all right to borrow money to cover living expenses when income is cut?" was expressed by 44% of the participants, primarily nonwhite adults aged less than 35 years with low income and outstanding late debt payments. In another study, Abdul-Muhmin (2008) found a negative relation with age when investigating attitude toward debt in Saudi Arabia. His study aimed at explaining the puzzling observation of a growing debt level in a country where the Islamic religion prohibits interest on loans. A convenience sample of consumers was recruited, either from family and friends (female participants) or else in banks, institutions, or shopping malls. A questionnaire was administered

that assessed both general and specific attitudes toward debt. The results showed that overall the participants have positive attitudes toward debt and that younger, well-educated men have more positive attitudes than other demographic groups.

Several studies have specifically investigated attitudes toward credit cards among college and university students. For instance, Makela, Punjavat, and Olson (1993) investigated attitude toward credit cards held by students from 55 different countries enrolled at a US university. A questionnaire assessed experience with and knowledge of credit cards as well as attitude toward credit cards. The results showed that the students had poor knowledge of credit cards but neutral to positive attitudes toward such cards. This is in line with the results from an exploratory study prompted by the frequently aggressive credit card advertisement directed at college students in the US (Warwick & Mansfield, 2000). Sixty-eight percent of a sample of US college students (the majority between 18 and 25 years of age) participating in the study agreed to the statement that credit cards "are good, if used correctly". Although the results showed that the participants had little knowledge about interest rates, credit card limits, and their credit cards outstanding balance, they had positive attitudes toward credit cards. In an attempt to create a reliable and valid scale to measure attitude toward credit cards, in another study Xiao, Noring, and Andersson (1995) asked college students to agree or disagree to positive and negative statements about credit card use, either affective (e.g., "My credit card makes me feel happy"), beliefs (e.g., "Using credit cards is a very desirable practice"), or behavioral (e.g., "I am not tempted by discounts or other benefits to acquire a credit card"). The results showed overall that the students had positive attitudes toward credit card use. Their ratings were most positive for affective statements (82%), followed by belief statements (67%), and behavioral statements (20%). The results were stronger for credit card holders compared to those without credit cards, as well as for students owning more credit cards who rated affective statements higher compared to those with fewer cards. This is consistent with Hayhoe, Leach, and Turner (1999), who showed that graduate and undergraduate students, at different US universities, without credit cards were less positive toward credit cards than those with credit cards, and that the students with positive beliefs were more likely to have four or more credit cards. The students were asked to rate their attitude using a modified version of the scale developed by Xiao et al. (1995). Unfortunately, because of a

low response rate, it is difficult to generalize the results. Yet, the results were in line with previous research and confirmed in a follow-up study by Yang and Lester (2001).

The results of many of the cited studies of college and university students' attitudes may not generalize to the population of young adults. Therefore, investigating young adults' attitudes toward borrowing should also include young adults in other life situations. A study in Québec, Canada, used telephone interviews of a large randomly selected sample of young adults aged 18 to 29 years (Lachance, 2012). The participants answered questions about their attitudes toward credit in general, credit use and debts, credit knowledge, budgeting and saving, financial competence, and source of learning about personal finance. Other questions included their own, parents and friends' use of credit, and a unidimensional scale developed in this study was used to measure attitude toward credit. An attitude measure was constructed from the summed ratings of six items (e.g., "There are more advantages than disadvantages to using credit"). Participants expressed favorable attitudes toward credit albeit not as favorable as previous studies of primarily students have shown. The results of regression analyses revealed that attitude toward credit is positively related to education, number of credit cards, and credit knowledge, as well as to parents and friends' use of credit. However, in contrast to other research reviewed below, there was no correlation between attitude toward credit and amount of debt.

Since the 1980s, attitudes toward credit has, in general, become more positive (Watkins, 2000). Does this also apply to young adults' attitudes? There is a lack of longitudinal studies, but in an attempt to address the question Norvilitis (2014) combined the results of five previous studies performed during ten years (Norvilitis & MacLean, 2010; Norvilitis & Mao, 2013; Norvilitis & Mendes-Da-Silva, 2013; Norvilitis, Szablicki, & Wilson 2003; Norvilitis et al., 2006). In spite of having slightly different aims, the studies all used similar measures making possible to infer changes in college students' attitudes toward debt as well as credit card use, financial status, delay-of-gratification,[3] and perceived financial well-being. In four of the five studies included in the analysis, attitude toward borrowing was measured with the Attitudes to Debt Scale (Davies & Lea, 1995). The scale had low reliability across studies perhaps because it tapped too many diverse aspects of students' attitudes. Therefore, apart from examining the overall attitude to debt, Norvilitis (2014) analyzed separately statements from the scale

addressing different aspects of student debt, saving versus debt, financing leisure activities with credit, and acceptance of credit cards. The results revealed a downward trend in young adults' positive attitudes toward credit, an increase in financial well-being, and a decline in student credit card debt. However, the ability to delay gratification did not change over time. In the most recent study (Norvilitis & Mendes-Da-Silva, 2013) included in the analysis, fewer students reported having credit cards than the years before, and they more frequently payed off their credit card balance. Over the ten years, the participants agreed to a larger extent to the statement "You should always save up first before buying something", thus prioritizing saving over borrowing to consumer purchases. They were also more positive toward the statement "You should stay at home rather than borrow money to go out for an evening in a bar", revealing a less positive attitude over time toward financing leisure activities with credit. In the year 2009, the legislation of credit card changed in the US (the Credit CARD Act) restricting the use of credit cards by young adults under the age of 21. The changed legislation may be one reason for the declining trend in attitudes toward credit card use. Yet, the results showed that attitudes became less favorable before the legislation was implemented. Norvilitis (2014) proposed as a possible explanation the increase in media coverage over the years concerning the perils of credit use and debt. However, there was no difference between the studies regarding the statement "Students should be discouraged from using credit cards". This implies that the participants accepted credit cards equally over the years in spite of gradually more negative attitudes toward borrowing, thus perhaps exhibiting a more prudent attitude toward credit card use.

### *3.2 Consequences of Young Adults' Attitude Toward Borrowing*

A more favorable attitude has in the general population been linked to higher amounts of consumer debts in studies in several countries (e.g., in the US; Livingstone & Lunt, 1992, and Lea et al., 1993, in the UK; Pattarin & Cosma, 2012, in Italy; Wang, Lu, & Malhotra, 2011, in China; Webley & Nyhus, 2001, in the Netherlands). Are young adults' attitudes toward borrowing likewise associated with actual borrowing and debt? Some studies found positive associations and as noted above, others negative (Norvilitis, 2014) or no association (Lachance, 2012). A brief review of the studies showing positive associations follows.

Norvilitis et al. (2006) investigated antecedents and consequences of college students' propensity to get into debt by credit card use. Students from five different US universities completed a questionnaire assessing risk-taking, financial knowledge and attitudes, personality characteristics, and demographic and situational factors. On average, debt in relation to average income was about 30%. The results of regression analyses showed that debt was significantly and positively associated with age, lack of financial knowledge, number of credit cards, and borrowing. Among the personality characteristics, delay-of-gratification was the only one associated with debt (the others were sensation seeking, materialism, and compulsive buying). The Attitudes to Debt scale did not predict the amount of debt held by the students. Norvilitis et al. (2006) also measured beliefs about debt and income. The results showed that a majority of participants with credit card debts were optimistic in that they believed they would be able to repay their debts faster than the average student would, that is within 2 months rather than 2 years after college graduation. Only 6% thought they were similar to the average student in this regard. All participants furthermore believed that they would earn at least as much or more than the average student would directly after graduation. These results are in line with the results found by Davies and Lea (1995). In measuring UK students' attitudes with their Attitudes to Debt Scale, they failed to find any association between scores on the scale and debt, nor between beliefs in expected future income and debt. However, favorable attitudes were associated with higher expenditures for luxury consumption of clothing and entertainment, and among those with credit card debts (74% had at least one credit card), a majority (73%) had confidence in their ability to pay back their debts faster than the average student would. Thirty-two percent also believed they would earn more in the future than the average student would. Thus, the results suggested that the participants with favorable attitudes toward debt were overconfident in their ability to handle the payments. Two studies conducted in New Zealand also used the Attitudes to Debt Scale (Boddington & Kemp, 1999; Zhang & Kemp, 2009). In these studies, the results showed that higher scores on the scale were associated with accumulated debt.

Xiao et al. (2011) obtained information about credit card debts from a heterogeneous sample of US undergraduates. In a structural equation model, the credit card debt was jointly explained by self-reports of attitude, parental norm, financial efficacy, and financial controllability.

Friends' norm had no effect. Self-reports of risky paying and borrowing behavior partially mediated the relationship. Sotiropoulos and d'Astous (2013) noted that social norm has been found to have weak impacts on young adults' risky borrowing. In a sample of US business students, however, they found that a rating measure of social norm (e.g., "My friends think it's acceptable to have credit card debts"), but not of attitude (e.g., "To what extent are you favorable or unfavorable to overspending on credit cards"), correlated with a self-report 4-item measure of overspending on credit cards (e.g., "I spend more when I use a credit card"). Self-efficacy (e.g., "I am confident I will not overspend on my credit(s)") was found to correlate negatively with overspending. Sotiropoulos and d'Astous (2013) suggested that social networking has increased the role of friends' norm and, as noted by Sotiropoulos and d'Astous (2012), primarily by influencing consumption desires.

Previous studies have not attempted to clarify the causal direction of the correlation between attitudes and debt acquisition. Davies and Lea (1995) compared different cohorts of university students in a quasi-longitudinal design. The results showed that debt increased with age in the investigated student groups but more steeply in the first years at the university, while attitudes toward debt increased less steeply. They concluded that the results are consistent with debts causing a change in attitudes rather than vice versa. Conceivably, being in debt may be the result of a positive attitude toward borrowing or may otherwise be the cause of a negative attitude. Paradoxically, Davies and Lea (1995) found that as debt accrues, less favorable attitudes changed to more favorable. The students in the study came from relatively prosperous socioeconomic groups assumed to be used to higher living standards. Borrowing provided an opportunity to sustain their previous lifestyle while studying at the university. Probably therefore, they accordingly changed their attitudes to more favorable. In line with this reasoning, Callender and Jackson (2005) found the opposite for undergraduate students from lower socioeconomic circumstances who are negative toward debt because it may make it impossible for them to continue their higher education. In many countries, student loan is governmental policy. This may also enhance students' positive attitudes toward debt. For instance, in Italy student debt is less frequent and students are less positive toward debt (Vicenci, Lea, & Rumiati, 2001, cited in Zhang & Kemp, 2009). This applies to student loans and not to consumer loans. One may speculate that repayment in the near future would counteract positive attitudes

toward borrowing to consumption more than student loans that are not to be repaid until much later and frequently only when the borrower has reached a certain income level (Norvilitis, 2014).

In Norvilitis and MacLean (2010), students enrolled at a US university completed a questionnaire about their parents' understanding of various financial issues and methods for educating them about such matters including instructions (e.g., "My parents considered it important to teach me"), parent facilitation (e.g., "My parents helped me budget my allowance"), parent worries (e.g., "My parents were worried about money often"), or parent reticence (e.g., "My parents avoided talking about money with me"). Other variables investigated were students' own credit behavior, ability to delay gratification, financial knowledge, and well-being. The results showed that parents' educational style is associated both positively and negatively with the students' credit card debt as mediated through impulsivity when using credit cards, delay-of-gratification, and problem credit card use, for instance, making only minimum monthly repayments. Students whose parents educated "hands-on" by helping them to save money, or budgeting an allowance, report lower levels of credit card debt. An interpretation of this result is that the parents' behavior mirrors their attitudes that financial issues are important and that this influences the students' attitudes toward credit use and more prudent credit behavior. The results are partly corroborated by a pretest posttest experimental study showing that a seminar aiming at educating students about their credit card use and other financial behaviors increased financial knowledge and responsible attitudes toward credit card use (Borden, Lee, Serido, & Collins, 2008). Actual credit card use and debt were, however, only assessed in the pretest and not in the posttest.

## 4 Measuring Attitude Toward Borrowing

We noted above that the correlation between attitude and behavior is frequently weak. Fishbein and Ajzen (1975, 2010) proposed that additional elements of TPB (intention, subjective norm, perceived behavioral control) may account for the low correlation between attitude and behavior. In regression models with measures of intention and perceived behavioral control added to the attitude measure, the correlations with a measure of behavior are generally increased compared to the correlation with only the attitude measure (Ajzen et al., 2019).

The empirically verified principles of correspondence and aggregation were introduced by Fishbein and Ajzen (1975, 2010). According to the principle of correspondence, the correlation between attitude and behavior is stronger if the attitude measure has the same specificity. A general attitude ("How positive is your attitude toward loans?") is less strongly correlated with actual borrowing unless specified with respect to action ("How positive is your attitude toward borrowing?"), target ("How positive is your attitude toward borrowing to a desirable consumer product?"), context ("How positive is your attitude toward borrowing to a desirable consumer product in a specified price range?"), and time ("How positive is your attitude toward borrowing to a desirable consumer product in a specified price range this month?"). Even though a general attitude fails to correlate with borrowing, according to the aggregation principle, it may correlate substantially with the average frequency of several types of borrowing (e.g., loans from family, friend or bank, unsecured instant loans, credit cards, or installment payments). Individuals with a positive general attitude toward credit are not likely to engage in all these behaviors, but they are more likely to engage in some of the behaviors than are individuals with a negative general attitude.

We (Gärling, Michaelsen, & Gamble, 2018a) measured attitude toward borrowing taking into account the principles of correspondence and aggregation. The results showed that attitude correlates with intention to borrow and actual borrowing. Attitude was hypothesized to vary in an evaluative or affective dimension (positive versus negative; Eagly & Chaiken, 1993), but based on the previous research reviewed above (in particular Davies & Lea, 1995), we added a utilitarian dimension (sensible versus not sensible and convenient versus not convenient), and a moral dimension (acceptable versus not acceptable). We asked participants (young adults aged 18 to 30 years old) in an online questionnaire to use four 1-to-9 scales to rate these attitude dimensions. In an experiment preceding the attitude ratings, the participants used other 1-to-9 scales to rate how likely they were to borrow (by means of installment payment to the store, credit card, unsecured instant loan, loan from family, and loan from friend) to the purchase of a desired, needed or already purchased consumer product in the price range from SEK 4000 to SEK 8000[4] (1 SEK was approximately equal to 0.12 USD or 0.10 EUR at the time of the study). In order to achieve the same specificity, the attitude ratings were made of borrowing to consumer products in the same price range by the same loan types. Subsequent to the attitude ratings

and several interpolated other ratings, participants rated on a scale from 0 (never) to 4 (every month) how frequently during the last year they had taken the types of loans. In this case, no price range or purpose was specified.

Table 3 shows product-moment correlations between the ratings of attitude, the ratings in the experiment of the likelihood of borrowing, and the ratings of the frequency of actually borrowing. The attitude ratings are aggregated across the four scales since, as the high-reliability coefficient $\alpha$ suggested, they were positively correlated. Indexes were also constructed by averaging across loan type the ratings of attitude toward borrowing, likelihood of borrowing, and frequency of past borrowing since these ratings were likewise positively correlated as judged from the high $\alpha$ coefficient.[5] The results thus appear to show a general tendency across loan types to both be more positive to borrowing, more likely to borrow, and actually borrowing more.

It may further be seen in Table 3 that intention or likelihood to borrow and reported frequency of actual borrowing are both positively correlated with the attitude ratings, according to the correspondence principle higher for the ratings of the same loan types. According to the aggregation principle, the highest correlation is between the indexes obtained by averaging across the loan types. As commonly observed (Ajzen et al., 2019), the correlations between the reported frequency of actual borrowing the last year and attitude are lower than the correlations between intention and attitude. In our results the pronounced positive skewness of the frequency of actual borrowing and the fact that price range and purpose were not specified may have further contributed to the lower correlations and perhaps also to the minor deviations of the pattern of correlations. In a multiple linear regression analysis, a higher correlation with the frequency ratings ($r = .59$) was observed if the index of the likelihood of borrowing ($\beta = .35$, $p < .001$) was added to the attitude index ($\beta = .26$, $p < .001$). Another variable added in the regression equation was self-assessed financial resources (Griskevicius, Delton, Robertson, Tybur, & Simpson, 2011). The negative influence ($\beta = -.16$, $p = .002$) suggested that the frequency of borrowing to consumption decreases with available financial resources. The correlation between the attitude index and self-assessed financial resources was virtually zero.

We have demonstrated that drawing on the correspondence and aggregation principles (Fishbein & Ajzen, 1975, 2010) is important to increase the correlations between attitude toward borrowing, intention

**Table 3** Product-moment correlations between attitude toward borrowing, likelihood of borrowing, and self-reported frequency of actual borrowing ($n = 273$)

| *Attitude toward borrowing (−4 to 4)* | | | *Intention to borrow in experiment (1–9)* | | | | | | *Reported frequency of actual borrowing (0–4)* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *1* | *2* | *3* | *4* | *5* | *6*[a] | *1* | *2* | *3* | *4* | *5* | *6*[b] |
| Loan type | $\alpha$ | Mean | 3.30 | 3.67 | 1.93 | 4.41 | 2.41 | 3.16 | 1.07 | 0.75 | 0.28 | 0.78 | 0.40 | 0.65 |
| 1. Credit card | .95 | −0.59 | ***.58*** | *.35* | *.26* | .11 | *.27* | *.46* | ***.46*** | *.23* | *.13* | *.22* | *.15* | *.38* |
| 2. Installment | .95 | −0.68 | *.25* | ***.54*** | *.26* | *.28* | *.28* | *.46* | *.18* | ***.38*** | *.18* | *.28* | *.20* | *.35* |
| 3. Unsecured instant loan | .95 | −2.86 | *.37* | *.29* | ***.62*** | *.14* | *.50* | *.52* | *.23* | *.36* | ***.53*** | *.25* | *.40* | *.47* |
| 4. Loan from family | .94 | −0.51 | .12 | *.20* | *.13* | ***.55*** | *.33* | *.38* | .01 | .10 | .12 | ***.29*** | *.19* | *.18* |
| 5. Loan from friend | .95 | −1.93 | *.20* | *.20* | *.40* | *.26* | ***.57*** | *.44* | .08 | *.19* | *.37* | *.30* | ***.43*** | *.35* |
| 6. Index | .76 | −1.31 | *.43* | *.45* | *.45* | *.34* | *.28* | ***.72*** | *.28* | *.35* | *.36* | *.37* | *.37* | ***.48*** |

Italized correlations are significant at $p < .05$, and bold-faced correlations are the highest in each column and row

[a]$\alpha = .74$

[b]$\alpha = .72$

**Table 4** Product-moment correlations between a general measure of attitude toward borrowing and self-reported frequency of actual borrowing ($n = 152$)

| *Attitude toward borrowing (−4 to 4)* | *Frequency of actual borrowing (0–4)* | | | | | |
|---|---|---|---|---|---|---|
| | *Loan type* | *Credit card* | *Installment* | *Unsecured instant loan* | *Loan from family/friend* | *Index (α = .81)* |
| Dimensions | Mean | 1.65 | 1.14 | 0.64 | 1.03 | 1.12 |
| Evaluative | −1.53 | .15 | *.26* | *.31* | *.22* | *.29* |
| Utilitarian | −1.84 | ***.19*** | ***.34*** | ***.35*** | ***.35*** | ***.38*** |
| Moral | −0.75 | .08 | .01 | .02 | .12 | .01 |
| Social influence | −0.91 | .10 | *.16* | .12 | *.21* | *.18* |
| Index (α = .73) | −1.26 | .11 | *.26* | *.29* | *.30* | *.29* |

Italized correlations are significant at $p < .05$, and boldfaced correlations are the highest in each column

to borrow, and actual borrowing. We did, however, not examine whether a measure of a general attitude is higher correlated with the aggregated frequency of actual borrowing than the correlations with the loan types. In Gärling, Michaelsen, and Gamble (2018b), we measured attitude toward borrowing to consumption without any further specification. One 1-to-9 scale was used to measure each dimension (evaluative, utilitarian, moral) and the dimension social influence ("others influence me to borrow to consumption")[6] that was added. Table 4 shows that the attitude measure aggregated across the four dimensions was significant positively correlated with the index of frequency of actual borrowing but that this correlation was not higher than the correlations for the loan types. However, it may also be seen that for the utilitarian dimension ("It is easier to borrow to consumption than paying in cash") the correlation with the index is higher than for the loan types. Since the correlations with the loan types are also higher than for the other dimensions, it is suggested that this dimension is more important than the other dimensions.

