RES MILITARIS
REVUE EUROPEENNE D ETUDES EUROPEAN JOURNAL OF MILITARY STUDIES
Social Science Journal

Determinants Of Over-Indebtedness from A Borrower's Perspective: The Application of Social Cognitive Theory (Sct) In Developing the Research Framework

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Abstract

Over-indebtedness has become a major concern throughout the world. It had been proven that over-indebtedness had given impact to individual physical and psychological health. Besides from the impact, however there is limited research on the phenomenon especially from the standpoint of the borrower which has been identified as the source of the problem. As such, the purpose of this research was to propose a conceptual framework in investigating determinant of over-indebtedness, specifically from the borrower's point of view. Using the Social Cognitive Theory as the underpinning theory, this research proposed a conceptual research framework based on the integration of external (lending institutions practice), personal (materialism and self-efficacy) and behavioural factors (money management skills), along with the mediating effect of materialism towards over-indebtedness in the research model. With the research framework, we hope that future researcher could test the given model and the result could fill the knowledge gaps in the consumer's over-indebtedness research field.

Keywords: Over-indebtedness; psychological well-being; neurocscince; Social Cognitive Theory; Self-efficacy

Introduction

Over-indebtedness is one of the biggest challenges in the current modern world (Carlsson et al., 2017; Ferreira et al., 2021; Hiilamo, 2020; Idris et al., 2018). It has been proven that over-indebtedness can pose significantly negative impacts on the individual, society, institutions, and a country's economic conditions (Cuesta & Budris 2015, Goedde-Menka 2017, Pazarbasioglu, 2019). The impact of over-indebtedness on the individual can be seen in the form of financial distress. It has been described in previous literature that financial distress can affect individuals' physical and psychological health. An over-indebted borrower feels pressured by his/her financial situation and continuously thinks about how to settle their debt burden or their financial commitments. In turn, over-thinking leads to stress (Cannuscio et al., 2012), anxiety (Dackehag, Ellegard, Gerdtham & Nilsson, 2019), depression (Hojman, Miranda & Ruiz-Tagle, 2016), panic attack (Chan, Yip, Au & Lee, 2005; Fatoki, 2015; Haushofer & Fehr, 2014) and also physical health effects such as back pain (Cuesta & Budría, 2015). A recent study on the impact of over-indebtedness on individual well-being by Ferreira et al. (2021) reveal that over-indebted borrowers have lower life satisfaction and emotional well-being on top of poorer health and sleep quality as compared to non-over-indebted borrowers. More alarmingly, over-indebtedness has been proven to lead to the tendency to commit suicide due to the associated pressure faced with this debt burden (Chang, Cheng, Lee & Yip, 2016; Richardson, Elliott & Roberts, 2013).

Moreover, being over-indebted has also been linked to negative job performance (Hiilamo, 2020). Over-indebted workers have difficulties keeping their mind off their debts and thus have trouble concentrating at work. Additionally, over-indebtedness often causes one to take time off work due to stress thus leading to low productivity and other problems at the workplace including product defects and poor service delivery (Alleweldt et al., 2013). This condition results in various domino effects involving the individual, company performance and economic growth. If the customer is not satisfied with the quality of goods from a company due to a defect, the sales will drop and ultimately the tax paid to the government (corporate tax) will be small. This will be detrimental to the country as the national income will be reduced. It has been noted that taxation is the major revenue source of the government in every country (Omodero & Ogbonnaya, 2018) and that corporate taxes are one of the main sources of income to finance government budget, and an important determinant of the capital investment in every nation (Pitulice, Stefanescu, Minzu, Popa & Niculescu, 2017). Therefore, low productivity and performance caused by over-indebted workers is not only a disadvantage for the company, but also for the whole country.

In terms of economic and institutional impacts, lending institutions can be affected by write-offs which worsen their financial performance and may also lead to reputational loss (D'Alessio & Iezzi, 2013; Gathergood, 2012). Tarnished reputations among financial companies can result in a temporary surge in banking regulation (Van Der Cruijsen, De Haan & Jansen, 2016). Even though the effect is temporary, it may be reflected in the society's general lack of trust for times to come (Hiilamo, 2020). While there is a growing concern about consumer over-indebtedness around the world, there is limited research on the causes of consumer's over-indebtedness (Risal, 2018) with less agreement on how it should be measured or defined (Hiilamo, 2020). The current understanding of the problem is based largely on the lender's perspective (Bylander et al., 2018; Gutierrez-Nieto et al., 2017; Schicks, 2014).

