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Behavioral Aspect Of Consumer Debt Intention And Household Consumption: A Case Of Riau, Indonesia

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Abstract
This paper aims to examine the influence of behavioral factors on indebtedness for household consumption in Indonesia. The data for this study was obtained from 490 selected respondents using a structured questionnaire. Statistical analysis was conducted using the partial least square analysis. The results of the study indicate that household attitude towards behavior, subjective norms and behavior control are the main predictors of household debt intentions and debt behavior. Among the determinants, attitude towards debt behavior shows a highly significant relationship with household consumption. The results suggest that the attitude of the household plays an important role in determining debt behavior. The results of this study may help consumer associations, financial institutions, intermediaries and policy makers to improve consumers' awareness, provide better credit service facilities and efficient financial management.

Keywords: attitude, financing, debt behavior, household consumption, debt intention, Indonesia

1. Introduction

In Indonesia, the rise in household debt has become a great concern about economic stability and wellbeing of households. Household debt ratio has increased at the highest level from 7.99 percent in 2009 to 9.51 percent in 2019 (Noerhidajati et al., 2021), and about 214 million people (20%) depends on borrowing loans for their livelihoods in Indonesia (Santoso and Gan, 2019). Indonesia is an emerging economy with a very diverse socio-economic groups and have a fast-growing middle-class society (Dartanto et al., 2019). There are multiple factors influencing peoples demand for consumption such as income, low interest rates, access to credit, increasing marketing campaigns, urbanization and modernization (Yusop et al., 2020). The current trend indicates that both the poor and middle income households in Indonesia had spent more than half of their budget on consumption. Household debt are associated with lower income, lack of employment, and high probability to reduce the household consumption. On the other hand, higher household borrowing could improve household consumption and quality of life. Several micro based studies show that higher debt increase peoples consumption and improve lifestyles in Thailand, Malaysia, Japan and China (Chucherd, 2006; Yusop et al., 2020; Fan & Yavas, 2017; Lombardi et al., 2017; Ogawa & Wan, 2007). Other studies show that debt has a negative impact on household consumption in the developed countries due to economic recession (Pardo and Santos, 2014; Bunn and Rostom, 2014; Kim et al., 2014). During the crisis, the economically vulnerable people rely more on borrowing financial credit from various sources to maintain their household consumption (Mehrotra & Yetman, 2015).

Behavioral factors may also play an important role in household borrowing. Despite significant risks associated with household debt, consumer's individual beliefs and their optimistic behavior

encourages for excess borrowing. Cynamon & Fazzari (2008) have highlighted that social influence can change consumer behavior. Consumers have substantially increased their ability to consume through borrowing at less stringent repayment terms. People adapt modern consumption behavior through interactions with various social groups. Past evidence indicates that debt has a significant effect on durable consumption such as house compared to other consumption such as education, health and transportation particularly in developing countries (Chucherd, 2006; Yusop et al., 2020). The low income households rely on debt to cope their economic crisis due to lack of employment and income (Loke, 2016; World Food Programme, 2020), they use loans to cover essential non-durable household expenses (Arsyianti & Kassim, 2017). But, the consumers in urban areas have more consumption choices compared to the rural areas that lead to higher consumption expenditures (Liu et al., 2013).

It has been observed that people have more access to credit due to rising intermediaries, competition, business innovation, and flexible credit terms. In the developing countries, the growing number of households are moving from rural to the urban areas. The urban residents are more likely to change their lifestyles and consumption habits. Several scholars have highlighted that individuals' behavioral factors and psychological perceptions influence people's borrowing for consumption (Georgarakos et al., 2014; Keese 2014; Selvanathan et al., 2016; Öz¸sahin et al., 2019; Flores and Vieira, 2014). Yunchao et al. (2020) reports that household debt behavior has an economic impact as well as psychological impact on consumption. However, the psychological factors of debt behavior vary between individuals (Zakaria et al., 2018), people's borrowing decisions depend on their attitudes toward debt and financial expectations (Keese, 2012; Brown et al, 2005; Ahmed et al, 2010).