## 5 Summary and Conclusions

In this chapter, we reviewed research conducted since the 1990s of attitudes toward borrowing among young adults—in a majority of studies samples of college or university students. The Attitudes to Debt Scale originally developed by Davies and Lea (1995) has been used in many of these studies although in some cases only after modification.

In other cases (e.g., Harrison et al., 2015), newly constructed items were used but found to be similar to those in the original scale. A few studies (Sotiropoulos & d'Astous, 2013; Xiao et al., 2011) have used the more common method in social psychology of positive–negative evaluations of an attitude object (e.g., borrowing, loan, debt). Whereas none of the previous studies, except Chien and Devaney (2001), have directly measured young adults' attitudes toward borrowing to purchases of consumer products, this is what we did in two studies (Gärling et al., 2018a, 2018b) reported in the chapter. Our studies also differ from other studies in measuring attitude on evaluative scales with high internal-consistency reliability.

Even though the reviewed studies with some exceptions (e.g., Sotiropoulos & d'Astous, 2013) reveal correlations between attitude toward borrowing and intended or actual borrowing, the causal direction needs to be questioned: Does a positive attitude cause an increased likelihood of borrowing, and does a negative attitude cause a decreased likelihood? Or does likelihood of borrowing cause the positive or negative attitude? Since attitudes are assumed to be relatively permanent (Albarracín et al., 2005), answering this question importantly depends on when young adults form attitudes toward borrowing. We reviewed a few studies (Borden et al., 2008; Norvilitis & MacLean, 2010) relevant to answering the question, but a more comprehensive review is beyond the scope of the chapter (see Webley & Nyhus, 2008). Another possibility is to specify and investigate the process through which attitude interacts with behavior and intention.

Despite beliefs (e.g., fear of dept, utility of loans) measured in the research we have reviewed imply correlations with attitudes, only Sotiropoulos and d'Astous (2013) have attempted to understand more explicitly the role of attitude in the affective-cognitive pre-decisional process leading to the decision to borrow. They noted, however, that its role is questionable given that many decisions to borrow are impulsive. Following Pratkanis (1989), Gärling et al. (2018a) proposed that when negative attitudes toward borrowing have been formed, they may act as a powerful heuristic that suppresses impatient decisions to borrow to purchases of consumer products. Positive attitudes may strengthen the role of impatience. At the same time, financial knowledge would possibly counteract unplanned decisions. This is an account that we suggest of the observed correlations between attitude toward borrowing and intended or actual borrowing. However, since attitude toward

borrowing or debt is such a broadly defined construct, the account is likely to be incomplete.

An issue raised last in the chapter is how to measure attitude toward borrowing. We demonstrate in re-analyses of our own results (Gärling et al., 2018a, 2018b) that it is important to adhere to the principles of correspondence and aggregation (Fishbein & Ajzen, 1975, 2010). If the goal is to find an association between an attitude toward borrowing and a specific credit behavior (e.g., installment payments), the attitude question should be at the same specificity level. On the other hand, if the goal is to find an association with any type of credit behavior, a general attitude question should be asked. An attitude measure defined as an evaluation (Albarracín et al., 2005; Eagly & Chaiken, 1993) is expected to be unidimensional. A measure of the prevalence of pro and con beliefs need, however, not be unidimensional (e.g., Harrison et al., 2015; Haultain et al., 2010). In our studies (Gärling et al., 2018a, 2018b), we found that evaluations of different beliefs (utilitarian, moral, social influence) were unidimensional and positively correlated with the positive–negative evaluation. Our contribution is still not a new "attitude toward borrowing" scale, but a demonstration of how to measure the attitude. No scale is needed if measures are made of evaluations of correctly specified attitude objects. It is still important to know what beliefs form favorable or unfavorable attitudes since attitudes may be changed through changing beliefs (Borden et al., 2008; Norvilitis & MacLean, 2010).

## Notes

1. In other chapters referred to as consumer credit.
2. In this and the following Chapter 5, we assume that borrowing (taking loans) to purchases of consumer products make the products instantly available to consume, whereas repayments of the loans are deferred on agreed conditions, for instance fixed or revolving installments including interest. According to Ranyard et al. (2018), if repayments become burdensome, or the borrowers default, loans are referred to as debts and borrowers said to be in states of indebtedness. Over-indebtedness is when the total sum of repayment demands causes financial strain. However, the terminology is not consistent. See Chapter 2 of this book for a more extensive discussion.
3. Delay-of-gratification is closely related to present-biased temporal discounting discussed in Chapter 5.

4. See Chapter 5 for further details.
5. The unidimensionality of each index was also confirmed by principal component analyses yielding single high eigen values.
6. Lea et al. (1993) and Sotiropoulos and d'Astous (2012, 2013) found influences of others' positive attitude to borrowing.

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CHAPTER 5

# Young Adults' Consumption Desires, Feelings of Financial Scarcity and Borrowing

*Amelie Gamble, Tommy Gärling and Patrik Michaelsen*

## 1 Introduction

A tenet of the life cycle hypothesis (Modigliani, 1966), referred to in Chapter 2 of this volume, is that people smooth their consumption across the life cycle by borrowing in young ages when they have low incomes and repaying at older ages when their incomes are higher. Although it appears sensible to borrow to consumption in young ages, when the income is lower than expected to be in the future, inexperienced young borrowers appear to over-borrow (Kamleitner, Hoelzl, & Kirchler, 2012). Consistent with the research findings in other countries (e.g., Xiao, Ahn, Serido, & Shim, 2014; Xiao, Tang, Serido, & Shim, 2011), a governmental study in Sweden concluded that it is particularly alarming that young adults are overrepresented among debtors, have high levels of credit card debts and are the primary users of unsecured instant loans with high interest (Swedish Government

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Official Reports, 2013). If people in the early stages of adulthood borrow extensively at high interest rates, this may have detrimental consequences for their future consumption. They are also at risk of being trapped in problem debts and possibly over-indebtedness resulting in psychological ill-being (e.g., Ahlström & Edström, 2014; Meltzer, Bebbington, Brugha, Farrell, & Jenkins, 2013; Walsemann, Gee, & Gentile, 2015).

Our focus in this chapter is on young adults' borrowing to consumption that improves their material lifestyle, for instance, purchases of new models of smartphones, computers or other electronic gadgets, weekend travel or vacations in distant foreign countries. We believe that both an increasing supply and aggressive marketing in conjunction with accessible loans make young adults desire these products even though they do not afford to purchase them. Young adults are therefore likely to borrow to purchases at the risk of over-borrowing. Furthermore, in present-day markets of consumer products, it appears possible to borrow "without full awareness." Paying by credit cards and leasing contracts are examples of when borrowing may not be a primary motive. Our two main propositions in this chapter is that young adults' borrowing is more likely (i) if consumption desires exclusively focus on present consumption while future consumption is neglected, and (ii) if lack of borrowing awareness reduces the influences of a negative attitude toward borrowing and financial knowledge that otherwise would have moderating effects.

In the next Sect. 2, we briefly discuss the relation between purchasing and borrowing. In the following Sect. 3, we then analyze the role of consumption desires in the affective/cognitive pre-decisional information process leading to young adults' decisions to borrow to purchases of consumer products (Kamleitner et al., 2012). The analysis is based on findings in our recent study conducted in Sweden of young adults' borrowing to purchase consumer products (Gärling, Michaelsen, & Gamble, 2018a) and reported findings in related previous studies in other countries. In Sect. 4, we address the question of whether borrowing unawareness affects how much young adults borrow to purchases of smartphones. As in Sect. 3, we both review research in different countries by others and present the results of our own study on young adults' overspending on smartphones in Sweden (Gärling, Michaelsen, & Gamble, 2018b). The chapter ends with a summary and conclusions in Sect. 5.

## 2 Borrowing and Purchasing

Our focus on young adults' borrowing to purchases of consumer products implies that purchasing and borrowing are closely related. In the following, we exclude expensive products, such as cars and apartments or houses, for which borrowing normally is needed. We also exclude purchases of consumer products paid by debit or credit cards for which the intention is not to defer payment longer than until the end of the month (although it may be tempting to extend the credit if feasible).[1] A prototypical situation is facing a choice of how to pay for a purchase of a consumer product if the store offers the option of installment payments. Accepting this offer makes the product instantly available to consume, whereas the payment is deferred on agreed conditions. The offer is likely to be particularly attractive if the product is highly desired, barely affordable and pre-commitments have been made to purchase it. Other loans, including unsecured instant loans, loans from family and loans from friends, may also be used but not necessarily equally close in time to a purchase.

In contemporary Western societies, necessities are affordable to most young adults whereas non-necessities may not always be. However, the distinction between what is necessary and desired, but not necessary, is floating. Products such as smartphones are by many young adults today considered a necessity (Ting, Lim, Patanmacia, Low, & Ker, 2011). Yet, smartphones are vastly different from, and more expensive, than necessities in the past, like similarly handheld cellular (mobile) telephones with no Internet connection or GPS, or even earlier, stationary landline telephones. Furthermore, every new generation of smartphones comes with new features (e.g., stereo sound, an advanced camera) that attract young adult buyers. Supplementary products (e.g., wireless charger, headset) are likewise attractive. Thus, features added to the core features of necessary products, supplementary products, or their combination are both making the products even more desired and expensive to purchase. The same may hold for other products, for instance, computers and TV sets. Products that improve the material lifestyle are thus connected to necessities. This may increase the temptation to purchase them even if not affordable. Available and easily accessible installment payments offered by stores (sometimes in connection with Internet shopping) or other accessible loans are likely to further strengthen the temptation to purchase the products.

A pre-decisional process preceding a purchase may result in deferring or abandoning the purchase. One factor is liquidity constraints. However, the pre-decisional process may be shortcut if the desire is strong and resistance weak,[2] therefore resulting in unplanned purchases. The likelihood of borrowing for unplanned purchases of unaffordable products would then conceivably increase. In the following, we argue that strong desires for unaffordable consumer products are important determinants of borrowing. Thus, desires for the attractive products are primary drivers. Anything that increases the desires or prevents counteracting factors therefore increases borrowing. Lending possibilities are necessary but not sufficient conditions.

## 3 Affective/Cognitive Pre-decisional Information Processing

Deferring payments of purchases of consumer products has generally been considered to be an essential ingredient of borrowing (Webley & Nyhus, 2008). This is referred to as intertemporal decision-making, which has been studied extensively by means of context-free choices between small outcomes earlier or large outcomes later (Frederick, Loewenstein, & O'Donoghue, 2002; Read, McDonald, & He, 2018). A general finding is that small gains earlier are preferred to large gains later, and small losses earlier are preferred to large losses later.

A preference for instant small gains to deferred large gains is referred to as present-biased temporal discounting (Laibson, 1997). In a consumer purchase context, present-biased temporal discounting would, *ceteris paribus*, account for borrowing (Meier & Sprenger, 2010). If knowledge of the repayment cost is weighted in, borrowing to the purchases of consumer products are however unlikely if liquidity allows cash payment. A negative attitude toward borrowing is an additional factor that would favor cash payment. If cash is not available, saving to a later purchase is an option.

Previous research has shown that feelings of resource deficits related to economic transactions may strengthen present-biased temporal discounting. Such feelings referred to as a scarcity mindset is a critical factor (Mullainahan & Shafir, 2013). It explains irrational economic behaviors to result "simply from having less" (Shah, Mullainathan, & Shafir, 2012: 682). Findings in this research reviewed below show that the scarcity mindset has consequences for how people process information and make

decisions. One consequence is that attention is focused on the means of reducing the deficit. Metaphorically, the scarcity mindset induces "tunnel vision." Matters falling inside of the tunnel receive attention, while matters falling outside are neglected. This is how present-biased temporal discounting may be explained. The other consequence is that mental resources are depleted (e.g., imposing a load on working memory, decreasing fluid intelligence, reducing executive control). This results in an impaired ability to process information with no bearing on reduction of the deficit.

A scarcity mindset caused by financial deficits may provide a theoretical account of why young adults borrow to purchases of unaffordable consumer products that improve their material lifestyle. A financial deficit is, however, not felt unless desires for purchasing the products exist. In the Elaborated Intrusion (EI) theory proposed by Kavanagh, Andrade, and May (2005) (see also Hofmann & Van Dillen, 2012), desire is defined as an '…affectively charged cognitive event in which an object or activity that is associated with pleasure or relief of discomfort is in focal attention' (ibid.: 447). Stated differently, a desire is a conscious feeling of wanting to have or do something. Although sometimes evoked by unconscious processes, the desire increases in strength when cognitively elaborated by thoughts about the benefits. If barriers are encountered to purchases of a desired consumer product, a conflict exists that needs to be resolved. The conflict initiates thoughts about borrowing as a means of eliminating the financial deficit.

Figure 1 illustrates that a desire for a consumer product would influence the decision to borrow if insufficient financial resources make the consumer product unaffordable such that a scarcity mindset is evoked. Borrowing instantly satisfies the desire for the product, whereas future repayment costs are neglected due to present-biased temporal

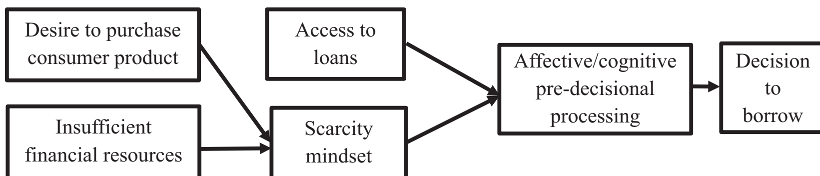


**Fig. 1** Influences on decision to borrow to purchase of desired consumer product

discounting resulting from the scarcity mindset. Several empirical studies in different contexts have demonstrated this effect of a scarcity mindset (Mullainathan & Shafir, 2013).[3] In a laboratory experiment reported in Shah et al. (2012), participants competed in a video game in which the goal was to use shoots to hit distant targets for points. The participants were randomly assigned to one group receiving a low number of shots or to another group receiving a high number. Half of the participants in each group were offered to borrow shots to use in the current period to be repaid with "interest" in future periods. The shot-scarce participants given this opportunity borrowed more than their affluent peers, and as a result received worse total scores. In contrast, the shot-abundant participants performed similarly whether they were allowed to borrow or not. It appears as if the shot-scarce participants' desire to outperform the competitors in the current round made them neglect their need of shots in future rounds, implying that a focus on the present induced by the scarcity mindset led them to neglect future consequences.

Other research (as reviewed by Hofmann, Schmeichel, & Baddeley, 2012) has shown that desires may impair executive functions and as a result the quality of cognitive information processing. Executive functions supporting attainment of self-control goals include memory updating related to working memory capacity, inhibition of automatic impulses, and mind shifting. Cognitive elaboration in working memory of desires aroused by external or internal factors, as proposed in the EI theory (Kavanagh et al., 2005), may interfere with self-regulatory goal pursuit that results in yielding to desires that are opposed to these goals.

There are three objections to our arguments. A first objection is that a scarcity mindset evoked by consumption desires may make people more aware of their financial scarcity. In support of this, a scarcity mindset sometimes has the reverse effect that all relevant information is processed thoroughly. In another similar experiment reported in Shah et al. (2012), it was found that the shot-scarce group performed more accurately than the shot-abundant group when none was offered any loan. In another series of experiments, Shah, Shafir, and Mullainathan (2015) found that a scarcity mindset shields people from irrational context influences on economic choices. As an example, a percentage discount on a low price is valued equally much as the same percentage discount on a high price (e.g., Tversky & Kahneman, 1981). In facing financial scarcity, however, participants value higher the discount on the higher price (the larger monetary amount) since it makes possible more additional

purchases. Furthermore, Shah, Zhao, Mullainathan, and Shafir (2018) showed in several studies that thoughts about monetary costs are more easily triggered as well as more persistent in heavily budget-constrained compared to less budget-constrained people. In one study, participants were presented a scenario asking them to pay for a gift to celebrate a friend's birthday. When then asked to report their thoughts, the heavily budget-constrained in contrast to the less budget-constrained participants more frequently reported cost-related thoughts than thoughts not related to costs.

A second objection is that the need to replace some consumer product to maintain the current material lifestyle may have a larger effect than a desire to purchase a new consumer product to improve the current material lifestyle. This was demonstrated in studies by Cook and Sadeghein (2018). Referring to the "triple-scarcity" effect, they argued that insufficient liquidity, limited lending possibilities and personal loss consequences are necessary conditions for a scarcity mindset to be aroused and to result in over-borrowing. In a scenario experiment, adult participants were asked how much they would borrow to cover expenses if liquidity was absent and they had no other lending possibilities than taking a payday loan of USD 500, the amount at least needed to cover unpaid expenses, or at most USD 1000—at an annual percentage interest rate exceeding 600%.[4] The expenses were late installment payments for the currently owned car (need or anticipated loss of repossession of the car) versus paying for leasing a new model (desire or anticipated gain). Over-borrowing was observed to be higher for need than desire. This effect was particularly strong for those who had previously taken payday loans compared to those who had not. Cook and Sadeghein (2018) also noted that payday loans are primarily used to pay for necessities (including repayments of previous loans). Choosing installment payment to a store for an unaffordable desired consumer product is arguably different. The finding that loss consequences had a larger effect on over-borrowing than gain consequences may therefore not rule out that the scarcity mindset plays the role we propose for installment payments of desired unaffordable consumer products.