In principle, to solve this problem, a study should be made to identify the factors of occurrence of over-indebtedness referring from the perception of the borrower. This is because, the borrower is the person who really feels the burden of the debt. Therefore, the study on over-indebtedness should refer to the perspective of the borrower itself and use the correct respondents in identifying the root cause of this problem. Concerning with the above discussions, hence it this paper is trying to propose a conceptual framework in identifying factors of over-indebtedness, specifically from a borrower's perspective. The literature review and research gaps pertaining on the study of over-indebtedness will be presented in the Section 2. Section 3 is about the proposed framework for the determinants of over-indebtedness, and the last section will present about the conclusion and directions for the future researcher.

Literature Review

Over-Indebtedness: Definitions and Measurements

It is important to understand the meaning of over-indebtedness to identify the factors. Currently, there is no agreed general definition for over-indebtedness, or any comprehensive agreement on how it should be measured (D'Alessio & Iezzi, 2013; Fatoki, 2015; Hiilamo, 2020; Idris et al., 2018; Liv, 2013; Marron, 2012). However, contemporary research has pinpointed three potential measurements or models for explaining consumer over-indebtedness (Betti, Dourmashkin, Rossi & Yin, 2007; Bylander et al., 2018) namely subjective measures, objective measures and administrative measures. An objective measure is, typically, a quantitative model which explains over-indebtedness as an extreme amount of debt in terms of debt ratio. The debt ratio, in this case, can be between 30% to 50% (Marron, 2012; Veliziotis, Bryan, & Taylor, 2010).

A subjective measure of over-indebtedness would be via self-reporting on the part of the debt-holder, as only the debt-holder or borrower is said to have a truly accurate picture of their own state of over-indebtedness. An individual can be said to be over-indebted if he/she is experiencing financial struggles such as issues with repayments, taking on extra jobs to sustain his/her needs, or defaulting on bills (Carlsson, Larsson, Svensson & Åström, 2017b; Disney, Bridges & Gathergood, 2008; Gathergood, 2012; Lusardi & Tufano, 2009; Schicks, 2014). An administrative measure assesses over-indebtedness by taking account of incidents where debts have not been repaid, and when these non-payments have been officially declared as bankruptcy or stated in court. This can occur in a case where a borrower has declared bankruptcy and has been sent warning notices from relevant official parties due to defaulting on payments (Betti et al., 2007). However, all of the above definitions have several limitations.

Using debt-to-income-ratio as a cutting point for over-indebtedness will expose it to the preconception in judgement. The cutting point for debt-to-income-ratio varies among individuals. As such, 40% of debt-to-income-ratio might be considered as a burden for some individuals but deemed acceptable for other group of borrowers. Moreover, it has been proven that default payments occur not because the borrower is unable to pay or is facing financial difficulties, but because of the borrower's attitude (Idris, 2019). Additionally, using self-reporting measures in determining individual over-indebtedness may result in biased reporting, where the borrower will over-judge himself as facing financial difficulties (Gathergood, 2016). Meanwhile, bankruptcy is often considered as a late stage or consequence of over-indebtedness (Betti, 2012; Guiterrez-Nieto et al., 2017).

On top of that, debt-to-income-ratio, default payment and bankruptcy are derived from the lender's point of view rather than the borrower, which is considerably different from the perspective of the consumers. Thus, there is a need to apply a measurement for over-indebtedness that cater from the viewpoint of the borrower, with less emphasis on issues of defaulting or repayments. As such, the development of studies on over-indebtedness literature have proposed a new measurement in defining over-indebtedness that more details and concern the definition from the borrower's point of view. For instance, Gutierrez-Nieto et al. (2017) and Schicks (2014) presented alternative descriptions for over-indebtedness by expanding the category of self-reporting. Schicks identifies an over-indebted individual as someone who is consistently having trouble meeting deadlines for payments and is forced to make unreasonably high sacrifices to compensate for their debt-related burdens.

Considering the extent to which many over-indebted individuals make sacrifices to ensure that their debt repayments are fulfilled, situations such as defaults or delinquency are markers of extreme states of over-indebtedness than the norm. The over-indebted individual makes sacrifices to be able to manage his/her financial issues, such as by working overtime or taking part-time work, cutting down on basic needs such as particular foods, and enduring psychological burdens such as shame. From the researcher knowledge, there is only Gutierrez-Nieto et al. (2017) and Schicks (2014) who have the over-indebtedness measurements from a borrower's perspective in the over-indebtedness literature. However, Schicks measurements are more details than Gutierrez-Nieto et al. (2017) in describing the over-indebtedness, and Schick's measurements had been mentioned by other studies such as in Puliyakot & Pradhan, 2017 and Srivalosakul & Suwanragsa, 2018. Although Schicks' definition of a customer refers to a household, it can be applied to other economic units such as a person, a group of people or a firm (Debnath & Roy, 2018).