There is a lack of comprehensive micro level studies available to understand whether people make more choices for consumption due to the psychological factors. The intention of various social groups for borrowing to fulfill their consumption desire has yet to be clearly understood particularly for middle and low income households in Indonesia. The objective of this study is to examine the influence of psychological factors on household consumption through the theory of planned behavior (TPB) framework. Specifically, the study examines how the people's attitude, subjective norm, and perceived behavioral control influencing the relationship between behavioral intention and household consumption in Indonesia.

This research directly examines the relationship between peoples' behavioral factors of debt and their consumption in semi urban areas in Indonesia, therefore the findings of the research provides better understanding of the consumption behavior of growing urban residence in Indonesia. The study provides insights to the consumer associations, financial institutions, intermediaries, government agencies, and non-government organisations who can use this information to provide awareness to the consumers for long term financial management practices efficiently to enhance quality of life. This paper is structured as follows: Section 2 discusses the literature review and theoretical basis of the study. Section 3 describes the methodology and Section 4 presents the results and discussion. Finally, Section 5 presents the conclusion and limitations.

2. Literature Review on Household Debt and Consumption

The issue of household debt behavior is increasingly highlighted in the existing empirical economic literature, however, a few studies have investigated the behavioral factors of debt burden in the Asian context. Several scholars have found that internal factors such as knowledge in financial aspect and numeracy skills influencing consumers' financial decision-making process and financial behavior (Lusardi & Mitchell, 2014; Nicolini, Cude, & Chatterjee, 2013).

Previous studies have shown that financial decisions were influenced by people's emotions, attitude, and behavioral factors rather than logical thinking (Gutiérrez-Nieto et al., 2017). Several authors highlighted that household debt affects psychological wellbeing (Dackehag et al., 2019; Turunen & Hiilamo, 2014; Keese & Schmitz, 2014). Households decision for borrowing is motivated through social and psychological factors i.e., prestige, respect, and friendship (Cardaci, 2018), debt burdens are perceived through psychological factors and household budget (Keese, 2012; Brown et al, 2005; Ahmed et al, 2010). The important psychological factors of debt behavior for household consumption has not been comprehensively investigated, these factors need to be examined to understand individuals' behavior (Wang et al., 2011; Robb & Sharpe, 2009).

Scholars argue that the attitude influences household indebtedness especially in terms of decision in credit usage (Haultain et al., 2010; Livingstone and Lunt, 1992; Zafar et al., 2010). Study found that consumer's self-regulation is important for long-term financial decision making (Kimiyagahlam et al., 2019). The authors suggested that consumers can maximize their financial well-being through controlling their temptation to spend money in the short-term (Howlett et al., 2008; Van et al., 2012). There is limited evidence to understand whether the behavioral tendencies of households achieve credit impacts (Zinman, 2014). The behavioral aspect of household borrowing need to be explored further.

Recent studies claimed that household attitude and intention factors are important for understanding the debt behavior for consumption. Stango and Zinman (2009) found that there is systematic bias among the households in making borrowing and spending decision. They argue that the payment bias influences the households to borrow more loans and use excessively high-cost credit instruments. However, there is mixed evidence regarding the consumers' behavior on the relationship between consumer's financial confidence and risk taking behavior (Fan, 2021).

There is strong relationship between household debt behavior and consumption (Liu & Li, 2018). However, the microeconomic factors that determine household debt behavior for consumption expenditure has been limited (Kukk, 2018; Nakajima & Telyukova, 2020). Studies conducted in the Asian countries have found that consumption, savings and population are the main determinants of household debt (Catherine et al., 2016).

Study in Malaysia indicates that there is a positive relationship between consumption and household debt (Yunchao et al., 2020; Yusop et al., 2020). Similar finding was reported in other studies in Thailand, China and Japan (Ogawa & Wan, 2007; Chucherd, 2006; Fan and Yavas, 2017). Studies have found that household may change their behavior that contribute negative effect of household debt towards consumption patterns (Pardo and Santos, 2014), household debt increases vulnerability to debt repayment (Reiakvam & Solheim, 2013), debt can reduce future household consumption and household savings (Baker, 2014; Ekici & Dunn, 2004), and it can create significant obstacles to economic recovery (Gärtner, 2013).