A third objection is still that the results of the experiments (Shah et al., 2012) discussed above may not generalize to young adults' purchases of consumer products. In order to investigate this, Gärling et al. (2018a) conducted an online experiment with participation of a heterogeneous sample of Swedish young adults aged 18 to 30 years. One group of the

participants were randomly assigned to the desired purchase condition in which they reported a currently desired product in the price range from SEK 4000 to SEK 8000 (1 SEK was approximately equal to 0.12 USD or 0.10 Euro at the time of the study).[5] In a needed purchase condition to which another group was randomly assigned, participants reported a product they expected to need to replace in the near future but not immediately. Table 1 reports a classification of the products that were reported. The differences in frequencies between the desired and needed purchase conditions were statistically significant ($p < .05$) primarily due to the different frequencies of consumer electronics and entertainment media. Although it is not clear that more non-necessities were chosen in the desired purchase than in the needed purchase condition, the motives for the purchases may still differ in accordance with the instructions. A third group of the participants were randomly assigned to a past purchase condition in which they imagined having already purchased a consumer product at the price of SEK 6000 but not yet paid for it. Next, the participants indicated their preferred method of payment. In the past purchase condition, payment was immediately required, whereas in the desired purchase and needed purchase conditions, deferring the purchase would not require any payment. However, in the desired purchase condition this denied participants instant access to the desired product. If a scarcity mindset induced present-biased temporal discounting, we expected that the participants in this condition, as they must to do in the already

**Table 1** A classification of reported products in the *needed purchase* and *desired purchase* conditions

| *Needed purchase (n = 90)* | % | *Desired purchase (n = 91)* | % |
|---|---|---|---|
| Consumer electronics[a] | 49 | Consumer electronics[a] | 34 |
| Entertainment media[b] | 19 | Entertainment media[b] | 25 |
| Household equipment, refurbishing | 13 | Furniture | 14 |
| Vehicles (car, bicycle, baby carriage) | 8 | Clothing, jewelry | 9 |
| Clothing, jewelry | 3 | Household equipment, refurbishing | 8 |
| Travel | 3 | Vehicles (car) | 4 |
| Furniture | 2 | Cosmetics | 2 |
| Cosmetics | 0 | Travel | 2 |
| Other | 1 | Other | 1 |

[a]Primarily computers and smartphones
[b]Primarily TV sets

purchased condition, would borrow to the purchase if they did not manage to pay in cash. On 1-to-9 numerical scales ranging from very unlikely to very likely, ratings were made of whether participants preferred to pay by credit card, installment, unsecured instant loan, loan from parents or other relatives or loan from friends. An index of likelihood of borrowing was constructed by averaging the ratings on the five scales ($M=3.16$, $SD=1.65$, $\alpha=.74$). Borrowing from parents or other relatives was rated highest ($M=4.41$) followed by installment payments to the store ($M=3.67$), credit card ($M=3.30$), loans from friends ($M=2.49$) and unsecured instant loan ($M=1.93$). The results showed that the index means were 3.22 for desired purchase, 3.22 for past purchase and 3.04 for needed purchase. Although in the expected direction, the differences were not large enough to reach statistical significance ($p>.25$).

The results contradict the effects of scarcity mindset observed in the laboratory experiment by Shah et al. (2012) described above. It must, therefore, be questioned whether the effects generalize to young adults' borrowing to purchases of desired consumer products. What can then account for the results? One possibility is that the scarcity mindset was not sufficiently strong because many participants did not feel any financial deficit (see Note 4).[6] However, even if the scarcity mindset would make the decision to borrow more likely, a negative attitude may inhibit borrowing by the young adults (see Fig. 2), perhaps by acting as a heuristic that overrides the preference for borrowing (Pratkanis, 1989).[7]

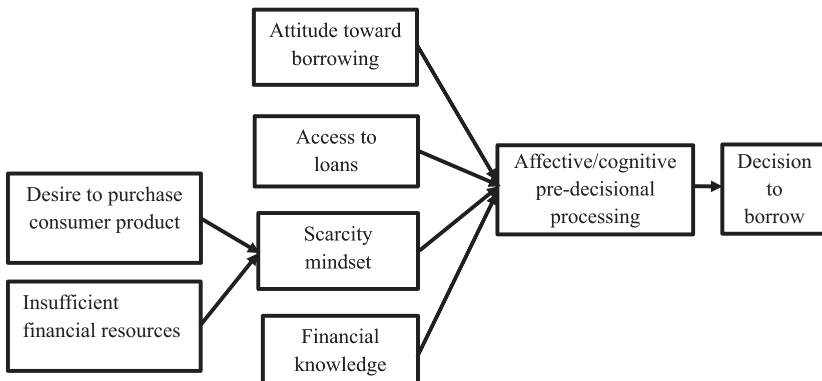


**Fig. 2** Influences on decision to borrow to purchase of desired consumer product including also attitude toward borrowing and financial knowledge

Since the young adults' attitudes on average were negative and regression analysis yielded a statistically significant strong effect ($\beta = .48$, $p < .05$), we conclude that attitude had the effect of decreasing the likelihood of borrowing. Financial knowledge may also influence decisions to borrow if knowledgeable young adults are more accurate in judging the costs associated with borrowing. In line with this, we find that financial knowledge has the effect of making the young adults choose shorter and less costly installment payments, although there is no effect of financial knowledge on likelihood of borrowing.

## 4 Borrowing Unawareness

In present-day markets of consumer products, some payment methods may not be perceived to be loans. Being unaware of taking a loan would perhaps pertain to young adults' installment payments for purchases of smartphones. Would the young adults then, if asked to re-purchase a new smartphone prefer this method of payment? Would being unaware of taking a loan eliminate the negative attitude toward borrowing and thus increase borrowing?

Two-year monthly installment payments are frequently how smartphone purchases are paid by young adults, in some cases framed as leasing contracts that after two years offer a replacement of the old smartphone with a new one at a reduced cost.[8] One reason for paying by installment is low liquidity to pay in cash for a product that today's young adults consider being a necessity (Ting et al., 2011). Another reason is that a negative attitude toward borrowing has no influence on the decision since the buyers are not aware of that the installment payment is a loan.

A legal requirement in many countries is to disclose the total price of installment payments. A scarcity mindset may still make a disclosed total price to be neglected (Bertrand & Morse, 2011). Other misperceptions are also likely (see Raghubir, 2006, for a review). If the price is perceived as a loss, distributing the payment in time is less painful and if the total price is not disclosed, judging it by means of the anchoring-and-adjustment heuristic would lead to underestimates. Our conjecture is that compared to cash prices, installment payments make buyers likely to purchase more expensive smartphones with desirable add-on features.

A smartphone is a handheld cellular (mobile) telephone with built-in applications and Internet access (www.pcmag.com/encyclopedia).

The transition of the cellular telephone to the smartphone late last millennium is considered the largest technology revolution since the Internet (McCasland, 2005). University students are found to be earlier adopters of electronic gadgets than other sociodemographic groups (Heinonen & Strandvik, 2007; Sultan, Rohm, & Gao, 2009). As reviewed by Arif, Aslam, and Ali (2016), studies in many countries show that a large majority of university students own a smartphone, which they use for making phone calls, text messaging, accessing Internet, social networking, as well as several other tasks including, for instance, GPS navigation, reading and sending e-mails and Internet shopping. A consistent finding furthermore is that in the general population ownership is most frequent in the age range from 18 to 30 years. A high degree of ownership of smartphones is today observed also among Swedish young adults in this age range (Larsson, Svensson, & Carlsson, 2016).

In a study of Malaysian university students, Ting et al. (2011) developed a reliable self-report multi-item measure of possible determinants of purchases of smartphones including social need (e.g., "I use my smartphone to catch up with friends and relatives"), social influence (e.g., "It is important that my friends like the brand of smartphone I am using"), convenience (e.g., "Using a smartphone would allow me to accomplish tasks more quickly"), and dependency (e.g., "I am totally depending on my smartphone"). By fitting a covariance-based structural equation model, it was shown that dependency is reliably associated with all three determinants of social need, social influence, and convenience, and that a reliable multi-item measure of purchase behavior (e.g., "I intend to keep using a smartphone in the future") is associated with dependency. Almost identical results using similar scales were obtained in another study of university students in Pakistan (Arif et al., 2016). In a conceptual analysis not reporting any data, Chow, Chen, and Wong (2012) extended the determinants of continued use of smartphones to product features (e.g., appearance, speed, operation system), brand name (e.g., internationally recognized, trustworthy, favorite), price (e.g., non-essential versus essential, purchase only with discounts), social influence (e.g., all friends/family have one; influenced by friends/family/others). Indicating that price may not be important, Rahim, Safin, Kheng, Bas, and Ali (2016) found that Malaysian university students do not consider purchases of smartphones to be economically strenuous (referred to as "product sacrifice"). Purchase intention is associated with product features, brand name, and social influence but not with product sacrifice.

None of the cited studies has made the connection between purchases of smartphones and payment method as we do. In another one-line experiment (Gärling et al., 2018b), a heterogeneous Swedish sample of young adults aged 18 to 25 imagined purchasing a new smartphone to replace their current one, which had stopped working.[9] First, we presented technical descriptions of five smartphones ranging from budget to premium. The same smartphones were then presented in a user-friendly evaluation format in the style of a popular computer magazine (see Table 2).

**Table 2** Evaluations of smartphones presented to participants including in different conditions either the cash prices or the monthly costs of 2-year installment payments with 20% discount on the cash prices

| |
|---|
| *Smartphone A*<br>Premium model, one of the best deals in the market. Top class performance. Big but still easy to handle because of its rounded corners. New technical features are improved battery life, stereo speakers and water-resistance. Furthermore, it is fitted with dual cameras; one wide-angle lens and one telephoto lens allowing for optical zoom. Top image quality. Available in black, gold, silver, and pink gold. */Cash price SEK 7920/2-year installment payment SEK 260 per month with 20% discount on the cash price/* |
| *Smartphone B*<br>This smartphones performance is not far behind the premium model, but it has a smaller display with lower resolution. Same brightness. Has a new but less advanced camera that delivers good image quality. Battery life is the same. Not waterproof. Available in black, gold, silver, and pink gold. */Cash price SEK 6960/2-year installment payment SEK 230 per month with 20% discount on the cash price/* |
| *Smartphone C*<br>Is the most advanced of the older smartphones. With a lower performance and a shorter battery life. Has the same screen as the premium model but with a weaker screen brightness. Camera with acceptable image quality. Not waterproof. Available in space gray, gold, silver, and pink gold. */Cash price SEK 6000/2-year installment payment SEK 200 per month with 20% discount on the cash price/* |
| *Smartphone D*<br>The less advanced of older smartphones with the same performance and battery life. Has the same smaller screen as the closest to that of the premium model but with a weaker screen brightness. Camera with acceptable image quality. Not waterproof. Available in space gray, gold, silver, and pink gold. */Cash price SEK 5040/2-year installment payment SEK 170 per month with 20% discount on the cash price/* |
| *Smartphone E*<br>Budget smartphone. Has all features as the more advanced smartphones but with a lower performance. Same battery life as those in the older model range. Smaller display with low resolution and screen brightness. Not waterproof. Available in space gray, gold, silver, and pink gold. */Cash price SEK 4080/2-year installment payment SEK 140 per month with 20% discount on the cash price/* |

In different conditions, the participants choose a smartphone either with the cash price as default or a 2-year installment payment with a 20% discount on the cash price as default. The results showed that installment payment as default did not lead to saving on the price but to choices of more expensive smartphones. Attitude toward borrowing was negative, as in the previous experiment, but did not correlate positively with choices of installment payment.

Even though young adults perceive a smartphone as a necessity, their purchases may still be influenced by desirable add-on features. In order to interpret the results as being caused by a scarcity mindset, we therefore introduced one condition in which the participants imagined that "this was an opportunity to purchase a new better smartphone with features that they desired" and another condition in which they "a new better smartphone than your old broken is not necessary for you to purchase." In a preceding pilot experiment (Gärling et al., 2018b), where undergraduates choose among the same smartphones but the payment method (i.e., installment or cash payments) was optional, we found that the upgrade instructions led to choices of more expensive smartphones than the replace instructions. However, Fig. 3 shows that this was not the case when method of payment was default.

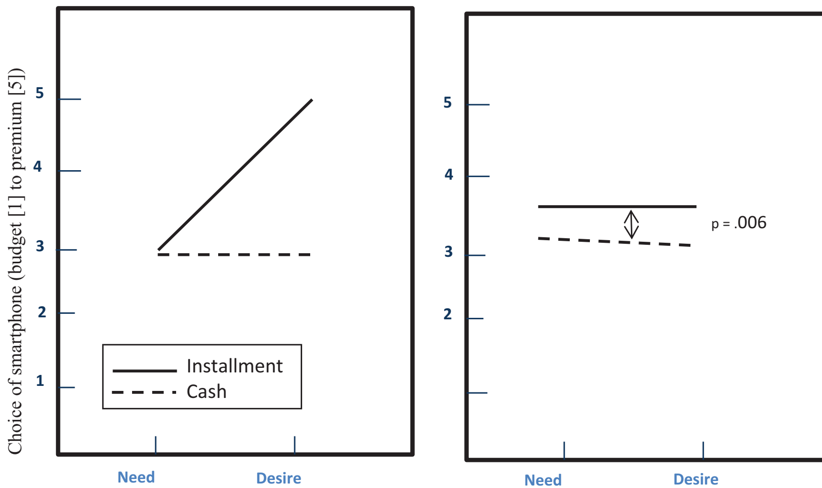


**Fig. 3** Results of experiment asking young adults to choose smartphones (hypothesis to the left, results to the right) (*Source* Adapted from Gärling et al. [2018b])

If a scarcity mindset had been evoked, we should have expected that only the desire instructions would lead to choices of more expensive smartphones. A possibility is that the 20% discount resulted in a desire that evoked the scarcity mindset in both the upgrade and replace conditions. Hence, in both these conditions purchases of more expensive smartphones were chosen.

## 5 Summary and Conclusions

Borrowing is influenced by many factors including some that are psychological (Kamleitner et al., 2012). We argue that psychological factors should not be neglected in explanations of why young adults over-borrow. In particular, this may be true of borrowing to purchases of consumer products to improve a current material lifestyle. Specifically, we propose that young adults' borrowing to purchases of desired consumer products (although sometimes considered necessities) is more likely (i) if consumption desires make affective/cognitive pre-decisional processing to focus on the present benefits and neglect the future costs and (ii) if lack of borrowing awareness reduces the influences of a negative attitude toward borrowing as well as financial knowledge.

The role of impatience (present-biased temporal discounting) in borrowing has been recognized for a long time (Webley & Nyhus, 2008). Mullainathan and Shafir (2013) have recently proposed a possible explanation of present-biased temporal discounting as being related to feelings of deficit resulting in impairment of cognitive information processing. We propose that, in the context of purchases of consumer products, desires create the feeling of financial deficit or scarcity mindset if the consumer products are unaffordable. Yet, borrowing would not be possible only because of a scarcity mindset. Lending possibilities also need to be available and accessible. Our own study (Gärling et al., 2018a) presented in Sect. 2 did not give full support to the hypothesis that the scarcity mindset influences young adults' borrowing to desired unaffordable consumer products. Cook and Sadeghein (2018) showed an effect of "triple scarcity" to avoid a pending loss when liquidity was lacking and no other lending possibilities than a payday loan were available. Whereas Cook and Sadeghein did not leave much choice to their participants, a possible caveat in our study is that self-reports of desired products did not cause an immediate want of the products.

Our main finding is the strong effect of a negative attitude toward borrowing. As we review in Chapter 4 of this volume, attitudes have previously been shown to play important roles for borrowing. However, few of these studies have investigated borrowing to purchases of consumer products. Furthermore, previous research has frequently found that the attitude toward borrowing is positive. In the absence of any more specific information, we can only speculate why young adults in our study have a negative attitude toward borrowing. In line with the results of Haultain, Kemp, and Chern (2010), one possibility is that fear of over-borrowing may be more important than that borrowing allows purchases of desired consumer products. In our study the reported consumer products were desired but probably still not wanted to the same extent they would be at the point in time of an actual purchase. Perhaps the results would be different if payment method is chosen at this point in time. Internet shopping would provide an excellent opportunity to investigate this.

Shefrin and Thaler's (1988) behavioral life cycle hypothesis implies another account of a negative attitude toward borrowing. According to this hypothesis, resolving the conflict between immediate and deferred spending requires self-control. Allocation of assets to "mental accounts" (i.e., income, savings, and future income) is hypothesized to be a general self-control mechanism implying that the marginal propensity of spending is highest from the income account, next highest from the savings account, and referred to as debt aversion, lowest from the future income account. Although income plays a larger role for spending than the life cycle hypothesis (Modigliani, 1966) predicts, it is still the case that at an aggregate level household loans increase up to middle age after which it declines (Eng Larsson, Hallsten & Kilström, 2018). It is also a fact that borrowing to consumption has increased (Watkins, 2000). Even though the behavioral life cycle hypothesis has some support, it does not provide a full account unless mental accounting as a self-control mechanism extends to apply to people's everyday management of money (Antonides & Ranyard, 2018).

People may be unaware of what they borrow since they do not perceive some payment methods to be loans. A common payment method today is installment payments for purchases of smartphones. We found in our research presented in Sect. 3 (see Gärling et al., 2018b) that more than 50% of the young adults choose installment payments. Not being aware that it is a loan would perhaps eliminate the effect of a negative

attitude toward borrowing. In choosing between smartphones with either cash or installment payment offering a discount on the cash price, we show that smartphones that are more expensive are chosen. Nevertheless, contrasting desire to upgrade to need to replacement does not have any effect, thus again failing to show an effect of a scarcity mindset. However, the negative attitude toward borrowing did not positively influence purchases of more expensive smartphones on installment payments.

Although our results show that the young adults have predominantly negative attitudes toward borrowing, others express the concern that young adults take unsecured instant loans at high interest rates (Swedish Government Official Reports, 2013). Loans are necessary and desirable for young adults to smooth consumption across the life cycle (Modigliani, 1966; Shefrin & Thaler, 1988). However, after the financial crisis in 2008–2009, banks have been more reluctant to offer loans to young adults because of lending constraints, new regulatory standards and the relatively high lending risk they ascribe to this segment of customers. In many other Western countries than Sweden, social lending is a countermeasure that in different ways has been implemented by governments to facilitate for young adults to take loans, in particular, to enter the housing market. These programs are combined with requirements to save at subsidized lower interest rates. Conceivably, financial institutions may in combination with requirements to save at interest rates that are more reasonable may likewise offer loans to purchases of consumer products. This would likely reduce the market for unsecured instant loans at high interest rates. The requirements to save may also prevent young adults to over-borrow and mitigate possible over-indebtedness.

## Notes

1. Several studies (e.g., Xiao et al., 2011, 2014) have shown that young adults frequently have unpaid credit card debts.
2. Commonly referred to as a weak self-control (Baumeister, 2002). In a review, Labroo and Pocheptsova (2017) note that in previous research self-control is conceptualized as a personality trait, whereas more recently the role of situational factors is found to be important. This is our theoretical stance in this chapter.
3. A scarcity mindset is also evoked by poverty, in which case it may result in over-borrowing to needed consumption (Mani, Mullainathan, Shafir, & Zhao, 2013).