Research Gaps

Consumer over-indebtedness has been a major concern in our world today. However, not many studies had been conducted to examine the factors that had caused it (Risal, 2018), and there is less agreement on how it ought to be identified or quantified (Hiilamo, 2020). The existing knowledge of the problem is mostly focused on the perspective of lenders (Bylander et al., 2018; Gutierrez-Nieto et al., 2017; Schicks, 2014), and existing approaches stand from challenges stemming from the difficulty to identify how much is too much in the case of household debt (Puliyakot & Pradhan, 2017). Previous researchers did suggest for future studies to apply the concept of borrower's sacrifices as a measurement of over-indebtedness since it covers the aspects of over-indebtedness definition from a borrower's perspective (Puliyakot, 2020; Schicks, 2014). With regards to these gaps, thus it is imperative to develop a conceptual framework on determining the over-indebtedness from a borrower's perspective.

Apart from the limitation on the measurement (defining over-indebtedness), most studies on over-indebtedness do not cater to real over-indebted borrowers and are hence exposed to biased results (French & Mckillop, 2016). Most studies on over-indebtedness recruited respondents from among general young adults (Larsson, Svensson & Carlsson, 2016), general microfinance borrowers (Bylander et al., 2018), students (Rogers et al., 2015) and general workers (Meyll & Pauls, 2019).

In spite of the fact that materialism is strongly related to compulsive buying, there is a lack of research explaining how materialism relates to personal debt (Adzis et al., 2017; Gardarsdóttir & Dittmar, 2012; Muzafari, Mowlaie & Bahmani, 2016) and hence how materialism is linked to over-indebtedness. Additionally, existing research on the impact of materialism on debt levels largely emphasize on personal credit such as the utilisation of credit card facilities, with no attention on the link between materialism and high household debts (Adzis et al., 2017).

Moreover, despite the fact that the mediating influence of materialism has been the subject of discussion in other fields, there is still insufficient research on materialism within the area of consumer behaviour (Matos et al., 2019). Srivalosakul et al. (2018) urged future studies to take materialism into account as a variable when examining consumer indebtedness. This is because the concept of materialism is capable of connecting various emotional, psychological and economic factors in relation to indebtedness.

Additionally, the individual's personal environment in the context of over-indebtedness has received less attention in the literature (Disney & Gathergood, 2013; Gutierrez-Nieto et al., 2017). The growth in financial innovation and financial liberalisation has made consumer access to credits easier while causing financial problems. The tendency to imitate the lifestyles of others also causes many individuals to live beyond their means. Instead of only buying what they need, individuals are now more prone to buying the same thing as others. To sum up, the phenomenon of "Keeping up with the Joneses" plus easy access to credit has posed a great impact on the increase in consumer over-indebtedness. While the factors involved in financial institutions in relation to the problem of debt have been widely discussed in the literature, previous studies have paid little attention to several critical questions concerning modern market economies and how these impact consumer behaviours. Moreover, research on credit markets typically focuses on lending to firms, while households are mainly viewed as suppliers of funds rather than as debtors (Japelli et al., 2013). The relation between lenders and households is, in fact, essential in understanding the implication of easy access to credit on the lifestyles of households and their material welfare (Kus, 2013). Most of the studies on lending institutions used objective measures to access the effect of lending institutions practices on indebtedness.

Money management skills which also known as financial skills is a part of financial literacy, but its role in predicting financial outcome has been largely ignored (French & Mckillop, 2016; Idris et al., 2016). Moreover, most of the previous studies on the prediction of money management skills and individual debt focused more on credit card and student debts, causing the findings to be ungeneralizable to other types of consumer debts such as housing loans, personal loans and hire purchase loans. In addition, studies on factors that contribute to consumer debts in Malaysia, particularly among young adults, are limited (Adzis et al., 2017).

Additionally, financial decision making in households primarily emphasised the influence of cognitive capacities, such as financial literacy. Although it has been established that self-efficacy can prevent negative outcomes in terms of personal finances, there is a lack of research into this factor to predict financial consequences (Farrell, Fry & Risse, 2016; C. M. Kuhnen & Melzer, 2017). Policymakers have focused on improving financial literacy through the implementation of educational programs. Despite these programs, sound financial management requires a degree of conviction and self-confidence within the individual, in addition to financial literacy. This personality trait is classified as 'self-efficacy' in the field of psychology (Salim et al., 2017). Those with low perceptions of their own financial acumen are shown to be in greater states of indebtedness. These findings support the significance of individual confidence in influencing consumer behaviour (Braun Santos et al., 2016). Therefore, financial education programs should ideally strive to improve consumer convictions and beliefs in their own capabilities with regards to managing money, also known as financial self-efficacy (Lown, 2011; Matos et al., 2019). Figure 1 summarises the research gaps in consumers' over-indebtedness research field.