Girouard et al. (2006) have reported that high income households are likely to engage in excess borrowing compare to the low income households. Keese (2012) has found that the city dwellers have more access to debt than those staying in small town. The low income households can achieve positive outcome of debt through increasing access to assets. Arsyianti & Kassim (2017) have found that low income households borrowed credit to fulfill their basic needs, most of the loans were used for durable assets such as vehicle and housing purchases. City dwellers have relatively higher level of debt burden than residence in the rural areas. These studies have found mixed results, the evidence is not clear to understand whether the urban residents are able to access more financial borrowing to increase their consumption and successfully reduce debt burden. This study used the Theory of Planned Behavior (TPB) to understand attitudinal factors toward subjective norms, perceived behavioral controls, and actual behavior affecting an individual's intention that form behavior for household consumption decision (Kimiyagahlam et al., 2019).

2.1 Household Debt and Theory of Planned Behavior

Household debt behavior is assumed to be underpinned in the theories of consumption. The theory of planned behavior (TPB) is to understand consumer behavior (Ajzen, 1991). According to the TPB, a person's behavior can be predicted by intention, the person's attitude toward the behavior, subjective norms, and perceived control towards intentions, and household debt behavior (Ajzen, 1991). Literature review shows that the theory of planned behavior (TPB) has been widely used in socioeconomic studies to determine consumer behavior in the perspective of individuals, households and organizations (Shi et al., 2014; Achmat, 2010).

Several studies used the TPB to investigate the determinants of financial behavior (Sahni, 1994; Ozmete & Hira, 2011) to understand attitudes, financial behavior and debt behavior of individuals or groups (Kamil et al., 2014), household attitude towards debt behavior (Xiao & Wu, 2008). However, the evidences from the past studies are mixed. Literature review showed that there was a significant positive relationship between attitude

toward behavior, subjective norms, behavioral control of intentions and behavioral actions (Denan et al., 2015). Other studies found that there was no influence between behavioral intentions and debt behavior (Ashraf & Ibrahim, 2013). Using the TPB model, this study fills the gap in the literature to understand how the attitude of households towards debt, subjective norms and perceived behavior (independent variables) affect debt intention to perform the debt behavior for household consumption (dependent variable). This theory used as behavioral change theories which extend from pure psychological aspects to a more socio-psychological domain (Boonroungrut & Huang, 2021; Magendans et al., 2017). The theory mainly focused on the factors affecting on individual's intentions, which finally influence behavioral changes in consumption decision.

2.2 Attitude Toward Behavior (ATB)

Attitude toward behavior is determined by household beliefs (b_i) and the consequences of behavior lead to judgment (e_i) of these consequences, then; ATB = $\Sigma b_i e_i$ (Achmat, 2010; Ajzen, 1991). Previous study has found that attitude positively influences on financial management and household budgeting intentions (Shahrabani, 2012). Other authors have found that there is a significant relationship between attitude and debt behavior (Widyastuti et al., 2016). Therefore, in terms of the impact of attitudes towards household debt behavior, the following hypotheses were developed.

H_{1a}: The attitude of the household has a positive effect on debt intention.
H_{1b}: The attitude of the household has a positive effect on debt behavior.

2.3 Subjective Norms (SN)

Subjective norms are directly determined by normative beliefs and motivation (Ajzen, 1991; Xiao & Wu, 2008). Several authors reported that the patterns of social relations and household consumption behavior, are associated as cause and effect, and reflected from unhappiness or inspiration of households in their standard of living (Cynamon & Fazzari, 2008; Georgarakos et al., 2014). Subjective norms are primarily associated with the consumer's perception of social acceptability of the intended behavior. Consumer generally make choices, identify preferences, expectation, and consequences based on their social network, association with family members and friends (Sadati and Mohammadi, 2012). Chudry et al. (2011) found that friends and parents were recognized as the source of subjective norms. Thus, subjective norms can influence household intentions and behavior. Therefore, in terms of the impact of subjective norms on household intention and behavior, the following hypotheses were developed.