4. In the US, a payday loan is an unsecured instant loan that the borrower is obliged to repay on the payday, that is the day when receiving the next paycheck.
5. Based on self-reported incomes in pilot studies, for the majority of participants we considered this to be an unaffordable price range that would prevent cash payment. Yet, it is still conceivable that the desired consumer products in the price range were considered affordable (e.g., because participants had been saving to the purchase). In support of this suspicion, ratings of whether participants were able to pay in cash were on average high ($M=6.03$, SD=3.09, on a 1-to-9 scale).
6. Another possible caveat is that the desire was weak. However, ratings on a 1-to-9 numerical scale of how much the products were desired yielded in the desired purchase condition a high mean of 7.41 (SD=1.75), and in the needed purchase condition a lower mean of 6.67 (SD=2.14). The difference was statistically significant at $p<.05$.
7. How attitude toward borrowing was measured is presented in Chapter 4, and financial knowledge referred to below is discussed in Chapter 7.
8. Our survey results presented below showed that 44.7% of the participating young adults reported having chosen installment payment for purchases of their current smartphones. This should be contrasted to that 41.4% (excluding gifts and other forms of credit) reported having paid by cash, debt or credit cards.
9. Note, that in the cited previous studies (Arif et al., 2016; Rahim et al., 2016; Ting et al., 2011) smartphone users report that they strongly intend to continue purchase smartphones although they would change their feature preferences (Keaveney & Parthasarathy, 2001). In addition, Hew, Badaruddin, and Moorthy (2017) found that brand attachment plays an influential role for repurchases.

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PART III

# Financial Information and Young Adults' Borrowing Decisions

CHAPTER 6

# Impacts of Loan Communication on Young Adults' Borrowing

*Jonas Nilsson and Jeanette Carlsson Hauff*

## 1 Introduction

The ability to borrow money has evolved into a necessary function of modern economies. Used in a responsible manner, loans give access to more expensive purchases, such as cars and homes, while credit cards have a long history of easing transactions by providing shorter-term unsecured borrowing (Zinman, 2015). According to the life-cycle hypothesis, explained in more detail in Chapter 2, in order to smooth consumption over their life span young adults are expected to use borrowed funds to a larger extent than the population in general. A concrete example of the necessity of borrowing being especially valuable for young adults is the Swedish housing market, as described in Chapter 3. The booming prices especially in urban areas make it almost necessary for new entrants to the market, that is young adults, to borrow a substantial amount of the price of a home in order to obtain somewhere to live.

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However, as explained in other chapters in this volume, borrowing money sometimes comes with a downside: taking on too much debt and becoming over-indebted constitutes a real problem. Over-indebtedness often leads to severe personal consequences, such as depression, stress, and anxiety (Ranyard, McHugh, & McNair, 2018). Moreover, on a societal level, over-indebtedness can bring risks to the economic systems, as observed during the last financial crisis. As discussed in Chapters 4 and 5 of this volume, much research has been focused on understanding how attitudes toward borrowing and other psychological factors influence borrowing decisions (e.g. Livingstone & Lunt, 1992; Sotiropoulos & d'Astous, 2013). In this chapter, we switch focus to the potential role of the interaction between borrower and financial institution as a key to understand (and potentially control) borrowing behavior. Specifically, we address the role of the information that is provided to young adults making borrowing decisions.

For actors with an interest in reducing problems associated with over-indebtedness, common strategies include adapting the provided information regarding the loan, or to communicate messages in a way that encourages responsible borrowing practices among potential borrowers. Such information and communication efforts can come in many forms, from a fairly passive disclosure of terms of the loan to a more active provision of information, such as outright warnings (e.g. Perry & Blumenthal, 2012; Salisbury, 2014; Seira, Elizondo, & Laguna-Müggenburg, 2017). However, while the idea of such communication is often beneficial, their behavioral and attitudinal impacts are largely unclear, and sometimes contested. For instance, when it comes to disclosure documents, people have generally been found to be unwilling or unable to pay attention to and process, complex information (Loewenstein, Sunstein, & Golman, 2014). Moreover, in some areas of the borrowing market, such as unsecured instant loans at high interest, there may also be a speed element in the process that may hamper the potential for borrowers to take part of and understand the disclosure documents and texts (e.g. Hill & Kozup, 2007). Finally, the fact is that while governments and not-for-profit organizations may communicate and regulate with good intentions, the private sector often continues to spend substantial resources on advertising. Bertrand, Mullainathan, and Shafir (2006) argue that governments may be driven by a false assumption that policies and social programs will work for themselves, leaving them without including an element of persuasion that exist among private actors.

Against this background, the purpose of this chapter is to examine the potential of communication as a means to promote a more responsible borrowing behavior. We first focus specifically on the ability of the young borrower to interpret given information and, as a consequence, to make wise decisions, and second, the impact of the format of the presented information on borrowing behavior. In order to accomplish this, we review recent literature and present two empirical studies of our own performed to understand borrowing behavior among young adult consumers.

The rest of the chapter proceeds as follows. First, in Sect. 2 we describe general communication research to gain insights into the effects and mechanisms of communication on recipients. In this section, we also review previous research with special focus on the impact of information format on borrowing behavior. We then proceed in Sect. 3 to describe the results of two studies. Finally, in Sect. 4 these results are being discussed and conclusions are drawn.

## 2 The Influence of Communication and Information on Behavior: The Importance of Involvement

### *2.1 Importance of Effective Communication and Accurate Information*

For many actors in society, understanding how to communicate effectively with various stakeholders is very important. Translating these ambitions into practice, however, is often difficult. For example, not only does effective communication require the difficult tasks of capturing the audience's attention, providing messages that are accurately understood, and has the intended attitudinal, emotional, or behavioral consequences among recipients. It also requires the sender to follow both industry-specific and general rules and regulations of how this communication should be implemented. For companies and legislators that may have an interest in providing consumers with specific information, providing accurate and attractive messages while at the same time following the rules remain a key challenge.

Given these challenges, and adding the general importance of communication to many different actors and contexts, it is not surprising that research has focused extensively on the topic. In a short historical overview of how communication affect attitudes and behaviors of

recipients of information, Petty, Brinõl, and Priester (2009) highlight the development over time. Here, the development is traced from so-called "direct effects models" of the early twentieth century, where communication was thought to have a direct effect on the behavior and attitudes, to the present day, where the relationship between communication and its effects is much more nuanced. One of the more recent models that aims to explain the effectiveness of communication is the Elaboration Likelihood Model of Persuasion (ELM) (Petty & Cacioppo, 1986). The ELM highlights that the involvement level of the recipients is key to understanding how they will process messages of persuasion (Petty, Cacioppo, & Schumann, 1983). On one hand, cognitive efforts are used in high involvement situations to process information to determine whether the message has merit (Petty et al., 2009). In low involvement situations, on the other hand, simple cues are used instead of in-depth cognitive processing.

For communication regarding loans and indebtedness, these insights have consequences for policy makers and financial service providers alike. For example, a key aspect of communication and information provision about responsible borrowing behavior will be to adapt to the involvement level of the recipients in order to be efficient. In the context of financial services, research has shown that people in general have low involvement with personal financial matters (e.g. Devlin, 2010). While studies of the specifics of involvement and borrowing behavior are few, insights from information search behavior indicate the same. For example, in a series of studies, consumers have been found to not spend much effort on searching and analyzing information prior to the loan or credit decision (e.g. Fan & Chatterjee, 2017; Lee & Hogarth, 1999a, 1999b, 2000a, 2000b). Thus, it is unlikely that communication to reduce borrowing that requires cognitive effort will be very successful in the context of loans. Many consumers may simply not be involved enough to engage in the cognitive processing required to respond to such messages.

With these insights about the importance of involvement to processing communication, we now turn to the specifics of communication and information provision as a means to promote responsible borrowing behavior. Given the limited involvement of consumers, what is the potential of communication or information provision to promote responsible borrowing behavior among young adults?

### 2.2 Communication and Information Initiatives on Borrowing and Credit

Below we summarize the literature regarding the impact of information format on borrowing decisions, as well as a presentation of a few general remarks.

#### 2.2.1 The Importance of How Borrowing Information Is Presented: Loan Disclosure and Format

The format in which information is presented, and its behavioral outcomes, has been a research topic within financial decision-making for several years (e.g. Duclos, 2015; Kozup, Howlett, & Pagano, 2008). The majority of this body of research has however focused on investments, and not loans and borrowing.

Turning specifically to the research that focuses on borrowing behavior, a clear categorization of these studies is difficult to provide. One distinction in the literature is still that some papers focus on the impact of information format and disclosure on spending money, and as a consequence, the *tendency to take up a loan*, while other papers focus on the impact of format in *paying off a loan*. With regard to the former, Soman and Cheema (2002) experimentally study the impact of credit limit on spending. Throughout a series of experiments (with both young students and older respondents), they show that consumers with a high spending limit, and who perceive that the spending limit is credible, also spent more as compared to consumers with a low spending limit.

Results like those produced by Soman and Cheema (2002) indicate that the format and information that surrounds the borrowing decision may have a large impact on the borrowing decision. Further evidence of the impact of format is provided by Bertrand, Karlan, Mullainathan, Shafir, & Zinman (2010) who perform a field experiment to investigate the impact of advertising on demand for credit in South Africa. In the experiment, advertising about the credit offer was manipulated in eight groups based on advertising content, price, and offer deadline. The authors found that advertising had an effect of demand for credit, for example, showing a female photo, and not suggesting a specific use for the loan increases demand for the loan by the equivalent of a 200 basis point reduction in interest would do.

One area where formats may be particularly important are the instant unsecured loans in the United State that are required to be repaid on the next payday. These so-called payday loans carry a high interest rate, which makes them a poor choice for many consumers. Bertrand and Morse (2011) report a field experiment examining whether specific information may reduce the tendency to take up payday loans. In the experiment, information regarding the costs of the payday loans was manipulated in dollars or annual interest rates. The results showed that the additional information has a negative impact on the tendency to take up payday loans during the months after the information was provided. Especially strong was the effect of adding up the actual cost of payday loans over time in dollars.

Finally, Ferman (2016) show that the format of the disclosure may impact different sets of customers in a different manner. In an experimental study of bank clients in Brazil, credit information (interest rate) and the prominence of this information as presented to the customer was varied. The results showed that while customers were interest-rate sensitive, high-risk customers were less sensitive to a higher interest rate when the offer did not display the interest clearly. These customers may thus be less discerning and more vulnerable to poor disclosure.

Turning now to the research that focuses on the influence of format in paying off loans, the primary concern is often credit balances. Credit cards have a high interest, making it expensive to carry the debt for an extended time. However, many credit offers use "minimum payments" where the holder can opt to pay back as little as 2–3% every month. These minimum payment factors can also have a negative effect on the amount that is paid off by consumers. For example, in a series of experiments and field data analysis, Navarro-Martinez et al. (2011) varied the minimum payments and supplemental loan information on decisions to repay debt. Throughout the studies, a strong negative effect of the minimum payments was observed on repayment behavior.

With a slightly different focus, Salisbury (2014) studies the effects of providing minimum payment warnings, that specify the consequences of only paying the minimum amount. The study found that displaying only the negative impact of minimum payments had a limited effect by itself. However, when providing clear alternatives for action, such as providing a three-year plan, the warnings resulted in increased payments.

Many recent papers on the topic of debt repayment behavior have dealt specifically with the 2009 Credit Card Accountability Responsibility

and Disclosure (CARD) act in the United States. The CARD act designed a number of simplified disclosure requirements, such as displaying the interest savings for paying off the loan within 36 months, as opposed to make only the minimum payments (Loewenstein et al., 2014). In studying the consequences of the act, Agarwal, Chomsisengphet, Mahoney, and Stroebel (2015) found that the CARD act did in fact reduce the costs of borrowing, particularly for consumers with low credit scores. Moreover, the nudge to make people pay off their balance within 36 months had a small but statistically significant effect. Jones, Loibl, and Tennyson (2015) studied the effects of the CARD act using surveys, nationally representative to the United States. The results showed an increase in the amount that was paid off each month. However, among so-called revolvers, who carry credit debt, the act had little effect.

#### *2.2.2 General Remarks and Observations*

First, we note that while borrowing behavior has received some attention, the vast majority of studies regarding the influence of information and communication on financial decision-making have been focused on investment and savings behavior. While the introduction of the CARD Act in the United States clearly attracted some research (e.g. Agarwal et al., 2015; Jones et al., 2015; Salisbury, 2014), it is still much less research of the borrowing side of financial decision-making. As savings and borrowing make up key interrelated behaviors in order to understand the financial situation of consumers, this is problematic.

Second, within the body of literature that is available, the bulk of research has focused on credit and credit cards (e.g. Braun Santos, Mendes-Da-Silva, Flores, & Norvilitis, 2016; Ferman, 2016; Lee & Hogarth, 2000b; Seira et al., 2017; Sotiropoulos & d'Astous, 2012, 2013). While some research focuses on other types of loans, such as payday loans and mortgages (Bertrand & Morse, 2011; Lee & Hogarth, 2000a; Perry & Blumenthal, 2012; Perry & Lee, 2012), this type of focus is less common.

Finally, a third observation is that while information and communication theoretically can focus on many issues, most research is centered around the effect of formats of disclosure (e.g. Navarro-Martinez et al., 2011; Perry & Blumenthal, 2012; Salisbury, 2014).

We believe that research that focuses on understanding borrowing behavior as a consequence of the interaction with various format

and content of information, particularly regarding other types of loans than credit, and other types of influences than disclosure, is a welcome addition to the literature. Furthermore, the observation that borrowing might have pronounced importance for young adults also deserves some empirical attention. Below, we present two studies that have been performed on the topic of information interaction, focused on young adults.

## 3 Two Studies of the Influence of Communication and Information About Borrowing Behavior

Below we present two studies of the influence of communication and information on young adults' borrowing behavior, in the context of mortgages. The first study is performed in order to understand the decision-making process and the impact of information about mortgage loans. In the second study, we focus on storytelling, with the aim to see if presenting information as stories induces more involvement and affect instead of traditional fact formats to communicate downsides of borrowing.

### *3.1 Does Clear Information Matter?*

The first study presented assesses the impact of information format on home-purchasing decisions. Recall the discussion in Chapter 2 that buying a home is one type of purchase where young adults, with no previous exposure to sometimes rapidly increasing house prices, are particularly exposed to the availability of loans. When deciding what home to buy, various options have different consumption values. The size, location, and general standard of the home are all attributes that can impact whether people desire a particular option. However, as apartments and houses cost a substantial amount of money, they are typically bought using mortgage loans, and it can hence be difficult for consumers to understand the consequences of buying a home at a certain price. In order to investigate the ability of consumers to make reasonable home purchases, and as a consequence, reasonable borrowing decisions, we designed an experiment. Through the experimental design, we aimed to study the tendency for young adults to choose a home that is too expensive, and that may result in over-indebtedness.

Undergraduate students were presented a scenario asking them to imagine that they had received a job in a different city, that they wanted to purchase an apartment and move there, and that they would have to borrow for the entire purchase. The participants were asked to imagine that they would make SEK 25.000 per month in the new job (which is a normal salary for new graduates in Sweden). They were then shown different ads for available apartments in the new city, where the prices were similar to actual housing ads in a mid-sized Swedish town. The two most expensive alternatives were more expensive than the appropriate loan amount given the specified income as detailed by the Swedish National Board of Housing, Building and Planning (2009). The homes varied in attractiveness with the more expensive apartments being larger and having a better location than the cheaper apartments. Participants choose one of the advertised apartments.

Almost half of the sample of 429 participants (44%) chose apartments more expensive than the norm set by Swedish authorities. This is a clear indication that many people find it difficult to judge what a reasonable price of a home is when only being presented with an overall price. This is a valuable result given our focus on understanding the individual as borrower/decision-maker. We tried to envisage various factors that could possibly have an impact on how expensive a flat the individual would choose. The results are depicted in Table 1. First, we focused on the economic background, measured as approximate levels of current income, monthly rent, monthly savings, and level of other expenses. Second, we included level of current economic worry, which may be described as the

**Table 1** Standardized regression coefficients ($\beta$) and $t$-statistics associated with effects on choice of apartment varying from less to more expensive

| *Dependent variable:* choice of apartment | $\beta$ | $t$ | $p$ |
|---|---|---|---|
| Economic background | −.125 | 1.21 | .228 |
| Economic worry | −.056 | 0.90 | .368 |
| Help from parents | .065 | 0.61 | .543 |
| Loan attitude | .129 | 1.48 | .139 |
| Loan literacy | −.328 | 5.96 | <.001 |
| Age | .004 | 0.50 | .567 |
| Gender | −.022 | 0.14 | .888 |
| Model fit | $R^2 = .143$; $F(1,420) = 5.963$; $p < .001$ | | |

subjective judgment of the above-stated descriptions regarding economic background. A third factor expressed the possibility of parents helping out with loans, and a fourth factor aimed at capturing the participants' attitude toward loans in general, that is whether it is negative, unacceptable, or unwise to borrow money. We further included a crude literacy measure, focusing on loan-related knowledge. Participants' knowledge of, for instance, fixed versus variable interest rates, and how to act in order to minimize interest-rate payments over the duration of the loan were posed, and the number of correct answers (out of four) was included as an indication of a loan-literacy level. Finally, age and gender were included as possible influential factors. The results showed that the only factor having a statistically significant impact on choice of apartment was loan literacy, implying that the more correct answers they had on the measure, the cheaper the apartment they chose.

The results in Table 1 deserve some comments. First, the result that loan attitude did not have a statistically significant impact on choice of apartment is in line with Chapter 4 of this book demonstrating that the link with attitude is weak if not measured to closely correspond to a behavior. Second, the strong effect of loan literacy should be interpreted bearing in mind that the literacy questions asked are more centered on knowledge of borrowing and lending specifically, and hence not directly comparable to a general literacy scale, as described in Chapter 7.

The fact that our participants chose flats that were often too expensive clearly implies that individuals have difficulty in interpreting what a price of a flat (with associated loans) means in terms of monthly cash-flow, and ultimately suitability for the own economy. The results further suggest that financial literacy, that is objective loan-related financial knowledge, is key to understanding the choice behavior of individuals. Thus, without concrete information on monthly cash flows and payments, individuals may over estimate their ability to take on large loans. Using concrete information thus seems to be a key factor, which is well in line with the concreteness principle (Kahneman, 2002), where individuals tend to not interpret information but rather use it in the format that it is given—something that is obvious in our example.

An alternative approach, elaborated upon in the literature, would be to instead work with norms. In aiming to address the impact of peer effects, Seira et al. (2017) studied how a set of different information

messages highlighting social comparisons had an impact on a number of credit-related factors, such as delinquency and interest paying debt. The social comparisons that were provided to the consumer gave indications of how their amount of debt or level of risk compared to their peer group of borrowers. While not all of the messages were effective, some messages such as communicating the level of risk (both high and low) reduced delinquency. In all, while the effects are small, the results highlight that communicating in terms of social comparisons may be one possible way forward. Braun Santos et al. (2016) surveyed female college students with the aim of understanding financial well-being and negative credit card usage in Brazil and the USA. In the study, high levels of financial social comparison, the notion that people compare their possessions with others, was a significant predictor of negative credit behavior. Thus, people who engage in social comparisons also tend to have a problematic credit card usage.

Other survey initiatives to disentangle the influence of social influences on credit card behavior include Sotiropoulos and d'Astous (2012, 2013). Both studies found that overspending on credit cards was influenced by social norms. However, the studies also recognize the importance of the feeling that others would expect them to spend at a certain level to the social effect on credit.

In all, we have here identified three tools for the legislator to work with in order to influence the individual to borrow more sensibly. First, there is the option to provide transparent and concrete information, or disclosure. Second, there is the possibility to implement financial education even more, since financial literacy seems to have a positive impact on choice. Third, some evidence points at social context, through consumption norms and social comparison of debt and risk, being able to affect consumers' decisions to borrow money. However, as compared to disclosure, we know less about these effects.