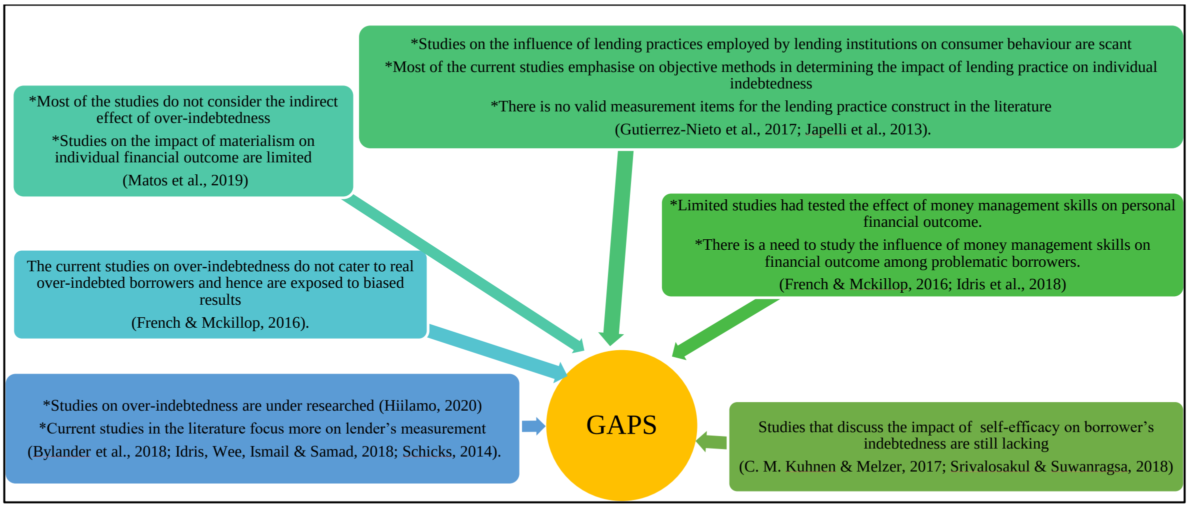

Figure 2. Gaps in over-indebtedness studies

Development Of the Conceptual Research Framework

Materialism and Over-indebtedness

Materialism is defined as the pursuit or attainment of possessions for the purpose of status or prestige. Simply put, the propensity for imitating other people and the desire to win their approval can cause an individual to live beyond his/her means (Loke, 2016). Materialism is a personal trait driven by the significance of owning items that indicate status and are perceived to bring happiness (Schiffiman & Kanuk., 2008; Podoshen & Andrzejewski., 2012). Thus, a high level of individual materialism contributes to the propensity to fall into indebtedness and is therefore associated with over-indebtedness. This can be attributed to materialistic consumers who believe that they must purchase more material goods to guarantee satisfaction and happiness (Gutierrez-Nieto et al., 2017).

Materialism has been shown to bring negative consequences to personal behaviour and well-being (Duh, 2015). The negative consequences include rising and unmanageable consumer debt, depleted savings, consumer bankruptcy, depression, unhappiness, and life dissatisfaction (Roberts et al., 2005; Roberts & Clement, 2007; Tsang et al., 2014). According to Tsang et al. (2014), materialistic people are less satisfied with their lives because they have less gratitude. This means that instead of being satisfied with what they have, they focus on what they do not have, thus making them less appreciative of the positive aspects in their lives.

Individuals with a materialistic mentality are more likely to engage in obsessive purchasing without contemplating the consequences of their actions, which will ultimately result in unfavourable financial behaviour (Gardarsdottir & Dittmar., 2012; Nye & Hillyard., 2013). For example, a highly materialistic individual that strongly associates happiness with assets might have a propensity for compulsive spending (Cheng, Rajagopalan, Hamid, Wei & Ahmad, 2015). Fitzmaurice (2008) confirms it with a study which demonstrates the positive correlation between high borrowing and a materialistic personality. However, despite such findings, several studies found no correlation between materialistic values and individual bankruptcy. For example, in a study on the relationship between personal lifestyles with bankruptcy, Noordin, Zakaria, Sawal, Ngah and Hussin (2012) found no significant relationship between personal materialistic value and individual bankruptcy among young executives in Malaysia. Based on the discussions above, we postulate that:

H1: *There is a significant relationship between materialism and over-indebtedness.*

Lending Institutions Practice, Materialism and Over-Indebtedness

One of the reasons for rising household debts is the ease of borrowing from a growing number of lending institutions. Financial institutions are criticised for their indiscriminate marketing practices of offering credit to even young, low-income consumers who are not able to repay their balances (Chichaibelu & Waibel, 2017). Moreover, it is said that lenders often offer a product which is inappropriate to a borrower's condition, while the lack of transparency can also create future problems for the borrower (Collins et al., 2009). Financial institutions that tailor their communication and product advertisement to turn consumers' heuristic-based judgments to their favour sometimes lead consumers to bad financial decisions regarding debt accumulation and repayment (Bar-Gill & Warren, 2008).