H_{2a}: Subjective norms have a positive effect on debt intentions.
H_{2b}: Subjective norms have a positive effect on debt behavior.

2.4 Perceived Behavior Control (PBC)

Perceived behavior control was determined by a combination of individual beliefs and feeling that supporting and inhibiting factors to conduct a behavior (Ajzen, 1991; Patterson, 2000). Several studies showed that households' behavioral control positively related to borrowing intentions (Denan et al., 2015; Xiao & Wu, 2008; Sommer, 2011). It has been recognized by scholars that behavioral control is related to attitudes and social pressure, thus perceived behavioral control can influence household intentions and behavior. Therefore, in terms of the impact of human behavior control on debt intention and debt behavior, the following hypotheses were developed.
H_{3a}: Behavioral control has a negative effect on debt intention.
H_{3b}: Behavioral control has a negative effect on debt behavior.

2.5 Debt Intention and Debt Behavior (DI, DB)

In the literature of finance, intention has been extensively investigated. Previous studies have investigated the intention to use credit card (Xiao et al., 2011) among the students, intention to manage cash and debt judiciously among young adults (Shim et al., 2009) and intention to manage money among undergraduate students with loans (Boonroungrut and Huang, 2021). Household debt is related to the demand for goods and services to achieve maximum satisfaction that can affect household consumption patterns (Cynamon & Fazzari, 2008). In a psychological perspective, household debt is related to attitudes, subjective norms, and behavior control. Review of literature indicated that there is a significant relationship between the attitude and the use of credit for consumption (Shih & Fang, 2004). Several authors found that attitude is the important factor for household debt behavior in financial management which is related to respect, envy, emotional effects,

imitating behavior and knowledge (Brown et al., 2005). The relationship between subjective norms and household debt behavior is related to social status in society, social reference groups, levels of aspirations and social comparisons, patterns of social relationships, peers and people around them (Legge & Heynes, 2009). Household intention directly influences the debt behavior in household consumption (Ozmete & Hira, 2011). Therefore, in terms of the impact of human debt intention and debt behavior, the following hypotheses were developed.

H_{4a}: Intention has a positive effect on debt behavior
H_{4b}: Intention has a negative effect on household consumption

2.6. Household Consumption (HC)

The TPB explains how the households borrowing intention will have the greater effect on individual's behavior. The intention and debt behavior can influence household consumption patterns, for example the greater the debt in the household, the greater the consumption for livelihood wellbeing in the future (Chucherd, 2006; Yusop et al., 2020). Arsyianti & Kassim (2017) have found that socio economic factor influenced debt taking behavior for consumption decision among the low income households in Indonesia. While, Pardo and Santos (2014) have found that there is a negative influence between household debt and consumption. The main reason for the relationship is due to the changes of household behavior, when they apply the debt as a substitute for low income to support their consumption. The level of household debt depends on the consumption behavior and their attitude (Ahmed et al., 2010). The increasing household debt reduce saving and investment and creates vulnerabilities to the economy (Charpe & Flaschel, 2013). This study examined attitude, subjective norm, and perceived behavioral control, mediated by the attitude on the intention to incur household debt behavior for consumption. Thus, the following hypotheses are developed.