### *3.2 Storytelling as Influencing Involvement?*

As noted above, one of the troublesome issues with communication in the financial context is the lack of involvement by customers. This lack of involvement often means that communication regarding important financial issues is difficult to convey. Consumers tend to not invest the

effort needed to process detailed messages. As proposed in ELM (Petty et al., 2009), a low level of involvement drives the individual toward a cue-based type of decision-making instead of pursuing cognitive information-processing.

Communication can also raise involvement in consumers. Two examples of such communication are to communicate in the form of stories or to emphasize the riskiness of the choice (Carlsson Hauff, Carlander, Gamble, Gärling, & Holmen, 2014). Stories, or narratives, may be defined as tales describing a protagonist and illustrating a sequence of events with both a beginning and an end (Wentzel, Tomczak, & Herrmann, 2010). The use of stories has been found to induce narrative processing, hence to help the individual getting immersed in a certain type of consumption (Escalas, 2007), and to induce positive affect and emotive response, as well as involvement (Green & Brock, 2000). This increased positive affect has also been verified in a financial communication setting, where also the inclination to save was positively affected by the use of stories (Carlsson Hauff et al., 2014).

Other research has highlighted the connection of financial risk to involvement (e.g. Howcroft, Hamilton, & Hewer, 2007). If something is perceived to be risky, people are more likely to process information and spend cognitive effort to make a deliberate decision. Thus, highlighting riskiness may be one strategy to increase involvement in the borrowing decision.

Against this background, the purpose of the second study was to investigate whether storytelling and risk information would impact consumers' involvement, affect and ability to make appropriate home purchasing and borrowing decisions. The influence of communicating cautionary information of taking on too much debt *in a storytelling format* was measured, focusing both on consumer involvement, affect, and behavior with the borrowing decision. Further, the influence of communicating cautionary information regarding taking on too much debt using clear illustrations of potential consequences of the underlying interest rate uncertainty was measured, likewise focusing on the level of involvement, affect, and borrowing behavior.

In order to address the effects of information, we designed a 2 (storytelling: story/fact) by 2 (interest-rate uncertainty: clear examples/no examples) between-group experiment. The manipulations were in

the form of information about amortizations and interest rate given to a potential borrower. In the fact conditions, this information was presented in a traditional, fact-based manner similar to information actually obtained when going to a bank. In the story condition, a story-based format of the same information was created, highlighting thoughts and reflections by the main character as opposed to hard facts. In the interest-rate uncertainty condition with clear examples condition—the fact-based and the story-based information was accompanied with an explicit illustration of consequences of taking on debt. We here explicitly take into account the fact that interest rates will fluctuate in the future, showing an example of the individuals' cash flow at three different interest-rate levels. In the no examples condition, these additional illustrations were left out.

The general experimental set-up had similarities with the one used in the previous subsection: participants in the study received a scenario instructing them to imagine that they had received a job in a different city and would want to purchase an apartment and move there. The monthly income and asset level were specified such that borrowing for the entire purchase was necessary.

After having been shown the scenario, the participants received one of the four treatments of storytelling and interest-rate uncertainty. After this, they answered questions about affect and involvement with regard to borrowing money. Finally, they made a choice of one of five different apartments. These apartment ads were identical to the ones used in the previous experiment, with minor price adjustments. Also here two alternatives were too expensive.

A total of 413 young adults between 18 and 30 years old were recruited from a Swedish nationally representative web panel. In order to make sure that the treatments had the intended effect, two manipulation checks (one question for each manipulation) was included in the survey. As can be seen in Table 2 that reports means and *t*-tests, the participants perceived the treatments as intended. In the case of storytelling, the participants in the story condition noticed the presence of a lead character, which is a characteristic of storytelling (Escalas, 2007), in a significantly higher extent than in the fact condition. As for interest-rate risk, participants in the interest risk condition indicated the presence of examples detailing the consequences of a rate hike to a higher extent than the no interest rate risk condition.

**Table 2** The manipulation checks

| | *Fact condition* | *Story condition* | *p* |
|---|---|---|---|
| Did the information have a lead character? | 2.76 | 3.76 | <.001 |
| Did the information provide examples of consequences of interest rate hike? | No interest rate risk condition | Interest rate risk condition | |
| | 3.01 | 3.81 | <.001 |

Table 3 shows the cell means and the standard deviations of affect, involvement and choice of apartment in the different conditions. As can be seen, the condition that received the story as well as interest-rate risk examples perceived the highest level of negative affect. This was also the group of young adults that chose to buy the cheapest apartments. As for involvement with the purchase of apartments, the storytelling without interest-rate risk examples had the highest rating. However, the only differences that reached significance (in *t*-tests) were the differences regarding choice of flat between the story and the fact group. Thus, participants in the story condition chose significantly cheaper apartments than the participants that made the choice after having been presented the information in a fact-based manner.

The same procedure was used to investigate the impact of highlighting potential interest rate risk (by using examples) on affect, involvement and tendency to choose an apartment that is too expensive. It was found that the participants who received clear illustrations of the interest-rate risk experienced more negative feelings than the participants who did not receive the risk illustrations. However, no significant differences were obtained as regards involvement and, more importantly, choice of flat.

**Table 3** Cell means and standard deviations

| | *Fact/ examples* | *Fact/no examples* | *Story/ examples* | *Story/no examples* | *Total* |
|---|---|---|---|---|---|
| Negative affect | 2.76 (1.18) | 2.52 (1.13) | 3.03 (1.03) | 2.63 (1.10) | 2.74 (1.10) |
| Involvement | 3.99 (.85) | 3.91 (.97) | 3.96 (.93) | 4.21 (.78) | 4.02 (.89) |
| Choice of apartment | 2.94 (1.41) | 2.72 (1.39) | 2.51 (1.31) | 2.59 (1.51) | 2.69 (1.41) |

This second study focused on the impact of two specific information factors when deciding to buy a home; presenting information content in terms of a story and highlighting risk by giving clear examples. In all, the results highlight some effects of these factors, although not as strong as expected.

As for presenting mortgage information in terms of a story, the results highlight that this may have a small effect on how young potential home-buyers process information. While there was no effect on affect or involvement, the group of young adults that received the story-based information chose to buy less expensive apartments. The share of respondents who purchased a too expensive apartment (options 4 and 5) dropped from 30 to 22% (compared to the fact-based information). As for the effect of including examples that highlighted the riskiness of the choice, however, no such effect on choice of apartment was found.

In all, the study shows that a story-based information format may result in potential young borrowers evaluating the borrowing decision in a different way. In particular, such a format may lead to a reduction of overall purchase amount. However, as several of the other explanatory variables (affect and involvement) were not statistically significant, it is difficult to identify the reason why this effect was observed.

## 4 Conclusions and Implications

The question we address in this chapter concerns the potential for information provision and communication to promote a more responsible borrowing behavior among young adults. By examining both the existing literature and our own experimental studies we reach a few important conclusions. The first is that people overstate what they can afford. It seems difficult for young adults to accurately calculate what they can afford, particularly when only being exposed to an overall cost. For policy makers it is thus key to make sure that rules are in place, and that focusing solely on forcing financial companies and lenders to provide accurate and transparent information may simply not be enough.

Second, level of loan literacy proved to have a distinctive impact on ability to interpret the sparse information given and to transfer the message to a more sensible level of borrowing. Continuing the information-processing road of imposing regulations as regards disclosure as indicated above, policy makers should be able to improve their results

by simultaneously working with tools that enhance young adults' ability to decode financial information, that is making them more financially literate.

Finally, there seems to be a limited effect of using a storytelling format when communicating with young adults about to make borrowing decision. Instead of only presenting facts, the story format reveals the relevant information in terms of a story, featuring the main protagonist with which they can identify. The effect of storytelling in the borrowing context was established as effects on negative affect, involvement, and choice of apartment. However, while a small reliable effect of the story format was observed on choice, the other effects failed to reach statistical significance.

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CHAPTER 7

# Financial Literacy and Debt

*Anders Carlander and Jeanette Carlsson Hauff*

## 1 Introduction

Given the importance of information and information format for credit behavior presented in Chapter 6 of this volume, a focus on the individual as an information-processor in a borrowing context is a natural next step. The general question hence is how well an individual is prepared to receive, decode, and act upon information from a lender.

This general theoretical question clearly has practical consequences. Focusing on the Swedish case, Chapter 3 of this volume describes a total increase in loans taken by individuals. The increase in mortgage loans could possibly be attributed to the sharp increase in house prices—but what would be the mechanism behind the surge of non-mortgage debts? A possible partial explanation may be that it is explained by a lack of knowledge in financial matters. This would be in line with much of the literature on individuals' information-processing capabilities: only one

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in three adults has a level sufficient to be considered fully informed and rational (Klapper, Lusardi, & van Oudheusden, 2015).

In this chapter, we discuss how financial literacy (both level of objective knowledge and individuals' own perception of their level of knowledge), in conjunction with age, gender, education, and income affects a wide range of reported financial behaviors related to debt. In the next section we discuss the definition of financial literacy, both in general and connected to borrowing decisions. We then discuss the measurement of financial literacy, and in the latter part of the chapter provide empirical evidence of the effect literacy has on a number of debt-related financial behaviors, such as, for example, mortgage-related decisions and use of credit cards. The chapter ends with a section on the connection between financial literacy and indebtedness for the group of young adults.

## 2 Financial Literacy

The term financial literacy is usually used to refer to financial knowledge. The exact definition is however not clear. On one hand, one may use a definition building on the actual outcome of financial decision-making, such as in Noctor, Stoney, and Stradling (1992). Another possible definition takes its starting-point in the various skills necessary; for instance, the ability to comprehend and analyze financial material, such as proposed by Vitt et al. (2000). The use of such skills is also the core of the definition adhered to by the President's Advisory Council on Financial Literacy (PACFL): 'the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being' (PACFL, 2008).

The focus of both skills and knowledge in the PACFL definition necessitates a discussion of the construct of knowledge. The construct comprises both objective knowledge (i.e., "knowledge of specifics", or skills and knowledge about finance that facilitates an optimal management of financial resources), familiarity (i.e., frequency of product-related experiences), a facet that has been reported to contribute more to financial literacy than information from peers or even from formal financial education (Hilgert, Hogarth, & Beverly, 2003), but also individuals' perceptions of their own level of knowledge. The importance of including in a definition not only the necessary individual skills but also the various other aspects of the knowledge construct is simply that all these aspects are likely to have an impact on subsequent behavior. To sum up,

we will in the following sections use the term financial literacy as an overarching label, and refer to objective literacy, subjective literacy, and familiarity when a reference to one of the subvarieties is necessary.

There are numerous examples of how financial literacy and financial behavior relate. Starting with the most fundamental examples of financial activities, low financial literacy has been shown to be positively related to being unbanked, that is, not holding a financial transaction account (Hogarth, Angelow, & Lee, 2005). It is therefore not surprising that a more complex task such as combining assets into a savings portfolio may be related to financial literacy leading to, for example, underdiversification of risky assets (Neumuller & Rothschild, 2017). Even more alarming perhaps is the connection between low levels of financial literacy and insufficient retirement planning, that is, a tendency not to look ahead and make preparations for life as a retiree (van Rooij, Lusardi, & Mitchell, 2011).[1] Individuals who are more literate are furthermore more likely to accumulate wealth, and hence to enhance well-being at old age (Behrman, Mitchell, Soo, & Bravo, 2012). These few examples are by no means exhaustive but suffice to conclude that there is ample evidence of financial literacy indeed playing a decisive role in guiding individuals' financial behavior, with higher levels of financial literacy leading to greater utility and well-being. It could also be argued that the importance of an adequate level of financial literacy has increased in the Western world, due to shifts toward an individually based form of decision making about, for example, pensions (for a lengthier review, see Hastings, Madrian, & Skimmyhorn, 2013).

## 3 Financial Literacy Connected to Borrowing Decisions

Financial literacy has also been proven to have a marked direct effect on indebtedness. Individuals with low objective or fact-based financial literacy are in a UK study found to use high-priced credit to a larger extent than those with high literacy scores (Disney & Gathergood, 2013). The individuals with low levels of financial literacy in Disney and Gathergood's study were also more likely to lack confidence when interpreting credit terms and to be confused about the financial terminology. This further highlights the connection between communication and format of information, and financial literacy discussed in Chapter 6 of this volume. Using a sample of individuals that took out subprime loans in

the US during 2006 and 2007 (i.e., prior to the financial crisis), Gerardi, Goette, and Meier (2013) find that individuals with low levels of financial literacy are more likely to default on mortgage payments.

Previous studies have not only focused on connecting low levels of financial literacy with inferior financial behavior. There is also evidence that financial education, that is, attempts to improve financial literacy, may have a positive impact on financial behavior. Using data on state-level policy changes in several US states regarding graduation requirement (with financial education becoming compulsory) in high school, a recent study connected these changes to a decrease in reliance on non-student debt and improved repayment behavior (Brown, Grigsby, van der Klaauw, Wen, & Zafar, 2016). Subjective financial literacy, or financial confidence, has also been found to lead to a more responsible use of credit cards (Braun Santos, Mendes-Da-Silva, Flores, & Norvilitis, 2016). There is hence some evidence that financial knowledge influences borrowing behavior, either positively or negatively.

## 4 Financial Inclusion

Before trying to assess in what ways financial literacy has an impact on various debt-related behaviors, we start with the basic concept of financial inclusion. We do this by describing the prevailing situation in Sweden. Specifically, we look at the percentage of the Swedish population holding accounts and credit cards of various sorts, and also at the frequency of saving for different purposes. One particular reason is to describe the environment in which we have obtained our results to be reported below, partly to allude to the very definition of financial literacy and its familiarity component.

The global picture regarding financial inclusion is a rather pessimistic one: over 1.7 billion adults remain completely unbanked (Demirgüç-Kunt Klapper, Singer, Ansar, & Hess, 2018). However, this is a picture with large geographical differences. In Western economies, like Sweden, almost everyone has at least one bank account.

In our study described below, we measure the level of financial inclusion through a set of questions pertaining to different types of accounts (transaction account, savings account, etc.) and cards (credit card, debit card, etc.). Our results correspond closely with the official statistics of financial inclusion in Sweden (see the column labeled Findex in Table 1).

**Table 1** Financial inclusion in our Swedish sample compared to the World Bank Financial Inclusion index[a] (Findex) 2017

| | *Findex*[b] | *Swedish data*[c] |
|---|---|---|
| Bank account (own) | 99.7 | 98.3 |
| Pay bills on the Internet (yes) | 79.8 | 94.9 |
| Debit card (own/used past year) | 98.2/91.6 | 85.2 |
| Credit card (own/used past year) | 45.0/34.7 | 47.0 |
| Mortgage (yes) | 48.3 | 35.1 |
| Mortgage interest (fixed/variable) | – | 23.0/26.8 |
| Saving for retirement (yes) | 57 | 55.2 |
| Coming up with emergency funds (possible) | 89.7[d] | 55.2[e] |
| Borrowed any money in the past year | 54.2 | – |
| Borrowed from a financial institution | 21.5 | – |
| Borrowed using store credit | – | 33.8 |
| Borrowed from family or friends | 13.6 | – |
| Saved any money in the past year | 83.1 | – |
| Saved at a financial institution | 75.4 | – |

[a] http://databank.worldbank.org/data/source/global-financial-inclusion
[b]In percent for ages from 15 years
[c]In percent for ages from 18 years
[d]1/20 of GNI per capita (≈2740 US$)
[e]Cover expenses for three months

An absolute majority report having a bank account and a debit card. Nearly 95% report that they use the Internet to pay their bills (Findex percentage being lower). Every other participant report that they are saving for retirement, are in possession of a credit card, and that they have an economic buffer or a rainy-day fund. In our sample, only a third report having a mortgage compared to the Findex number of nearly 50%. We conclude that our results show that financial inclusion in Sweden is high and that they are largely confirmed by the global Findex statistics.

Given the fact that experience and familiarity seem to foster a higher level of financial literacy, the high levels of financial inclusion as described above may hint at corresponding high levels of financial literacy. Remember however that the construct of financial literacy may be seen as three different but interrelated parts; objective literacy, subjective literacy, and familiarity. In the following sections we assess whether financially included individuals (i.e., those individuals that have reported mortgage

holdings and other savings funds) also are more financially literate. The figures in Table 1 all pertain to the whole population, including individuals from 15 years and above (Findex) and 18 years and above (Swedish data). Given our focus on young adults, the main message from the high levels of financial inclusion becomes one of describing the environment for young Swedish adults, starting to build financial experience of their own to be wisely used in subsequent borrowing decisions.

## 5 Measuring Financial Literacy

Moving from the basic topic of financial inclusion, we turn now to the topic of financial literacy, and to the task of how to measure the construct. Adhering to the thought that financial literacy is comprised of three subsets; objective literacy, subjective literacy, and familiarity, the task becomes one of measuring these three subsets. Starting with the subset of objective literacy, this comprises a set of knowledge questions pertaining to different financial topics. Objective literacy has in previous studies been measured using a variety of questions, but one of the most used measures consists of three questions included in the 2004 Health and Retirement Study (HRS) and two questions from the 2009 National Financial Capability Study (NFCS) (e.g., Lusardi & Mitchell, 2014). The five questions tap into the five topics of interest rates and compounding, inflation, risk diversification, mortgages, and bond pricing. The questions which are referred to as "the Big Five" are presented in Table 2 together with the answer options.

Another way of measuring objective financial literacy is the S&P Global Finlit Survey which consists of four questions about risk diversification, inflation, numeracy (interest), and compound interest. A person may be considered financially literate if he or she answers at least three of the four questions correctly. Results differ widely between countries, but Sweden is at the top with 55–75% of adults considered financially literate compared to roughly 30% globally (Klapper et al., 2015).

The need to increase objective financial literacy through financial education has been on the agenda for some time and is one of the main agenda items for the Swedish financial supervisory authority.[2] However, recent evidence seems to suggest that although it is more beneficial to be a high-knowledge investor (Guiso & Viviano, 2015), interventions, and financial education have little or no effect, especially in low-income samples (Fernandes, Lynch, & Netemeyer, 2014). One concrete reason for

**Table 2** The Big Five financial literacy questions taken from the 2004 Health and Retirement Study (HRS) and the 2009 National Financial Capability Study (NFCS)

| *Topic* | *Question* | *Answer options* |
|---|---|---|
| Interest rates and compounding | Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? | **More than $102**<br>Exactly $102<br>Less than $102<br>Don't know<br>Refused |
| Inflation | Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account? | More than today<br>Exactly the same as today<br>**Less than today**<br>Don't know<br>Refused |
| Risk diversification | Do you think that the following statement is true or false: Buying a single company stock usually provides a safer return than a stock mutual fund? | True<br>**False**<br>Don't know<br>Refused |
| Mortgages | Do you think that the following statement is true or false: A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest over the life of the loan will be less? | **True**<br>False<br>Don't know<br>Refused |
| Bond pricing | If interest rates rise, what will typically happen to bond prices? | They will rise<br>**They will fall**<br>They will stay the same<br>There is no relationship<br>Don't know<br>Refused |

*Note* Correct answers are in boldface

these findings may stem from the fact that financial education does not alter the structures and perceptions of low-income families (Tuominen & Thompson, 2015). A higher debt burden is on the other hand more prevalent among less financially knowledgeable individuals, especially if they are prone to impulsiveness (Ottaviani & Vandone, 2017). Specifically, individuals who exhibit less self-control are more likely to use high-cost credits, such as high-interest unsecured loans, and are less likely to be able to cover expenses (Gathergood, 2012). In the literature, a narrower conception of objective financial literacy is the introduction of debt literacy consisting of questions pertaining to consumer credit. Lusardi and Tufano (2015) report that more debt-knowledgeable individuals have more advantageous loans in terms of costs, fees and that they are, in general, less likely to be over-indebted.