In the case of microfinance borrowers as investigated by Puliyakot (2020), Rai et al., (2018), and Schicks (2013), it was found that microfinance institutions can push borrowers beyond their limits if the institutions focus excessively on portfolio growth and utilise aggressive marketing techniques. The study argued that microfinance institutions often offer products that are inappropriate to the borrower's situation, enforce unrealistic instalment schedules, and resist the need to reschedule loan agreements or artificially limit maturities. Micro-lenders also contribute to over-indebtedness through their operating procedures by being lax when evaluating repayment capacity, offering non-transparent terms and conditions, and using coercive collection practices. Because of cognitive limitations, difficulties in resisting temptation and sociological pressures, individuals sometimes make irresponsible borrowing decisions (Schicks, 2010).

Islam, Wei, Sheikh, Hameed and Azam (2017) emphasised that one of the antecedents of individual materialism and compulsive buying behaviour is advertising. The pressure for growth among financial institutions had turned them into socialization agents that promote credit facilities to the public, ease loan applications, offer lower rates and other lending methodologies to attract potential customers to apply loans (Gutierrez-Nieto et al., 2017; Raijas et al., 2010).

Previous studies also found that credit officers play a role in increasing loan demand among potential borrowers (Bushman, Gao, Martin & Pacelli, 2020). Loan officers aggressively promote higher loan amounts to potential borrowers. Besides that, the officers also do not practice thorough checking on new loan applications as they are more motived by the incentives offered by the lending institutions i.e., they will get bonuses or rewards based on the amount of loans processed under their name (Behr et al., 2020). The influence of loan-volume-based remuneration on loan volume and delinquency rates was investigated by Agarwal and Ben-David (2018). They discovered that when loan officers are compensated based on volume, they produce more loans but lesser loan quality.

Other empirical findings by previous studies also found that lending interest rate influences loan demand. Lending interest rate refers to the cost of holding loans or borrowings from the bank. Hence, lower lending rates cause the demand for household debt to increase. Otherwise, an increase in the interest rate on loans distracts agents from borrowing. Most of the studies argued that lending interest rate plays an essential role in explaining the changes in household debt from the supply side. Extensive empirical findings are in line with the fundamental underpinnings which highlight a negative relationship between interest rate and household debt (Meniago et al., 2013; Meng et al., 2013; Nagano & Yeom, 2014; Rubaszek & Serwa, 2014; Kim et al., 2014). This means that loan demand will drop when the cost of borrowing (loan interest) rises. Nevertheless, some studies found a positive link between these two variables (Catherine et al., 2016; Park & lee, 2019), while some other studies found no significant effect of interest rate on household debt (Rashid et al., 2017). Thus, based on these explanations, the researcher asserts that:

H2a: *There is a significant relationship between lending institutions' practice and over-indebtedness.*
H2b: *There is a significant relationship between lending institutions' practice and materialism.*
H2c: *The relationship between lending institutions' practice and over-indebtedness is mediated by materialism.*

Money Management Skills, Materialism, and Over-Indebtedness

Individuals who manage their money well have lower debts in various economic conditions. According to Bylander et al. (2018), borrowers with a lack of knowledge will demonstrate a lack of prudent consideration and improper usage of microfinance services. Money management skills do help individuals or households keep track of their income and expenditure to improve their financial status. These skills involve behaviours such as budgeting, making payments on time, saving money, managing credit card debt, and having an idea of one's net worth (Pham, Yap & Dowling, 2012). Money management skills are presumed to be a predictor of over-indebtedness (Ksendzova, Donnelly & Howell, 2017).

A common finding generated from previous studies indicate that poor money management skills are one of the predictors of debt (French & Mckillop, 2016; Hoffmann & McNair, 2018). Serious debtors are often associated with having weak money management skills (Adzis et al., 2017). Moreover, Donnelly et al. (2012) revealed that money management skills negatively influence credit card debt among students whereby students with good money management skills have lower credit card debt. Even so, several other studies revealed that individuals with good financial literacy and financial skills also find themselves trapped in high debts (Idris et al., 2016, 2018).

Meanwhile, in terms of the relationship between financial management and materialism, it is said that a low level of money management skills is associated with a high level of materialism. Previous studies recognize that budgeting influences the purchasing decisions of consumers and increases their awareness about their financial situation, thus contributing to their greater control over their expenses and less chance of indebtedness (Miotto & Parente, 2015). Previous studies also documented the many detrimental effects of materialism on personal and social well-being. It is said that a low level of money management skills is associated with compulsive buying and the acquiring of unnecessary goods and services (Harnish, Carson, Bridges, Nataraajan & Gump, 2018; Ku, Wu, Lao, & Lam, 2016).