H_5: Debt behavior negatively affects household consumption

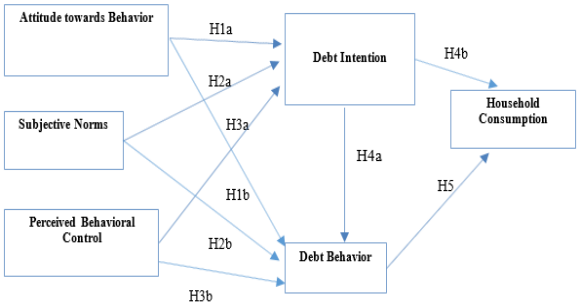

Figure 1. Conceptual Framework for the study

3. Methodology

3.1 Data Source

This research used a quantitative approach to collect primary data. The survey was conducted to obtain data from the selected respondents in Riau province, Indonesia. The total area of Riau province is 87,023.66 square kilometres and is located in the central part of Sumatra. There are 1.6 million households in 10 regions in Riau (Badan Pusat Statistik Provinsi Riau, 2021). Riau is currently one of the richest provinces and ethnically diverse area in Indonesia. The economy of Riau has grown rapidly, and household consumption expenditure has substantially increased. The population for study was suitable to capture the diversity of social and behavioral aspects of households towards credit use and management. The survey was conducted in five adjacent regions in Riau province: Teluk Kuantan, Pelalawan, Bangkinang, Pekanbaru and Dumai between November 2017 and February 2018. A total of 490 respondents were interviewed, 200 from Pekanbaru, 152 from Dumai, 76 from Bangkinang, 44 from Teluk Kuantan, and 18 from Pelalawan. The selected households had received loans from banks and other informal institutions. Sample respondents were selected through convenience sampling method. The data for this study was obtained from face-to-face interviews of households using a structured questionnaire. Prior to field data collection, we had conducted focus group discussions (FGD) and a key informant survey (KIS) to ensure that the questionnaire was complete and ready for the survey. The questionnaire covered a list of 6 variables and 40 items.

3.2 Variables and Measurements

This study utilized three independent variables, namely, Attitude Toward Behavior (ATB), Subjective Norms (SN) and Perceived Behavior

Control (PBC); two mediating variables, Debt Behavior (DB) and Debt Intention (DI); and the dependent variable, Household Consumption (HC).

Attitude toward behavior: this study adapted questions related to peoples' attitudes towards debt behavior from the previous study (Kennedy, 2013; Mutezo, 2014). In this study, attitude factors were measured by using 8 items. The questions include "I feel pleasure when the debt is approved; with debt I can buy the items I need; Debt can ease the burden of the household; I can plan the use and allocation of debt; I can oversee the use and the maturity of the debt; I can overcome the crisis by borrowing or own savings; I do not want big amount of debt; I try to be free of debt burden."

Subjective norms: to measure this variable, the study adapted questions from several studies (Kennedy, 2013; Georgarakos, et al., 2014). Subjective norm variable was measured by using 5 items. The questions include "Debt can provide benefits to family and friends; Family and friends can overcome the crisis through debts; Family and friends consider it important to pay off debt on time; Debt is a common trend in today's household life; Debt can meet increasing household needs."

Perceived behavior control: the study adapted questions related to behavioral control or self-regulation from previous studies (Kennedy, 2013; Cynamon and Fazzari, 2008; Johnson and Li, 2007). In this study, perceived behavior control was measured by using 5 items which include "the repayment of the debt is difficult in the long term; Debt occurs because of the convenience of the service providers; the higher the income, the more desires to be met; Debt must remain out of the debt circle whether it is much or little; Both strong or weak environmental influences, the use of debt remains under supervision."

Debt intention: the study adapted questions regarding peoples' intention towards debt from previous studies (Kennedy, 2013; Ajzen, 2001). Debt intention variable was measured by using 6 items which include "I intend to obtain debt for financing household consumption; I intend to pay off debts on time; I intend to obtain debt to finance unexpected costs; I intend to obtain debt to be used as savings; I intend to obtain debt to cover income shortage; I stay in debt even if I earn less or more than enough."

Debt behavior: the study adapted questions related to debt behavior from several studies (Bunn, 2014; Kumar & Mukhopadhyay, 2013; Cynamon and Fazzari, 2008; Mutezo, 2014; Legge and Heynes, 2009; Brown et al., 2016). Debt behavior variable was measured by using 10 items which include "I incur debt due to small monthly income; I incur debt to fulfill urgent needs; I incur debt due to promotional activities on the internet, advertisements, and other media; I incur debt due to the influence of family, friends, relatives and neighbors; I incur debt to improve my status and lifestyle; I incur debt due to the convenience of the lender; I know how to control and manage debt; I find debt as an option to overcome financial difficulties; we incur debt due to increasing dependents in the family; we are reluctant to use cash for our daily life."