It is also of interest to investigate whether objective financial literacy differs from self-reported subjective financial literacy. Allgood and Walstad (2015) report that a combined measure of fact-based and self-reported financial literacy more validly explain financial behaviors.

## 6 Empirical Effects of Financial Literacy on Debt-Related Financial Behavior

We present here results from a study covering the topics of financial behaviors and financial literacy (see Carlsson Hauff, Carlander, Gärling, & Nicolini, 2018). The study uses data from a representative sample of Swedish citizens provided by CINT (an online research panel). After an initial screening of 637 individuals, 269 men and 275 women ($n=551$) remained, with the most commonly reported age span of 41–50 years. The questionnaire contained 64 questions on socio-demographics and behaviors and 50 questions on different topics of objective or subjective financial literacy. We will only use a subset of the questions in this chapter, namely the five knowledge-based questions previously referred to as the big five (henceforth "Big5"), subjective or self-rated financial literacy (henceforth S-RFL) and behavioral questions pertaining mainly to debt. Each question together with the answer options are presented adjacently to the relevant analysis below. As will be seen in the sections below, we also use a subsample of young adults, aged 18–30 years, in order to assess whether they differ from the full sample. The empirical results enable us to discuss the possibility of financial education increasing financial literacy as a fruitful way to address the problem of indebtedness in a more concrete way.

### *6.1 Financial Freedom*

Our first question concerns what we here label "reported financial freedom", that is the ability of the individual to make ends meet each month. The hierarchical regression analyses in Table 3 reveal a statistically significant impact of fact-based financial literacy (Big5) which however is nonsignificant when introducing self-reported financial literacy (S-RFL). The impact of self-reported financial literacy remains when controlling for age, gender, education, and income.

The table shows a connection between subjective financial literacy and financial freedom. That financial literacy would be connected to the ability to plan, here specifically focused on the ability to spread out financial resources over the month, is consistent with research on retirement planning and literacy. Van Rooij et al. (2011) report that planning is more difficult for those with low financial literacy. It is however unexpected that subjective financial literacy (S-RFL) has a statistically significant effect. Subjective financial literacy, together with income explains almost 20% of the variance in economic freedom. An explanation for this may be that economic freedom is also a subjective measure moderated by living costs and lifestyle choices. Higher income is however still significantly associated with economic freedom to a much higher degree than any

**Table 3** Hierarchical linear regressions on reported financial freedom of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education and income

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *B* | *SE* | *B* | *SE* |
| Big5 | .17*** | .03 | .11** | .04 | .07 | .04 |
| S-RFL | | | .11** | .03 | .07* | .03 |
| Age | | | | | −.06 | .02 |
| Gender | | | | | .07 | .09 |
| Education | | | | | .04 | .04 |
| Income | | | | | .21*** | .02 |
| Adjusted $R^2$ | .05*** | | .06*** | | .18*** | |
| *n* | 495 | | 456 | | 421 | |

*Note* The question is phrased "In a typical month, how difficult is it for you to cover your expenses and pay all your bills and obligations?". Answer options are 1 = Very difficult, 2 = Difficult, 3 = A bit difficult, 4 = Not at all difficult

*$p<.05$, **$p<.01$, ***$p<.001$

other factor. As will be described in Table 10 below, the group of young adults differs significantly from the general population as regards financial freedom, in that the effects of fact-based financial literacy remain even after controlling for age, gender, and income.

### 6.2 Debt and Income

We focus next on the relationship between debt and income. This relationship referred to as the debt ratio is a frequently used measure of indebtedness. We asked the participants to rate how much total debt (not including mortgage) they have, expressed as, for example, "between 3 and 6 times my monthly income". This creates a coarse measure of the debt to income ratio. With this measure we investigate the relation between our debt ratio and other measures, such as amount of savings and level of financial literacy.

Starting with savings, we detect a negative relationship between the total amount of reported debts and savings, $r(384) = -.17$, $p < .001$. A cross table (Table 4) reveals that it is more common to have debt if the total amount of savings is low and that those who have zero debt also report more savings. This suggests that heavy borrowing (excluding mortgages) crowd out savings.

When introducing the concept of financial literacy, we find that level of debt does not show any relationship with either Big5 ($r = .01$) or

**Table 4** Cross table of frequencies between self-reported total amount of debt and total amount of savings

| *Total amount of savings* | *Total amount of debt (excluding mortgage)* | | | | | | *Total* |
|---|---|---|---|---|---|---|---|
| | *0* | *<3[a]* | *3–6[a]* | *6–12[a]* | *1–5[b]* | *>5[b]* | |
| <3[a] | 55 | 31 | 10 | 19 | 20 | 17 | 152 |
| 3–6[a] | 33 | 13 | 13 | 7 | 5 | 1 | 72 |
| 6–12[a] | 32 | 15 | 5 | 6 | 2 | 0 | 60 |
| 1–5[b] | 35 | 7 | 7 | 5 | 12 | 1 | 67 |
| >5[b] | 18 | 9 | 1 | 0 | 4 | 1 | 33 |
| Total | 173 | 75 | 36 | 37 | 43 | 20 | 384 |

[a]Multiplied by monthly salary
[b]Multiplied by annual salary

S-RFL ($r = -.02$). The reasons for this lack of relationship may emanate from several sources. One is that the type of "other debt" that is included in our measure, such as, for instance, credit card debt, is seen as unproblematic and a commonly used way to smooth consumption patterns over a time span. This type of financing alternative is available to, and used by, individuals independent of level of financial literacy. What is not included in the correlations, and that probably would make a difference, is the terms of the debt. Ample evidence shows that low levels of financial literacy lead to more expensive loans with unfavorable conditions (e.g., Disney & Gathergood, 2013).

### *6.3 Mortgage Loans*

As described in Chapter 3, mortgages constitute the majority of loans held by individuals in Sweden (similar to many other Western countries). When focusing explicitly on mortgage loans, we find that only one-third of the participants report that they currently have a mortgage (Table 1). Exposure should according to theory be related to financial knowledge and in logistic regression analyses shown in Table 5, we accordingly find that the Big5 is associated with having a mortgage but the effect is

**Table 5** Logistic regressions on having a mortgage of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education, and income

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *B* | *SE* | *B* | *SE* |
| Big5 | .22** | .07 | .12 | .08 | −.13 | .10 |
| S-RFL | | | .15* | .07 | .06 | .09 |
| Age | | | | | .17*** | .05 |
| Gender | | | | | −.30 | .24 |
| Education | | | | | .08 | .12 |
| Income | | | | | .48*** | .08 |
| Pseudo-$R^2$ | .01* | | .02** | | .15** | |
| *n* | 516 | | 469 | | 428 | |

*Note* The question was phrased "Do you currently have a mortgage?". Answer options where 0 = No, 1 = Yes
*$p < .05$, **$p < .01$, ***$p < .001$

reduced when we control for S-RFL which in turn is nonsignificant when age and income are entered.

The results overall indicate that financial literacy has very little effect on mortgage in terms of explained variance, whereas higher age and income both are positively associated with having a mortgage. Roughly 15% of the variance in having a mortgage can be attributed to mainly age and income. When analyzing the subgroup of young adults separately, the same overall picture is found: no effect of either fact-based or self-rated financial literacy

### *6.4 Fixed or Floating Mortgage Rates*

One aspect of mortgages is what kind of installment plan it includes, and more importantly, if it has fixed or floating interest rate. The optimal mortgage choice may differ depending on situations (Neuteboom, 2008), and many households exhibit a preference for fixed rates (Mugerman, Ofir, & Wiener, 2016). Floating rate may be more beneficial in the short to medium run for households with higher repayment capacity and willingness to take a higher financial risk. We find accordingly in Table 6 that both higher fact-based and subjective financial literacy is associated with a floating rate. The differences are however small and disappear when controlling for age and income that explain most variance in the choice between a fixed or floating rate mortgage.

When discussing the effect of floating versus fixed interest rates on mortgages, the tradition in Sweden is not to have a fixed rate over a longer time horizon. The typical available fixed rate periods would be 2 or 5 years and less frequently 10 years. This implies that the difference between a floating and a fixed rate is not large, something that could explain the small impact of self-assessed literacy.

### *6.5 Use of Consumer Credit*

We find that individuals with a higher fact-based financial literacy (Big5) are less likely to use consumer credit but only when controlling for self-rated financial literacy (S-FRL). This implies that S-FRL adds to the total effect of the Big5. We also find that income has a positive effect on consumer credit, which is surprising if credit is a substitute to liquidity. The predictive effects are modest, in Table 7 explaining no more than a few percentage points.

**Table 6** Multinomial logistic regressions on fixed versus floating mortgage interest rate of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education and income in three different models

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *B* | *SE* | *B* | *SE* |
| I never had a mortgage (comparison group) | | | | | | |
| *Fixed rate* | | | | | | |
| Big5 | .16 | .09 | −.04 | .10 | −.07 | .12 |
| SFL | | | .22* | .09 | .14 | .10 |
| Age | | | | | .30*** | .06 |
| Gender | | | | | −.44 | .31 |
| Education | | | | | .13 | .14 |
| Income | | | | | .40*** | .10 |
| *Floating rate* | | | | | | |
| Big5 | .25** | .09 | .11 | .10 | −.06 | .13 |
| SFL | | | .30*** | .09 | .20 | .11 |
| Age | | | | | .32*** | .07 |
| Gender | | | | | −.37 | .32 |
| Education | | | | | .06 | .15 |
| Income | | | | | .64*** | .11 |
| Pseudo-$R^2$ | .01** | | .02*** | | .16*** | |
| *n* | 452 | | 415 | | 382 | |

*Note* The question is phrased “In case you have/had a mortgage, is it/was the last mortgage a fixed rate or floating rate mortgage?”. Answer options are 1 = I have never had a mortgage, 2 = Fixed rate, 3 = Floating rate
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

To be noted is that approximately the same picture was obtained when analyzing the subgroup of young adults separately: effects of fact-based literacy but overall limited explanatory power.

### 6.6 *Use of Credit Cards*

The Swedish population seems reluctant to use credit cards in favor of debit cards, Swish (online payment through a smartphone app), and even cash (Riksbank, 2018), but nearly every other Swede still owns a credit card (see Table 1). This is in line with the picture regarding overall credit usage, at least in the US, which has increased together with a finance and credit culture (Fligstein & Goldstein, 2015). There are also other beneficial bonus and reward programs connected to holding and using a credit card, especially if paying the balance in full each month

**Table 7** Logistic regressions on credit line usage of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education, and income

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 2* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *B* | *SE* | *β* | *SE* |
| Big5 | −.11 | .07 | −.24** | .08 | −.27** | .09 |
| S-RFL | | | .09 | .07 | .02 | .08 |
| Age | | | | | −.01 | .05 |
| Gender | | | | | .11 | .23 |
| Education | | | | | −.05 | .11 |
| Income | | | | | .23** | .07 |
| Pseudo-$R^2$ | .00 | | .02* | | .03** | |
| *n* | 500 | | 455 | | 417 | |

*Note* The question is phrased “Did you, in the last 5 years, ever used a credit line to buy some non-investment goods such as furniture, cars, TV screens, cell-phones, etc. using consumer credit?”. Answer options are 0 = No, 1 = Yes
*$p < .05$, **$p < .01$, ***$p < .001$

compared to making down-payments and carrying the balance every month (Harrow, 2017).

Table 8 shows that more financially literate individuals are using credit cards frequently when investigating the isolated effect of Big5 on credit card usage. We also see that individuals who think of themselves as more financially literate (S-RFL) are using their credit cards more often. Higher education shows a positive effect on never using a credit card. This effect persists along with income on the reported answers of rarely and sometimes having used a credit card. Finally, in the third model, S-RFL and income show the strongest effects. In total 10% of the variance is explained.

### 6.7 Use of Pawn Shops

Finally, we focus on yet another substitute for cash: the use of pawn shops. Given the availability of other types of credit—both through credit card and other credit facilities (such as unsecured instant loans)—the initial assumption would be that pawn shops are most frequently used by the group of individuals excluded from these sources of credit and hence affected by level of financial literacy. This is also in line with

**Table 8** Multinomial logistic regressions of credit card usage of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education and income in three different models

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *B* | *SE* | *B* | *SE* |
| I do not have a credit card (comparison group) | | | | | | |
| *Never* | | | | | | |
| Big5 | −.05 | .09 | −.04 | .11 | −.18 | .12 |
| S-RFL | | | .04 | .10 | .01 | .10 |
| Age | | | | | .02 | .06 |
| Gender | | | | | .51 | .31 |
| Education | | | | | .48** | .16 |
| Income | | | | | .15 | .11 |
| *Rarely* | | | | | | |
| Big5 | .10 | .10 | .01 | .12 | −.13 | .13 |
| S-RFL | | | .15 | .10 | .07 | .11 |
| Age | | | | | .07 | .07 |
| Gender | | | | | −.05 | .33 |
| Education | | | | | .44** | .17 |
| Income | | | | | .51*** | .12 |
| *Sometimes* | | | | | | |
| Big5 | −.02 | .11 | −.15 | .13 | −.33* | .16 |
| S-RFL | | | .29* | .12 | .29* | .14 |
| Age | | | | | .15* | .08 |
| Gender | | | | | .02 | .39 |
| Education | | | | | .59** | .20 |
| Income | | | | | .44** | .13 |
| *Frequently* | | | | | | |
| Big5 | .27* | .10 | .26* | .13 | .09 | .15 |
| S-RFL | | | .43*** | .11 | .31* | .13 |
| Age | | | | | .05 | .07 |
| Gender | | | | | .55 | .35 |
| Education | | | | | .32 | .18 |
| Income | | | | | .67*** | .12 |
| Pseudo-$R^2$ | .01* | | .03*** | | .10*** | |
| *n* | 516 | | 469 | | 430 | |

*Note* The question is phrased "How often (on average) do you use credit card". Answer options where 1 = I do not have a credit card, 2 = Frequently, 3 = Sometimes, 4 = Rarely, 5 = Never

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

our findings as presented in Table 9; we observe a significant effect of both fact-based and self-reported financial literacy, even when controlling for age, gender, education, and income.

**Table 9** Logistic regressions on the reported use of a pawn shop of knowledge-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for age, gender, education and income

| *Predictor(s)* | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *β* | *SE* | *β* | *SE* |
| Big5 | −.41** | .16 | −.60** | .19 | −.52* | .21 |
| S-RFL | | | .45* | .18 | .52** | .20 |
| Age | | | | | −.09 | .11 |
| Gender | | | | | .47 | .55 |
| Education | | | | | −.16 | .29 |
| Income | | | | | −.12 | .19 |
| Pseudo-$R^2$ | .04*** | | .08** | | .11* | |
| *n* | 499 | | 457 | | 416 | |

*Note* The question is phrased "Did you ever - in the last three years - use a pawn-shop?". Answer options are 0 = No, 1 = Yes
$*p<.05$, $**p<.01$, $***p<.001$

We thus find a negative impact of objective financial literacy (i.e., knowledgeable individuals use pawn shops to a lesser extent), but a positive impact of self-reported financial literacy (i.e., more self-confident individuals use pawn shops more). The explanation of this observation may be that individuals believe they have a better control of their personal finances than they actually have. This would be an important topic for further investigation: the objective level of financial literacy in conflict with the subjective level of self-assessed financial literacy.

### *6.8 Summary*

In summarizing, we detect a few important areas where financial literacy has an impact. First, beginning with the area that does not seem to have any connection to level of financial literacy, mortgage-related topics stand out. Inclination to take a mortgage loan or the decision to take a loan with a fixed or floating rate do not seem to depend on financial literacy. One could argue that these two types of housing-related decisions are part of a societal norm: buying a house or an apartment in Sweden, at least in the bigger cities, almost always requires a loan.

In contrast, we find effects of financial literacy on behavior that is linked to either ability to plan (financial freedom), to use of credit facilities (such as both unsecured bank credit and credit cards), and to some extent also linked to the behavior of a smaller part of the population that use credit from pawn shops.

## 7 Young Adults

Our main focus in this book on young adults warrants an examination of the connection between financial literacy and indebtedness for this group. We have included age as a variable in the regressions above (yielding a few results such as a marked impact on use of mortgages). Here we sort out the younger adults from the larger group of participants and focus on them as a group. By doing so, we find some evidence suggesting that young adults are less financially literate. There is a significant effect showing that participants age 31 and above ($M = 2.92$, $SD = 1.31$) score higher on the Big Five, $t(549) = 3.98$, $p < .001$, than young adults age 30 and below ($M = 2.42$, $SD = 1.28$). There is however no difference between younger and older participants in terms of S-RFL ($p > .10$). At first this finding may be linked to that individuals have a view of their own capabilities that is not matched by the actual level of, in this case, objective fact-based financial literacy. This may have effects on behavior as such, including effects on risk-taking. Second, we know from our analysis of the general sample that some effects stem to a larger extent from the self-assessed level of financial literacy, rather than the fact-based financial literacy. This implies that the lower levels of fact-based financial literacy in the young adult subsample might not be so detrimental; their higher self-confidence may compensate for this.

When focusing on the actual effect of financial literacy on the debt-related financial behaviors, in the young adult subsample these effects seem to be lacking. However, we find some statistically significant results when doing the same analysis as in Table 3 above, investigating the effects of financial literacy on reported financial freedom. The results in Table 10 for the young-adult subgroup differ from the general sample mainly in that the effects of financial literacy remain even after controlling for gender, education, and income. This may imply that the effect of income is weaker among young adults, or that financial literacy is making a stronger and fairly unrelated contribution to the reported perception

**Table 10** Hierarchical linear regressions on reported financial freedom of fact-based financial literacy (Big5) and self-rated financial literacy (S-RFL) controlling for gender, education and income in the younger subsample

| | *Model 1* | | *Model 2* | | *Model 3* | |
|---|---|---|---|---|---|---|
| | β | *SE* | β | *SE* | β | *SE* |
| Big5 | .18** | .06 | .15* | .04 | .14* | .06 |
| S-RFL | | | .07 | .05 | .02 | .06 |
| Gender | | | | | .24 | .16 |
| Education | | | | | −.02 | .08 |
| Income | | | | | .13* | .05 |
| Adjusted $R^2$ | .06** | | .07** | | .11** | |
| *n* | 113 | | 112 | | 109 | |

*Note* The question is phrased "In a typical month, how difficult is it for you to cover your expenses and pay all your bills and obligations?". Answer options are 1 = Very difficult, 2 = Difficult, 3 = A bit difficult, 4 = Not at all difficult

*$p<.05$, **$p<.01$, ***$p<.001$

of financial freedom. The remaining analyses above showed no significant effects in the young-adult subsample.