In short, one of the most fundamental aspects of successful personal financial management is the capacity to live within one's means. The literature addresses this incapacity through the lens of excessive debt and consumer credit utilisation. When individuals spend significantly above their income, they will rely on other critical resources such as their savings to maintain their consumption. If this spending continues unchecked, it will inevitably result in a state of perpetual debt (Loke, 2016). To the extent that this is related to the lack of financial knowledge, it is important to note that highly materialistic persons are more likely to borrow extensively even though they possess a high level of financial literacy.

Materialistic attitude encourages an individual to make compulsive purchasing without thinking or considering about its consequences, thereby resulting in negative financial behavior (Gardarsdottir & Dittmar, 2012; Nye & Hillyard, 2013). It has been proven that money management acts as a safeguard against consumer debt (Ksendzova, Donnelly & Howell, 2017). Consumers who manage their money well tend to save more money, are less likely to shop compulsively, and have lower credit card debt (Donnelly, Ksendzova & Howel, 2013). Therefore, materialistic people need to have good money management skills to prevent themselves from being materialistic and becoming a compulsive buyer. On the other hand, highly materialistic individuals with good financial management practices are less likely to report compulsive buying problems. Based on the above points, thus we posit that:

H3a: *There is a significant relationship between money management skills and over-indebtedness.*
H3b: *There is a significant relationship between money management skills and materialism.*
H3c: *The relationship between money management skills and over-indebtedness is mediated by materialism.*

Self-Efficacy, Materialism and Over-Indebtedness

Self-efficacy plays a role in determining financial behaviour and the self-assuredness of one's capability to manage one's finances (Fauzi et al., 2020). Individual with strong self-efficacy have more conviction in their financial choices as opposed to people with weak levels of self-efficacy. Financially literate people with low self-efficacy are more dependent or more easily swayed by the guidance from a third party because they have insufficient confidence in their own capacity to manage their finances (Cheng et al., 2015).

Farrell et al. (2016) discovered a significant relationship between a woman's level of financial self-efficacy and elements of her personal finance behaviour, specifically the types and number of financial products that she holds, in their study on the effect of self-efficacy on woman's financial behaviour. More importantly, their study found this relationship while controlling a variety of other important factors such as a woman's personal financial risk preferences and factors influencing her financial literacy. As a result, the findings imply that a woman's financial self-efficacy, or sense of self-assurance in her financial management abilities, may have a real impact on her personal finance outcomes.

A person with a high level of self-efficacy is more likely to avoid the trappings of high debts, while a person with a low level of self-efficacy is more likely to be associated with negative financial outcomes, specifically over-indebtedness. Moreover, people with low self-efficacy have difficulties in justifying their financial abilities in repaying their debts (Cheng et al., 2015). The study by Selenko and Batinic (2011) found that self-efficacy can buffer the relationship between perceived financial strain and mental health. Also, Gathergood (2012) confirms that consumers who exhibit self-control problems are shown to make better use of quick-access but high-cost credit items such as store cards and payday loans. In short, the lack of self-efficacy has a stronger role than financial illiteracy in explaining consumer over-indebtedness. A person's level of self-efficacy also impacts their rates of saving and borrowing, as dictated through their financial planning targets (Salim et al., 2017). Huhmann and McQuitty (2009) detailed how a high level of self-efficacy in consumers gives them more conviction in their financial choices, while individuals with low-self efficacy are prone to seek out instant gratification at the expense of long-term well-being (Cheng et al., 2015).

In contrast with the above discussion, several studies revealed that self-efficacy does not influence consumer debt. For example, there are mixed results regarding the relationship between self-efficacy and student debt. Xiao et al. (2011) found that self-efficacy could restrain a student's personal finance. In addition, students who feel in control of their credit card usage are less likely to use it (Kennedy 2013). Moreover, Cloutier and Roy (2020) found a different result regarding the influence of self-efficacy on the credit behaviour of students. The researcher stated that the link between consumer credit self-efficacy and risky consumer credit behaviour is statistically significant for undergraduate students, but not for postgraduate students.

Rogers et al. (2015) in their study of psychological factors in credit scoring model found that self-efficacy has a high significance on optimism, and that optimism is positively influenced by high credit. Furthermore, the researcher stated that the self-efficacy variable accurately captures the relationship since optimism can lead to comfortable expectations of future income, which might drive people to consume now and go into debt to rationalize their expenditures. The tendency to overestimate future income is positively related to an individual's current debt levels. This means that a person with high self-efficacy is prone to have high debt and fall into over-indebtedness due to the overestimation that causes bias in decision making.