Household Consumption: the study adapted questions regarding household debt and consumption decision from several studies (Chucherd, 2006; Ogawa & Wan, 2007; Fan and Yavas, 2017; Yunchao et al., 2020). Household consumption variable was measured by using 6 items which include "Debt has positive impact on consumption if it is invested in durable assets (land, house); Debt can expedite and increase household service consumption (education, health, transportation); Debt can achieve people's desired level of consumption; Debt can lead to reduce luxury consumption expenditure; Financial risk has negative impact on consumption; Debt can be a burden to maintain consumption during economic crisis."

Respondents were asked to rate their level of agreement or disagreement with the statements using a five-point Likert Scale, ranging from 1 is strongly disagree and 5 is strongly agree (Brown, 2010). Exploratory factor analysis (EFA) and SEM inferential analysis were employed to answer the objectives and test the hypotheses of the study using SEM WarpPLS. In measuring the mediating effect, the VAF method of research hypothesis is expanded by adding indirect effects namely: H_{1c}: indirect positive effect of attitude (ATB) on debt behavior (DB) through intention (DI), H_{2c}: positive indirect effect of subjective norms (SN) on debt behavior (DB) through intention (DI), H_{3c}: a positive indirect effect of behavioral control (PBC) on debt behavior (DB) through intention (DI), H_{4c}: indirectly negative effect of debt intention (DI) on household consumption (HC) through debt behavior (DB). The presence of indirect effects would strengthen or weaken the total influence, this condition would be a consideration of decisions in the determination of hypotheses and

research conclusions (Kock, 2013; Hair et al., 2014).
The empirical research model is developed; the simultaneous equations are as follows:

$$Y_1 = a_1 + \beta_1 ATB + \beta_2 SN + \beta_3 PBC + \varepsilon_1$$
$$Y_2 = a_2 + \beta_1 ATB + \beta_2 SN + \beta_3 PBC + \beta_5 Y1 + \varepsilon_2$$
$$Y_3 = Y_1 + Y_2 + \varepsilon_3,$$

The study used multivariate analysis with structural equation model (SEM), then the above formula was transformed together in accordance with the SEM rules. According to Kock (2013) the formula can be transformed in the form of:

$$\eta_{DI} = \gamma_{1.1}\xi_1 + \gamma_{1.2}\xi_2 + \gamma_{1.3}\xi_3 + \zeta_1$$
$$\eta_{DB} = \gamma_{3.1}\xi_1 + \gamma_{3.2}\xi_2 + \gamma_{3.3}\xi_3 + \beta_{1.1}\eta_1 + \zeta_2$$
$$\eta_{HC} = \beta_{2.1}\eta_1 + \beta_{2.2}\eta_2 + \zeta_3.$$

Furthermore, the acceptance or rejection of a model used in this study is verified with the output of the model. The suitability of the model is evaluated using the model's fit indices and p-values in SEM-warpPLS.

4. Results and Discussion

Reliability and Validity of the Model
The validity and reliability of the questionnaire were tested through convergent validity and internal consistency reliability. Table 1 shows the relationship between the dimensions of debt behavior and household consumption using SEM-warpPLS (Table 1). The results of the validity test (loading factor) shows an acceptable range with a limit ≥ 0.70 at the value of P < 0.05 (Kock, 2013; Hair et al., 2014). The instruments in this model are self-developed, a loading factor guideline is used where the value of 0.35 and above is acceptable (Hair et al., 2014). Cronbach's alpha is a measure of internal consistency of data, to explain how a set of items were closely related as a group. Cronbach's alpha was utilized to assess construct reliability for each variable of the research framework.