## 8 Conclusion

We find that financial literacy plays a role for debt-related measures of financial behavior even after controlling for gender, age, education, and income. But the amount of variance explained is typically small which means that other factors have stronger effects. We also find that young adults in the age range of 18–30 years score lower on tests of objective or fact-based financial literacy. This fact, combined with the general findings above, that financial literacy plays a role for credit behavior could be framed as alarming: are the readily accessible credit facilities that exist in the form of, for instance, unsecured instant loans at high interest an even bigger threat to the less financially literate younger generation? Our results suggest no cause for alarm. The only significant effect we find in our young-adult subsample is an effect of fact-based financial literacy on financial freedom. All in all, financial literacy may be one factor having an impact on individuals' borrowing behavior—but not necessarily in any alarming way on young adults.

## Notes

1. In Carlsson Hauff et al. (2018), we find evidence of low levels of financial literacy having an impact on several phases of the retirement planning process: retirement planning, retirement saving, and retirement investing.
2. https://www.fi.se/sv/konsumentskydd/utbildning/.

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PART IV

# Legislator Tools and Possibilities for Healthy Lending

CHAPTER 8

# Toward Soundness in Provision of Credits and Loans to Young Adults

*Viktor Elliot and Ted Lindblom*

## 1 Introduction

The previous chapters of this volume have focused on defining over-indebtedness, examining and elaborating on the causes and consequences of excessive debt reliance of young adults, as well as analyzing and discussing the demand- and supply-sides of indebtedness and possible over-indebtedness. In these chapters, less attention is paid to what is being done in order to mitigate problems related to over-indebtedness, let alone what needs to be done in order to achieve soundness in the provision of credits and loans to young adults. In this chapter, we emphasize these issues by discussing policy measures that can be implemented to reduce excessive debt reliance (as well as the potential implications of such policy measures). The policy measures discussed here include credit market regulation, consumer protection, early identification, and prevention of over-indebtedness.

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In Chapter 2 of the book, we highlight and discuss, at some length, different definitions and operationalizations of over-indebtedness proposed in the academic literature. In theory, where it is free, or low cost, access to efficient financial markets, indebtedness is in many respects a matter of optimization. This suggests that over-indebtedness arises beyond the point where a greater degree of indebtedness will be value-destroying in terms of net present value (NPV). In practice, it is quite clear that over-indebtedness is a multi-dimensional concept covering at least the four dimensions commented upon by Davydoff et al. (2008: 37): (i) an economic dimension of over-commitments, (ii) a time-dimension where households or individuals experience long-term problems, (iii) a social dimension that includes issues of exclusion and stigma, and (iv) a psychological dimension of stress and health harm. A delicate problem is not having an agreed-upon definition, in combination with the multidimensional nature of the concept that makes it inherently difficult to translate into law, let alone into supranational law. This is emphasized as follows by Ferretti, Salomone, Sutschet, and Tsiafoutis (2016: 65) when they compare and analyze the regulatory framework regarding over-indebtedness of consumers in four Member States of the EU: 'Recent scholarship has acknowledged that the continuing vacuum of a clear content-based notion of over-indebtedness not only makes the comparison between Member States difficult but also a European response problematic'.

The brief overview in Chapter 3 of the financial environment in Sweden attracts attention to recent measures taken by Swedish regulatory authorities to reduce the rapidly increasing household indebtedness. It is important to bear in mind that the rationale for imposing higher amortization requirements and income related constraints on banks' mortgage lending is to strengthen financial system stability. This is also the main reason behind many other regulatory initiatives that has followed the global financial crisis. The most prominent of these is fitted within the umbrella-term Basel III and focuses on stricter capital adequacy requirements to promote soundness in banking. It is, however, questionable whether these regulatory measures are satisfactory and whether they are the most suitable for promoting soundness in the provision of credits and loans to young adults. Critics have expressed concerns about some potentially negative effects of implemented regulatory measures like these. In particular, many are emphasizing the risk that certain consumer groups, and among these young adults, will cease to be

provided with credits and loans by banks and, thus, become financially excluded (see, e.g., Carbo, Gardener, & Molyneaux, 2007; Mehrotra & Yetman, 2015). A side effect can be the emergence of "less serious" actors, which are operating outside the control of the Swedish Financial Supervisory Authority (SFSA). Such actors are commonly referred to as shadow banks, which can take advantage of tighter regulations of ordinary banks by utilizing those who are subject to financial exclusion.

Clearly, young adults may be induced to over-borrow if there is too easy access to financial sources when buying their first home on a real estate market, which exhibits rocketing property prices. Eng Larsson, Hallsten, and Kilström (2018: 8) point out that: '[u]njustifiably inflated house prices and debts can, in a financial crisis, cause young households to fall into a debt trap early in life, which can take a long time to get out'.[1] At the same time, the authors document that from 2010 to 2016 the debt-to-income ratio did in fact increase the most among older age groups. Between these years, young adults tended to increase their borrowing less than others in relative terms both when it came to average debt and debt-to-income ratio, despite that there was a relative increase in the number of young adults borrowing for a new home. Surely, young adults would appreciate and probably benefit from a reduction in property prices, that is, if the imposed regulatory measures are shown to lead to lower prices, and young borrowers are not displaced from the market but can still buy the home they desire. To this point, Lennartz, Arundel, and Roland (2016) show that the Nordic countries (Sweden, Denmark, and Finland) have seen a significant drop in homeownership among young adults (18–34 years old) from 2007 to 2012. Danish homeownership has decreased the most (by 12.4%), but the young Danes seem to primarily (8.8%) reallocate to rental apartments. The same is not true for the Swedish young adults, where both homeownership (−6.6%) and rentals (−0.7) have decreased. The implication is that co-residence has increased with more than 7% among Swedish young adults, that is, they stay with their parents longer. The authors refer this result primarily to stricter policy mechanisms and stricter lending standards among the banks.

Another major concern among Swedish authorities, like the Swedish Consumer Agency (SCA) and the Swedish Enforcement Authority (SEA), is directed toward young adults' increasing use of consumer credits such as unsecured instant loans (see SEA, 2007). To understand the mechanisms affecting young adults' borrowing is considered crucial

for being able to design adequate preventive measures in order to slow down the pace in their borrowing and, thus, reduce the risk of financial difficulties related to over-indebtedness. Our empirical studies reported in Chapters 4–7 contribute with pieces to the puzzle of understanding the driving factors behind the excessive debt reliance of young adults. Moreover, these chapters also discuss the financial behavior of young adults and, not least, financial knowledge and capability to accurately interpret financial information presented to them in different formats. The results are reported in each chapter, respectively. Let us conclude here that young adults are not a homogenous group. Even if this is of course true also for other age groups, there is greater uncertainty and far less information available when it comes to the single young borrower still at an early stage of the "life cycle". As a group, young borrowers are multidimensional and complex just like the over-indebtedness phenomenon.

In the remainder of this chapter, the definition and measurement of over-indebtedness will be adopted in accordance with the administrative approach. This follows by the fact that the chapter's focus is set on policy measures imposed by regulatory authorities aimed to reduce the risk of over-indebtedness. We will argue here that such measures are necessary in order to accomplish a reduction of excessive debt reliance and possible over-indebtedness among young adults. Our ambition is to map and analyze regulatory authorities with respect to their objectives and available tools, as well as the potential impact that such tools may have on indebtedness among young adults including the possible financial exclusion of some of them. The chapter is organized as follows. The next section offers a brief overview of policy measures taken by different regulatory authorities in the European Union (EU) to mitigate the problem of over-indebtedness. Thereafter, we zoom in on the situation in Sweden in Sect. 3. Finally, Sect. 4 concludes the chapter.

## 2 An EU-Perspective on Policy Measures Against Over-Indebtedness

Historically, over-indebtedness was a problem to be addressed at the nation-level across the EU. With the single market, and single banking license, implemented by the Maastricht Treaty in 1993 integration and adoption of common principles across the EU started its trajectory.

Still, joint preventive action and aggregated EU policy measures directly aimed at a more "responsible" credit market has been scarce.

According to Kilborn's (2010: 2) comprehensive review of policies to treat over-indebtedness: '[t]he first major examination of consumer over-indebtedness and collection of recommendations for legislative solutions was commissioned by the Directorate General of the Consumer Policy Services of the EC in November 1991'. The key outcome was a strong recommendation to develop a model for the discharging of unpaid debt, after the debtor had applied their best effort to pay off the debt. It was suggested that such a model should strive to keep debt settlements outside the court, with broad eligibility criteria and at low cost.

Kilborn (2010) continues by highlighting the INSOL's Consumer Debt Report from 2001, which is based on four key principles: each containing ten recommendations. The first three out of four principles deal with the treatment of over-indebtedness and the fourth focuses on prevention (INSOL, 2001: 11):

1. Fair and equitable allocation of consumer credit risks.
2. Provision of some form of discharge of indebtedness, rehabilitation or "fresh start" for the debtor.
3. Extra-judicial rather than judicial proceedings where there are equally effective options available.
4. Prevention to reduce the need for intervention.

Following the INSOL (2001) report, the Director General of Consumer Policy ordered another report, which was published under the acronym the iff (2003) report. The iff (2003) report largely mirrors the INSOL (2001) report but also reviews current practices within the EU of dealing with over-indebtedness. Kilborn (2010) highlights that while the iff (2003) report do not take a stance on best practice in Europe it does emphasize (i) the need for broad discharge that includes taxes, fines and damages, and (ii) that while the median length of payment plans in Europe seems to be five years three years would be preferable. Kilborn (2010) reviews a series of additional reports, but these are largely based on similar recommendations as the INSOL (2010) and iff (2003) reports. According to Valins (2004), literature that deals with the "coping with debt" issues tend to focus on two levels of institutional interventions, public policy and individual level aid.

### *2.1 Public Policy Intervention*

Public Policy intervention refers to, for instance, credit market regulation, more transparent loan granting practices, government tracks for debt discharge, and mechanisms for early identification (Krumer-Nevo, Gorodzeisky, & Saar-Heiman, 2017; Ramsey, 2012). Throughout the 1990s and up until the financial crisis, western economies were characterized by policies promoting deregulation, floating exchange rates, international integration, strict inflation targets, and reduced dependence on the state. From a financial policy perspective this was reflected in: autonomous central banks targeting stable inflation through policy interest rates changes, fiscal policy focusing on distribution of resources, supervisory authorities that ensured financial institutions adhered to converging, risk sensitive capital requirements, and capital could flow freely across borders and between sectors so that a stable economic development would result (Elliot, 2015). By the early 2000s an international literature discussing “The Great Moderation” was emerging that these policy measures had in fact created a more stable economic environment (see Benati & Surico, 2009).

However, the financial crisi s revealed that what, on the surface, appeared to be stable and prominent economic growth concealed significant imbalances. Among the more salient of these imbalances was the substantial credit expansion mentioned above, which also meant great vulnerabilities both the individual economies and to the world (Breman & Wallin Johansson, n.d.).

In response to the failure of the great moderation, policy setters have developed the so called macro-prudential regulation/supervision, aimed at increasing stability in the financial system and preventing the build-up of imbalances in the economy. In most western economies, macro-prudential regulation and supervision has come to focus on sound lending practices and indebtedness among households and non-financial firms. This is not surprising considering that unsustainable debt accumulation can be linked to many of the financial crises throughout history (see, Reinhart & Rogoff, 2009, 2013).

Because the macro-prudential regulation and supervision is still a rather new phenomenon in public policy, best practice has yet to form. The European Systemic Risk Board (ESRB) was established in 2010 with the aim ‘to oversee the financial system of the European Union (EU) and prevent and mitigate systemic risk’.[2] Among the first measures

taken by the ESRB was to recommend each member state to establish a national agency responsible for macro-prudential regulation and supervision. ESRB emphasized that the Central Bank should take a front position in the monitoring of systemic risk, but no strict guidelines were offered in terms of how to organize this new agency. Accordingly, there is significant variation among EU-countries both in terms of how to organize and how to utilize the macro-prudential policy mechanisms. According to ESRB (2017), in 13 countries[3] the central bank is the responsible agency, 12 countries[4] have a dedicated committee (often with close ties to the central bank) and in two countries[5] it is SFSA that is responsible for macro-prudential regulation and supervision. Table 1 illustrates some of the variance based on a number of selected countries.

As shown in Table 1, all countries focus their macro-prudential policies on household indebtedness. However, Swedish authorities, like Swedish National Audit Office (SNAO) and, particularly, SFSA, have advanced their macro-prudential mandate significantly further than most other European countries (see Braconier & Palmqvist, 2017; SNAO, 2018).

As mentioned in Chapter 1 and discussed at some length in Chapter 3 of this volume, the macro-prudential measures include the 2010 loan-to-value cap, minimum risk-weights for mortgages set at 15% in 2013 and increased to 25% in 2014, and two amortization requirements implemented in 2016 and 2018. In addition, SFSA has also added liquidity requirements, stricter capital requirements for systemically important banks, and the countercyclical buffer requirement has gradually been increased from 1% to the maximum level of 2.5% between 2015 and 2018. The intensity with which these measures have followed testifies to concerns among Swedish authorities, but it also caters to the importance of a better understanding of the implications of such measures for household indebtedness and financial exclusion.

### *2.2 Individual Level Aid*

Individual aid includes both motivational features such as financial education and literacy, and reactive solutions such as counseling and advice (see Orton, 2009; Stamp, 2012; Wolfe, Madge, & Kruse, 2004). As noted by Lusardi, Mitchell, and Curto (2010), financial literacy is particularly low among young adults (see also Lusardi & Mitchell, 2011), which indicates that more effort is needed to support this group making better financial decisions. According to Carlin and Robinson (2012:

**Table 1** Macro-prudential organization and utilization in selected countries

| *Country* | *Organization* | *Utilization* |
|---|---|---|
| Denmark | The macro-prudential agency is a committee (the Systemic Risk Board), which formally have an advisory role but can make recommendations based on "comply or explain" of systemic risks and appropriate macro-prudential measures. This committee includes representatives from the central bank (Danmarks Nationalbank), the micro-supervisory authority (Finanstilsynet) and the three departments that handle financial issues (the Ministry of Finance, the Ministry of Economic Affairs and the Ministry of the Interior and the Ministry of Industry). Committee meetings are held at least four times a year. The Ministry of Business Affairs is responsible for the capital adequacy regulations and has the final decision-making power over these macro-prudential tools. In addition, they are also responsible for macro-prudential tools based on national law. However, the Ministry of Trade and Industry has delegated the formal decision-making power to regulatory issues to the micro-supervisory authority (Finanstilsynet) and in practice it is therefore the latter that decides on the macro-prudential policy tools. The level of the countercyclical capital buffer requirements is reviewed quarterly | In micro-supervision, Denmark applies the so-called the supervisory diamond, which also takes into account systemic risks such as large exposures and rapid lending growth for banks. For mortgage institutions, a large number of macro-prudential factors are taken into account in the corresponding supervisory diamond. The institutions are incentivized not to lend to floating interest rates or amortization-free to households with medium to high loan-to-value ratios. Households with both medium to high debt ratios and medium to high loan-to-value ratios are limited to both mortgages and must meet strict restrictions for obtaining amortization-free loans. In addition, there is a general recommendation on minimum cash contribution, as well as guidelines that limit lending to households with a high debt ratio if they do not have significant other assets. Denmark has introduced the countercyclical capital buffer requirements, but the level has been left unchanged at 0%. System risk buffer requirements are applied to the banks that are considered to contribute most to systemic risks |
| Norway | The central bank (Norges Bank) makes proposals to the Ministry of Finance and/or the Government that makes decisions. The government tends to decide in line with the central bank's proposal, but it has occurred that the government chooses to make another decision. Measures within this policy area are normally limited in time, which provides a regular review of the measures' goal fulfilment and any need to make adjustments. The central bank is not responsible for micro-supervision of the financial system, which is the Norwegian Financial Supervisory Authority's responsibility | There are ceilings for loan-to-value and debt-to-income ratios that are applied for housing loans. The measures are directed directly towards individual loans, but for each bank a certain proportion of the loans may violate the limitation of the debt ratio and/or the loan-to-value ratio. More strict, separate requirements are applied for the Oslo region. The country has activated the countercyclical capital buffer and applies systemic risk buffers for the largest financial institutions |

(continued)

**Table 1** (continued)

| *Country* | *Organization* | *Utilization* |
|---|---|---|
| Finland | The FSA, which, like in Sweden, is also responsible for micro-prudential supervision is the macro-prudential authority and decides on the use of macro-prudential tools. However, these decisions are taken in close cooperation with the central bank (the Bank of Finland) and the Ministry of Finance, and the Finish Financial Supervisory Authority also has a closer relationship with the Bank of Finland than the Swedish counterparty has to the Riksbank. The decisions on macro-prudential measures are constantly being reviewed. Several of the measures are reviewed quarterly. However, as in Sweden, and in line with other euro area countries, the national central bank also has financial stability as a clear target | Ceilings are applied to the loan-to-value ratio for housing loans, with more generous rules for first-time buyers. These have been made more stringent in recent years. Finland has also introduced minimum risk weights of 15% for mortgages. The country has introduced the countercyclical capital buffer, even though the level has so far been set at 0%. Buffer requirements based on systemic risks are applied to four banks |
| The Netherlands | Formally, it is the so-called Financial Stability Committee, which is the macro-prudential authority. However, it is the central bank (De Nederlansche Bank) who is empowered to apply most macro-prudential policy tools since the central bank is the responsible authority for the tools that come from the capital adequacy directive. Decisions on the application of the tools are taken by the central bank after, among other things, preparation in the Financial Stability Committee, which also includes the Ministry of Finance and the Financial Market Authority. However, with respect to other types of macro-prudential tools, primarily the tools that are directly directed to household credit, it is the Ministry of Finance that decides based on a recommendation from the central bank or the Financial Stability Committee. The central bank is the micro-prudential supervisor for large parts of the financial system | In the Netherlands, a staircase model has been applied for a number of years to the maximum loan-to-value ratio, which is reduced by one percentage point per year. The Central Bank's and the Financial Stability Committee's recommendation is that one should gradually approach 90% of maximum lending in the future. By comparison, the maximum loan-to-value ratio was 106% in 2012. Tax rules are also used for macro-prudential purposes. Interest expenses are, for instance, only deductible if the loan is amortized at a rate so that it is paid off in 30 years. The countercyclical capital buffer has been introduced, but the level has not been raised above 0%. Systemic risk buffers for the largest banks are applied (from 1 January 2019) |

(continued)

**Table 1** (continued)

| *Country* | *Organization* | *Utilization* |
|---|---|---|
| Great Britain | The central bank (Bank of England) is the macro-prudential authority, but the decisions are taken in the Financial Policy Committee (FPC) and not the Monetary Policy Committee (MPC). The membership differs to a certain extent between the committees, but the FPC, like the MPC, has external members, including non-voting representatives of the Ministry of Finance. The central bank also has micro-prudential responsibility in all issues that do not concern consumer protection through the Prudential Regulation Authority | The UK have requirement to stress-test mortgage borrowers at a significantly higher interest rate level over a five-year period. Mortgages are limited in the case of high debt where only a certain proportion of the total mortgage volume may exceed the limit for the debt ratio. The Bank of England's Financial Policy Committee is also entitled to decide on limitations on loan-to-value ratios, but has not yet done so. Countercyclical capital buffer requirements have been implemented and applied at levels above 0%. Gross solvency requirements for banks are utilized based on the degree of system weight and the countercyclical buffer value |

*Sources* Adapted from Breman and Wallin Johansson (n.d.), ESRB (2018)

235), there are three archetype measures to improve financial literacy: (i) directly improving education, (ii) improving access to timely decision support, or (iii) implementing judicious default options to limit the harm that people can do by not making an informed choice.