As a conclusion, people who lack self-confidence and have low self-esteem are more likely to succumb to peer influence and as a result, they may adopt materialistic values (Duh, 2015). Thus, individuals with self-efficacy have the mind power to control themselves from making unrealistic decisions such as compulsive buying, being materialistic and making wise decisions when it comes to financial planning. Based on the above discussions, the researcher postulates that:

H4a: *There is a significant relationship between self-efficacy and over-indebtedness.*
H4b: *There is a significant relationship between self-efficacy and materialism.*
H4c: *The relationship between self-efficacy and over-indebtedness is mediated by materialism.*

The Application of Social Cognitive Theory (SCT) in Formulating Over-indebtedness Research Framework

The conceptual framework and the development of hypotheses are based on the reviewed literature described at length in the previous section. prior studies frequently state that the reasons of household debt growth are due to the two main factors i.e., internal, and external factors. Internal factors refer to individual or personal variables that occur within the households' controllable situations (Debnath & Roy, 2018; Gathergood, 2012; Lusardi & Tufano, 2009; Schicks, 2014) whereas external factors allude to uncontrolled events such as income shocks, recessions, or the impact of financial development in the open market (Hiilamo, 2020). The terminology of internal and external factors are interchangeable with the terms supply and demand side (also known as supply and demand factors), where the demand side/factor is the same as internal factors and the supply side/factor is the same as external factors (Braucher, 2006; Cavalletti, Lagazio, Lagomarsino & Vandone, 2020).

Basically, Albert Bandura had taken into consideration all these aspects in explaining human behaviour in his Social Cognitive Theory. Bandura explains that individual behavioural outcomes are due to personal factors, behavioural factors, and environmental factors. Since this theory has been complementary in explaining individual behavioural outcomes, therefore the formulation of constructing a conceptual research framework is based on the three main elements in the Social Cognitive Theory namely external, personal, and behavioural elements in shaping debt behaviour. Even though Bandura's introduces a reciprocal relationship between the elements in his original Social Cognitive Theory, however it is also can be applied for the oner-way causality effect in explaining the relationship of the constructs as in H.-Y. Lin & Hsu (2015) and Taherdoost (2018), The main objective of this study is to propose the conceptual framework in identifying factors of over-indebtedness. Figure 3 presents the development of the over-indebtedness framework from a borrowers' perspective, as captured from the Social Cognitive Theory. As a conclusion, the whole research framework is explained by Social Cognitive Theory which involve with the personal factors which refer to materialism and self-efficacy, external factor which refer to lending institutions' practice and behavioural factor which refer to money management skills in shaping the behavioural outcome (over-indebtedness). Details on the proposed conceptual framework and the applications of Social Cognitive Theory in developing the research framework as presented in Figure 3, and instrument items for each construct as presented in Table 1.

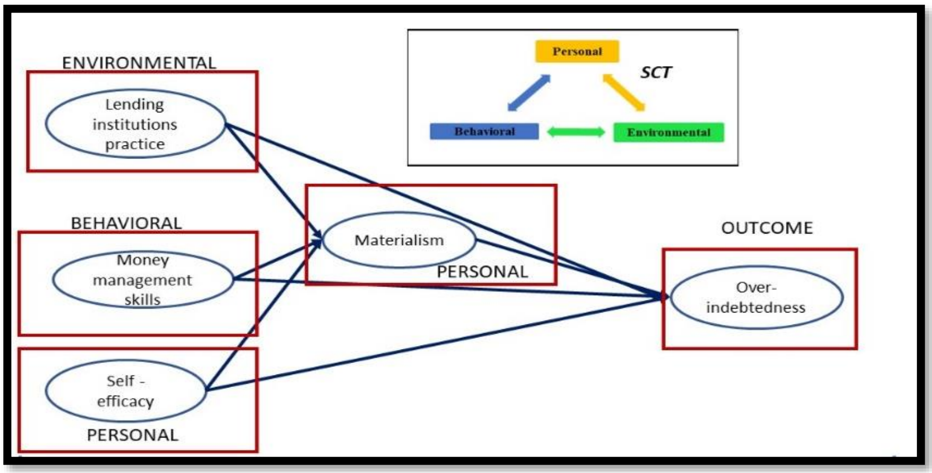

Figure 3: The Proposed Over-indebtedness Research Framework

Table 1: Measurements item

Constructs / Source	**Items**
Over-indebtedness (Schicks, 2014)	**Basic sacrifices** • Reduce food quantity/quality (cut down eating). • Reduce education (e.g., taking children out of school). • Postpone important expenses (e.g., for health, housing, business assets, etc.). • Work more than usual (e.g., take additional labour, work longer hours, on Sundays, and when ill). **Economic sacrifices** • Deplete your financial savings (e.g., money in the house or in a savings account). • Borrow anew to repay (take an additional loan from another lender). • Sell or pawn assets (e.g., jewellery, cattle, productive, or household assets). • Seizure of assets (Microfinance institutions takes property by force to make up for missed payment). **Psychological sacrifices** • Use family/friends' support to repay. • Suffer from shame or insults (also gossip about you/ exclusion from a contract). • Feel threatened/harassed by peers/family/loan officer. • Suffer psychological stress yourself or in your marriage. • Buying gives, me pleasure.