Table 1. Exploratory analysis of household debt behavior and consumption

No	Variable	Loading Factor (LF)	Type	Standard Error	P-Values*	*Explanation*
	X1 = ATB					
1	X11	0.666	Reflective	0.046	< 0.001	Valid
2	X12	0.563	Reflective	0.047	< 0.001	Valid
3	X13	0.570	Reflective	0.047	< 0.001	Valid
4	X14	0.553	Reflective	0.047	< 0.001	Valid
5	X15	0.645	Reflective	0.046	< 0.001	Valid
6	X16	0.476	Reflective	0.047	< 0.001	Valid
7	X17	0.461	Reflective	0.048	< 0.001	Valid
8	X18	0.426	Reflective	0.048	< 0.001	Valid
	X2 = SN					
9	X21	0.778	Reflective	0.045	< 0.001	Valid
10	X22	0.780	Reflective	0.045	< 0.001	Valid
11	X23	0.448	Reflective	0.048	< 0.001	Valid
12	X24	0.549	Reflective	0.047	< 0.001	Valid
13	X25	0.571	Reflective	0.047	< 0.001	Valid
	X3 = PBC					
14	X31	0.685	Reflective	0.046	< 0.001	Valid
15	X32	0.527	Reflective	0.047	< 0.001	Valid
16	X33	0.598	Reflective	0.047	< 0.001	Valid
17	X34	0.634	Reflective	0.046	< 0.001	Valid
18	X35	0.675	Reflective	0.046	< 0.001	Valid
	Y1 = DI					
19	Y11	0.711	Reflective	0.046	< 0.001	Valid
20	Y12	0.415	Reflective	0.048	< 0.001	Valid
21	Y13	0.762	Reflective	0.046	< 0.001	Valid
22	Y14	0.748	Reflective	0.046	< 0.001	Valid
23	Y15	0.821	Reflective	0.045	< 0.001	Valid
24	Y16	0.741	Reflective	0.046	< 0.001	Valid
	Y2 = DB					
25	Y21	0.575	Reflective	0.047	< 0.001	Valid
26	Y22	0.686	Reflective	0.046	< 0.001	Valid
27	Y23	0.709	Reflective	0.046	< 0.001	Valid
28	Y24	0.663	Reflective	0.046	< 0.001	Valid
29	Y25	0.685	Reflective	0.046	< 0.001	Valid
30	Y26	0.815	Reflective	0.045	< 0.001	Valid
31	Y27	0.608	Reflective	0.047	< 0.001	Valid
32	Y28	0.557	Reflective	0.047	< 0.001	Valid
33	Y29	0.832	Reflective	0.045	< 0.001	Valid
34	Y30	0.814	Reflective	0.045	< 0.001	Valid
	Y3 = HC					
35	Y31	0.780	Reflective	0.045	< 0.001	Valid
36	Y32	0.818	Reflective	0.045	< 0.001	Valid
37	Y33	0.793	Reflective	0.045	< 0.001	Valid
38	Y34	0.809	Reflective	0.045	< 0.001	Valid
39	Y35	0.792	Reflective	0.045	< 0.001	Valid
40	Y36	0.757	Reflective	0.046	< 0.001	Valid

Source: Results of the survey data using SEM-warpPLS

Table 2 shows that the composite reliability score and Cronbach's alpha which indicated that all the variables used in the study were reliable. The limit for composite reliability value is ≥ 0.7 and all the scales show very high Cronbach's alpha value ≥ 0.60 and above the generally accepted cut-off value of 0.7 (Hair et al., 2014). A validity test was conducted with Product Moment was conducted (α = 0.05) with a limit 0.09932 (r_{table}), and reliability test conducted with Cronbach's Alpha at the limit 0.60 was conducted for validation of the indicators (Table 2).