In more recent years, as financial literacy has attained more focus across the world, many new initiatives are available to help people become more financial literate including museums, theme-parks, e-games and apps, dedicated government programs and so on. In recent years a few studies have tried to estimate the effects of educational efforts (for an overview, see Lusardi & Mitchell, 2014), and these generally show that there are significant benefits. Still, Lusardi and Mitchell (2014: 31) note that most of these studies suffer from methodological problems among which accounting for the abovementioned heterogeneity among and between different age groups, the prediction being that: 'in order to change behavior, financial education programs must be targeted to specific groups of the population, since people have different preferences and economic circumstances'.

In 2008, the Minister for Financial Markets and Consumer Affairs in Sweden launched an initiative to focus on financial literacy. Since then, SFSA have run two surveys on financial literacy in Sweden and continuously run initiatives together with independent actors such as "Ung Privatekonomi" in order to increase financial literacy among young adults. Still, as suggested by Jappelli and Padula (2013) countries (such as Sweden) with generous Social Security benefits have less incentive to invest in financial literacy simply because there is weaker rationale to save in these countries. The authors also conclude that the least educated individuals have less incentive to invest in financial literacy, because it may not be worthwhile for them to incur the knowledge investment. As argued by Lusardi and Mitchell (2014: 9): '[d]espite the fact that some people will rationally choose to invest little or nothing in financial knowledge […] it can still be socially optimal to raise financial knowledge for everyone early in life, for instance by mandating financial education in high school. This is because even if the least educated never invest again and let their knowledge endowment depreciate, they will still earn higher returns on their saving, which generates a substantial welfare boost'.

Although financial literacy may be important to improve decision-making, research shows that an individual's actions in the financial market is influenced by a variety of factors such as lack of self-control (Ameriks, Caplin, Leahy, & Tyler, 2007), local bias (Mavruk, 2010),

overconfidence in their own abilities (Barber & Odean, 2000), as well as cognitive biases and emotional processes that affect risky decisions and creating "erroneous" thinking in relation to timing and ambiguity (Lucarelli, Brighetti, Uberti, & Maggi, 2015; Lucarelli, Marinelli, & Brighetti, 2014; Lucarelli & Alemanni, 2015). These shortcomings may in turn lead to insufficient risk management and non-diversified savings. The financial actors' role in helping individuals to manage financial decisions has proven to be important to balance the above-described bias (Bhattacharya, Hackethal, Kaesler, Loos, & Meyer, 2012; Gentile, Linciano, Lucarelli, & Soccorso, 2015).

The financial companies "role in increasing consumers" financial knowledge is undergoing a process of change and the forms of financial advisory services are a particular challenge in the new digitized and regulated environment. In England, several of the large players have started charging for advice as a result of new regulations and MiFID II, MiFIR, PRIIPs and IMD 2 regulations are expected to have further impact on the relationship between individual and actor. While such regulations strengthen consumer protection, they also make advisory services costlier, a notion that could make public debt support become even more important in the future.

In Sweden, public debt support is managed on a municipal level. A report from the SNAO concludes that the municipality financial counselors are severely underfunded and despite a quick increase in the number of application they have not seen a corresponding budget increase (SNAO, 2015). In addition, the same report highlight that there is a wide discrepancy in the educational background and types of advice provided. Larsson, Svensson, and Carlsson (2016) further notes that the vast majority of young adults do in fact not seek help from the municipality financial counselors, because they try to solve their financial difficulties themselves for many years before they seek external help.

## 3 Over-Indebtedness from a Legal Perspective: The Case of Sweden

We have already mentioned that Swedish household indebtedness is amongst the highest in the world (see Chapter 2). Statistics from Eurostat presented by the Swedish Bankers' Association (SBA, 2018:14) disclose that 'over 65 percent of the households own their homes', which puts Sweden in the middle in comparison with the share of

homeowner households in other Member States in the EU. Swedish households are, however, among the top three when it comes to the share of mortgage-financed homes. Almost nine out of ten homeowner households in Sweden have a mortgage loan. This explains the relatively high debt-to-income ratios reported in Chapter 3.

More detailed statistics from SBA (2018) show that new homeowners in the Stockholm area exhibit a debt-to-income ratio of as much as 534%, that is, almost 5.5 times their disposable income. Bearing in mind that many young adults that bought their first home are among these new homeowners, it is far from surprising that these figures are regarded as alarming on a governmental level. Time will tell whether the imposed direct and indirect policy measures (such as LTV-limits, amortization requirements and higher capital adequacy requirements related to the Basle III Accord) by Swedish regulatory authorities will have the desired effects. Still, it is not farfetched to assume that there might also be undesired side-effects such as, for example, the financial exclusion of potential homeowners, in general, and young adults, in particular. At present, it is still too early to tell what impact the measures taken will have. The risk of side effects in the form of financial exclusions makes the design and implementation of policy measures a "balancing act". To do nothing seems not to be an alternative. After all, financial exclusion can also be a side effect caused by over-indebtedness.

Adopting a definition of over-indebtedness according to the administrative approach, homeowner households have in the past been underrepresented with respect to arrears registered at the SEA. Based on statistics reported in the Swedish Government Official Reports (2013), de Toro (2016) attracts attention to that long time over-indebtedness, defined as having unsettled arrears registered at SEA for a duration of at least five years, was by far more common among tenants occupying a rental apartment than among homeowners at the time of the investigation. Representing less than one-third of the Swedish population, tenants still accounted for almost two-thirds of the number of long time over-indebted people. This implies that most of the arrears are not related to failures in fulfilling the obligations of mortgage contracts, but rather inability to comply with the contractual terms entered into when purchasing consumer products. Considering also that most young adults are tenants, who rent their home, the remainder of this section will focus primarily on policy measures targeting banks' and other financial institutions' provision of credits, and unsecured loans for consumption purposes.

In her dissertation, Henrikson (2016:439) states that: 'Swedish law contains many rules regulating the credit process, from the time when the consumer contemplates concluding a credit contract to the time when the consumer is too indebted to pay back as due and must seek debt modification or rescheduling of repayment obligations'. Stressing that over-indebtedness is inadmissible, she analyzes consumer protection against over-indebtedness in a legal context with respect to (1) how the adoption of consumer protection rules is motivated in the law writing process, (2) the consumer protection interest(s) targeted by the rules, and (3) consumers to be protected by the rules. She argues that consumer protection is needed through the whole "borrowing-on-credit" process, albeit the extent to which it is needed depends on the process phase. Hence, in her analysis, she divides the borrowing-on-credit process into the *pre-contractual* phase, the *contractual* phase, and the *post-contractual* phase.

Evidently, Swedish "consumer protection" oriented laws are most accentuated in the *pre-contractual* phase.[6] As in many other countries, Marketing and Consumer Credit Acts in Sweden aim at protecting consumers from entering into unreasonable agreements that can be harmful for them. The importance of adequate information is stressed in both. Consumers should not enter into disadvantageous credit contracts when purchasing on credit. According to the author, however, business firms do not always comply with these laws at the same time as the enforcement of the laws by Swedish authorities has been rather weak in the past. This is explained partly by that many consumers are not aware of their rights and/or find it inconvenient to enter into legal processes, and partly by lack of proper knowledge, information, and understanding at the governmental level. The author observes a change in the frequency of authorities' acting the past years and lately stricter regulatory measures in the form of control and sanctions have been imposed to prevent consumers from becoming over-indebted.

When designing suitable regulatory measures against over-indebtedness of young adults, findings in our conducted studies reported in Chapters 4–7 can be useful. These studies relate to the pre-contractual phase and cover also findings and knowledge generated in other contemporary research studies. Regarding, for example, young adults' attitude toward borrowing, prior research largely suggests that their attitude is positive toward borrowing, while the conducted study presented in Chapter 5 says the opposite. However, the study also finds that

the negative attitude of young adults toward borrowing did not prevent them from purchasing more expensive consumer goods on instalment payments. This seems to imply that young adults do not perceive that they borrow when entering into a credit contract to finance the purchasing a product, which in turn indicates lacking financial literacy. How to measure financial literacy and its impact on young adults' debt-related financial behavior is examined in Chapter 7. As expected, there was a strong relationship, but young adults did not differ significantly from other age groups. This does not exclude that different segments of young adults are more at risk. This calls for further research and investigations. Finally, in this context, the importance of information format must be emphasized. In Chapter 6, it is suggested that many of the regulations focusing on transparency may have difficulties obtaining their goals, since individuals have a hard time interpreting the consequences of a revealed financial fact (such as, e.g., the interest rate). It is further observed that by changing the information format from the commonly used fact-based format to a narrative-based format the borrowing decisions of young adults were positively affected.

The *contractual* phase starts at the point of time when a valid credit agreement is entered into between the consumer and the creditor. As Henrikson (2016:441) puts forward, this phase of the borrowing-on-credit process is characterized by consumer protection rules that: 'protect consumers by preventing the use of unfair contractual terms; limiting both consumers' and creditors' rights to close or cancel revolving credit accounts or installment loans; regulating creditors' rights to modify interest-rate terms and to charge fees; protecting consumers if the right to receive payments are transferred by the creditor; prohibiting sellers from certain settlement-of-debt restrictions or practices; and imposing an obligation to provide certain information to consumers'. In this phase, the Swedish Consumer Credit Act still applies but it is here surrounded/supplemented by Swedish contract laws as well as the Swedish Interest Act ("räntelagen" in Swedish). As the creditor is given (or takes) the right to design contract terms, it is important that these terms are reasonable for the debtor. The Swedish Consumer Credit Act is superior to contract laws, but the author illustrates that it many times can be difficult for consumers (borrowers) to interpret and sufficiently understand the contract terms when entering the credit agreement. What is, for example, the difference between interest and the various kinds of credit fees charged by many creditors? Until the implementation of a

new Consumer Credit Act in September 1, 2018 (i.e., SFS 2018:2028), it was also difficult to determine what level of interest rate constitutes usury. SFS (2018:2028) stipulates a specific interest rate cap given the current reference rate and, moreover, a ceiling for the annual interest cost paid by the debtor. As high-interest expenses play a crucial role for borrowers to enter into over-indebtedness, it is anticipated (or at least a hope) that the imposed interest constraints will help to protect borrowers, in general, and young borrowers, in particular, from this to happen. Considering the relatively high-interest rates approved, this might show to be just wishful thinking. Future studies and investigations on how the provision of unsecured instant loans are affected will show whether the new Act will make a difference to the better for young adults.

In the *post-contractual* phase, finally, the consumer protection is least visible. This phase is entered if the borrower is not fulfilling her or his obligations according to the credit agreement entered into. The Consumer Credit Act does no longer apply, but contract laws do. In addition, there are the Debt Recovery and Debt Reconstruction Acts. Hence, the creditor is often in a strong position to exert pressure on the borrower to recover the credit extended. Such pressure is mostly executed through penalties in the form of fees or interests. As described in Chapter 2 of this volume, if a solution is not reached, creditors often turn to debt recovery agencies and, eventually, the debt becomes an arrear registered at SEA. On its webpage, SEA informs that it then sends a "demand of payment" to the debtor urging her or him to settle the debt(s) claimed within the stipulated time period.[7] If the debtor is unable to pay, SEA starts investigating whether the debtor possesses and owns any assets (like e.g., real estate, including condominiums) with a positive net market value if liquidized. It is most common that SEA issues attachment of earnings, like salary, pensions, and other income. Under certain conditions, SEA can decide that the debtor is entitled to debt relief regarding all or part of her or his debts. SEA does not issue payment or arrears remarks, though. This is done by credit information agencies on the market, like the Swedish UC, in which payment arrears concerning private individuals are kept in registers for three years.[8] Such remarks usually mean that the debtor will be regarded as an unqualified borrower by banks and other creditors during this time period.

Debtors' weak position in the post-contractual phase relative to creditors in the Swedish (and largely also in the Member States of the EU)

borrowing-on-credit process can be challenged. Among the critics, de Toro (2016:15) makes a comparison with the United States advocating the American view that debtors are entitled to a second chance and, thus, a new starting-over of daily life: 'Over-indebtedness is seen as a market failure in that the market has not been able to satisfactorily assess the risks. Debt restructuring, or personal bankruptcy, is thus considered as a possible way of dealing with the problems of over-indebtedness, so that the over-indebted are able to quickly return to the market as entrepreneurs, consumers and borrowers'.[9] As the author asserts, creditors should take on more responsibility in the provision of credits and loans as they have greater opportunities to both diversify and manage their risk exposures on the market. For instance, SEA (2008:8) states: '[o]ne of the main reasons the United States has had such a forgiving bankruptcy system is that a forgiving system supports capitalism, risk taking, and entrepreneurialism'.

It is noteworthy that the latest quoted statement was made just before the news was released about the Lehman Brothers debacle and, thus, the outbreak of the global financial crisis a decade ago. From a financial system stability perspective, the US approach is evidently not the ultimate solution to managing problems caused by over-indebtedness. Just as the predominant approach in the EU, the US approach seems to open-up for opportunistic behavior among agents involved in the borrowing-on-credit process. Adverse selection in the pre-contractual phase and moral hazard in the post-contractual phase are well-known ingredients of crediting and lending because of asymmetric information. Hence, regulatory measures imposed for handling default problems arising in the post-contractual phase will more or less inevitably have implications for the financial behavior of borrowers and creditors in the pre-contractual phase, and vice versa. For example, if there is a lender of last resort, like Central banks traditionally have been, creditors will to a greater extent be inclined to utilize this in the pre-contractual phase when providing credits and loans to borrowers. Likewise, if given the opportunity, borrowers will to a greater extent over-borrow when sanctions in connection to a failure of meeting obligations according to the credit agreement are regarded too light in the post-contractual phase. This suggests that implementation of regulatory measures in the pre- and post-contractual phases, as well as the enforcement and execution of these measures, must be carefully coordinated to efficiently promote soundness in the provision of credits and loans to young adults.

## 4 Concluding Remarks

In this concluding chapter of our book about the indebtedness of young adults, we have examined and elaborated on what actions are taken as well as actions required on governmental levels against over-indebtedness among households, in general, and amongst young adults, in particular. Our ambition is to utilize findings in the studies conducted within our research program, as well as in prior research and public investigations in the area of household indebtedness and possible over-indebtedness, in order to suggest how to accomplish greater soundness in the provision of credits and loans to young adults.

When trying to understand the interaction in the loan chain between, on one hand, financial institutions and regulators, and financial institutions and individual young adult borrowers on the other, the use of the legal framework proposed by Henrikson (2016) provides insights illuminating the importance of where and in what format regulatory measures are implemented in the borrow-on-credit process, that is, in which of its three different phases of this process the various types of such measures are suitable. At present, there are already legal consumer protection rules in the pre-contractual phase that have the potential to discourage young adults from entering into inappropriate credit agreements when purchasing consumer products as well as buying a home. The adherence to these laws, however, has not been satisfactory in the past. Therefore, it is of vital importance that priority now is given to ensure that all creditors are complying with these legal rules. At the same time, it is evident that regulatory measures taken in each of the three phases are interdependent. This requires coordination between measures imposed to provide incentives for both young borrowers and creditors to make decisions accordingly. The weak position of the borrower in the post-contractual phase is not necessarily unreasonable, at least not when considering credits for purchasing consumer products. It depends on what has happened in the prior phases. If the creditor has applied what characterizes as sound provision of credits and loans and the borrower fails to fulfill her or his obligations anyhow, then a stronger position for borrowers at the post-contractual phase might even be contra-productive in the case of consumer credits. This is because it will indirectly encourage consumers to behave opportunistically in the pre-contractual phase and present private information about themselves in an unbalanced way to potential creditors. When there are information asymmetries, this is likely to

lead to adverse selection and, thus, that creditors end up with a too large share of the riskiest borrowers.

The provision of secured loans (i.e., collateralized mortgages) for buying a home differentiates from credits for purchasing of consumer products. First, the size of the amounts generally differs substantially implying that the creditor, which in most cases is a bank, can benefit more from economies of scale in its credit screening and controlling processes than otherwise. Second, the bank often has (at least the capacity to obtain) superior information about both the current situation and the likely future development of the real estate market. Third, the bank is also often in a position to better assess the fair market value of the single specific property for sale. Many banks cooperate closely with or even own their own real estate brokerage firm. Fourth, and finally, for many households buying their own home means a realization of a dream and something that they only do once or a few times. This implies a lot of emotions, which can make home buyers behave less rationally and, for example, absorb purchasing confirmatory information but ignore information that discourages a purchase. In that respect, these home buyers are vulnerable and, thus, more likely to enter into credit agreements that they will have difficulties to comply with. As stressed in the introductory Chapter 1, this appears to be particularly true for young adults who buy their first home. Hence, there are reasons for adopting the US approach when it comes to mortgages and not make the borrower liable for mortgage debt exceeding the net sales value of the home if sold. Given that there is information asymmetry, it would of course have implications for how the parties act and behave in the pre-contractual phase. Banks are likely to seek to compensate themselves for their higher risk exposure, which suggests a widening of their interest rate margins. On the one hand, this may lead to adverse selection. On the other hand, banks are in a fairly good position to mitigate adverse selection. However, higher mortgage rates can lead to certain categories of potential homeowners being squeezed out from the market and, thus, financial exclusion. The magnitude of this problem will ultimately depend on how adoption of the US approach will impact on bank competition. This is a question for future research.

Future research should also examine the suitability of the US approach on consumer credits extended by creditors, who have adopted a business model with a focus on providing credits to consumers that have difficulties to borrow from traditional banks. Such customers are often subject to arrears registered at SEA that have resulted in arrears remarks at

credit information agencies, like UC. Adopting such a business model, the creditor is calculating that there will be a higher proportion of borrowers that will not be able to fulfil their commitments according to the credit agreement entered into than otherwise. This is part of their value at risk assessment, where the expected credit losses are to be covered by the addition of a risk premium to the lending rate. It is questionable whether it is efficient that these creditors are given the right to utilize debt recovery agencies and SEA for a fairly low cost, which they can do according to the Swedish and, also largely, the EU approach. Adopting the US approach would set pressure on these creditors to be more careful in their lending. A question is what maneuver-room they have to increase their lending rates, which seem to be high already? Related questions are what the effect would be in terms of financial exclusion, in general, and concerning young adults, in particular? To answer these kinds of questions will be an important challenge for future research.

## Notes

1. Our translation from Swedish to English.
2. https://www.esrb.europa.eu/about/html/index.en.html (accessed January 3, 2019).
3. Belgium, Cyprus, Estonia, Greece, Ireland, Italy, Lithuania, Malta, Portugal, Slovakia, UK, Czech Republic, and Hungary.
4. Bulgaria, Denmark, France, Italy, Croatia, Luxembourg, Netherlands, Poland, Romania, Slovenia, Germany, and Austria.
5. Finland and Sweden.
6. As Henrikson (2016) notes, the concept of "consumer protection" is defined neither in Swedish law nor in EU law.
7. https://www.kronofogden.se/download/18.33cd600b13abbc8411c800020855/1371144370347/kronofogden_in_english.pdf.
8. The time duration is prolonged to five years if the debtor has been subject to debt restructuring.
9. Quote in Swedish, freely translated by us into English.

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