Materialism (Doosti & Karampour, 2017); α = 0.868 (Flores & Vieira, 2014); α = 0.74	• I like to have a lot of luxury in my life. • I admire people who own expensive homes, cars and clothes. • Some of the most important achievements in life include acquiring material possessions. • I like to possess thing to impress people • The things I own say a lot about how well I'm doing in life. • My life would be better if I owned certain things I don't have. • I'd be happier if I could afford to buy more thing. • It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like
Lending institutions' practice (Gutierrez-Nieto et al., 2017; Liv, 2013; Raijas et al., 2010)	• It is easy to get a loan from financial institutions. • Loan officers explained all the terms and conditions of the loan to me. • Financial institutions disburse the loan in time for me in the time needed. • The duration on loans given is adequate for me. • I received the loan amount I wanted from the financial institutions. • The loan repayment schedule of financial institutions is convenient for me. • Financial institutions provide fair rescheduling options for a borrower in honest difficulties. • The interest rate offered by the bank is affordable.
Money management skills (French & Mckillop, 2016; Gardarsdóttir & Dittmar, 2012; Lea et al., 1995) α = 0.80	• I keep an eye on how much money is coming in and how much is going out. • I always know exactly how much money I owe. • I monitor my financial reports • I put money away in advance to be able to pay my bills. • I repay my bills on time. • I make detailed budgets for my expenses. • I stay within my budget(s). • My finances are organised. • I am good at handling money.
Self-efficacy (Rogers, Rogers & Securato, 2015); α =0.81	• I can always manage to solve difficult problems if I try hard enough. • If someone opposes me, I can find the means and ways to get what I want. • It is easy for me to stick to my aims and accomplish my goals. • I am confident that I could deal efficiently with unexpected events. • Thanks to my resourcefulness, I know how to handle unforeseen situations. • I can solve most problems if I invest the necessary effort. • I can remain calm when facing difficulties because I can rely on my coping abilities. • When I am confronted with a problem, I can usually find several solutions. • If I am in trouble, I can usually think of a solution. • I can usually handle whatever comes my way.

Conclusion And Direction for Future Research

The objective of this paper is to develop and propose a conceptual framework in investigating the determinants of over-indebtedness from a borrower's perspective. This is due to the reason of high numbers of over-indebted borrowers from year to year, and it also had been practically and theoretically proven that over-indebtedness had given effect to the negative outcomes not only to the individual, but also to the whole economic systems. Several questions had raised and become researcher's concern such as "What are the causes of this problem?"; Are there any research studies had been taken to handle this problem? If so, why the numbers of over-indebted borrowers keep on increasing from time to time?". By having the questions in mind, the researcher had taken an initiative by investigate the causes of the problem (over-indebtedness). In the early literature review stage, the researcher noted that the scenario of over-indebtedness had been explained in the Social Cognitive Theory (SCT), where the theory had discussed that human behavioural outcomes are related with individual personal factors, environmental factors, and behavioural factors.

Based on the SCT as underlying theory, the general idea of the causes of over-indebtedness are from personal, environmental and behavioural factors. With these three main sources of over-indebtedness, the researcher had further investigated in detail what are the elements of each cause (personal, environmental and behavioural factors). By construing from the literature, the researcher had recognized several research gaps in the study of over-indebtedness which are; i) most over-indebtedness studies had concentrated on the over-indebtedness from the lender's perspective; ii) most of the studies in over-indebtedness focus on direct effect between the causes and outcome (over-indebted problem); iii) the absence of studies considering the effect of materialism, self-efficacy, money management skills and lending institutions practice towards financial outcome, and; iv) the current studies in literature do not consider an over-indebted borrower as their respondent. With the gaps, the researcher had come out a proposed conceptual framework, for determinants of over-indebtedness.

Looking ahead, by using developed instrument, lending institution can replicate this instrument to capture the issues of over-indebtedness among the customer from the early stages. In a similar vein, managers may implement programs that may increase self-efficacy of the employees or consumers, more specifically to the high materialists to tackle over-indebtedness problem among them. For employees or consumers, it is useful to inspect themselves regarding materialistic values. We hope that future researcher could apply the framework and tested it following with their study setting. The results from the tested studies could give benefits in dealing with over-indebtedness problem, and could add the knowledge value in the over-indebtedness study context.

Several constraints noted in this review may serve as potential interesting avenues for future research. Firstly, it would be more interesting to further explore the over-indebtedness studies by using other psychological theory or variables. Secondly, while this study relied solely on the survey methods, it is possible that respondents may follow experimental methods procedure to undermine this issue.

Acknowledgement

This work is supported by the Universiti Teknologi MARA (UiTM) under Grant No. 600-RMC/GPM LPHD 5/3 (102/2022).

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