Table 2. Reliability analysis of the Dependent and Independent variables

Variable	Composite Reliability	Cronbach's Alpha	Explanation
Attitude Toward Behavior (ATB)	0.773	0.665	Reliable
Subjective Norms (SN)	0.768	0.622	Reliable
Perceived Behavior Control (PBC)	0.762	0.610	Reliable
Debt Intention (DI)	0.856	0.795	Reliable
Debt Behavior (DB)	0.905	0.881	Reliable
Household Consumption (HC)	0.910	0.881	Reliable

Source: Results of the survey data using SEM-warpPLS Loading factors for each of the ATB, SN, PBC, DI, DB and HC variables were above 0.35 shows a strong contribution to the latent construct at the significance level of p-value <0.001, the results illustrate acceptable validity of the data. The composite reliability is an alternative method that can handle inappropriate assumptions that Cronbach's alpha made to measure internal consistency reliability. The value has to be more than 0.7 to be acceptable. The composite reliability scores of all the variables in Table 2 are larger than 0.60, which means that the internal consistency reliability is at an acceptable level. Thus, we can conclude that all the variables were reliable.

The results of the measurement model and fit indices are presented in Table 3. Collinearity test is applied by calculating the Variance Inflation Factor (VIF) scores. To avoid collinearity problems, the VIF value must be 5 or lower to be acceptable. The variance inflation factor (VIF) test indicates that there is no multicollinearity problem in both the vertical and lateral, the criteria for a full collinearity test is that the value must be lower than 3.3 (Kock, 2013), the study results show that the acquisition of a Full Collin Test for all the variables below 3.3 means that the model is free from problems of vertical, lateral, and common method bias. For Q-squared results obtained 0.067 and 0.483 on endogenous latent variables, the value greater than zero and positive indicate that the estimation of the model has good predictive validity that is greater than zero (Table 3). Therefore, we can conclude that the model has a predictive relevance.

Table 3. Summary of indices fit for the overall measurement model.

No.	Size of Degree of Match	Acceptable level of compatibility limits	Results obtained	Explanation
1.	*Average Path Coefficient* (APC), *Average R-Squared* (ARS), *Average Adjusted R-Squared* (AARS)	APC, ARS, and AARS values must be at P values <0.05	APC = 0.170 to P < 0.001 ARS = 0.206 to P < 0.001 AARS = 0.201 to P < 0.001	Model Fit
2.	*Average Variance Inflation Factor* (AVIF) dan *Average Full Collinearity VIF* (AFVIF)	Accepted when ≤ 5 Ideally < = 3.3	AVIF = 1.135 AFVIF = 1.424	Model Fit
3.	*Tenenhaus GoF* (GoF)	≥ 0.1 narrow / small, ≥ 0.25 medium ≥ 0.36 large	Tenenhaus GoF = 0.306	Model Fit
4	*Simpson's paradox ratio* (SPR)	≥ 0.70 means 70 % or more free from Simpson's paradox instance.	SPR = 0.889	Model Fit
5	*R-Squared Contribution Ratio* (RSCR)	Accepted when ≥ 0.90 and Ideally = 1	RSCR = 0.997	Model Fit
6	*Statistical Suppression Ratio* (SSR)	≥ 0.70 means 70 % or more free of SSR	SSR = 1	Model Fit
7	*Nonlinear Bivariate Causality Direction Ratio* (NLBCDR)	Accepted when ≥ 0.70	NLBCDR = 0.944	Model Fit
8	*R Squared* (R^2)	Great influence > 0.67 (strong), > 0.33 (moderate) < 0.19 (weak)	DI = 0.066 DB = 0.475 HC = 0.078	Weak Moderate / Strong Weak
9	*Full Collinearity* VIF	Ideally < = 3.3	ATB = 1.305 SN = 1.070 PBC = 1.382 DI = 1.863 DB = 1.847 HC = 1.079	Free of Multicollinearity
10	*Prediction relevance* (Q-Squared)	Accepted when > nol	DI = 0.067 DB = 0.483 HC = 0.078	accepted accepted accepted

Source: Results of the survey data using SEM-warpPLS

The results show that the R-squared value for DI is 0.07 (direct effect) which indicates that the variance of debt intention can be explained together by the variance in attitude towards behavior, subjective norms and behavioral control variable. However, the effect is weak (7%) as the category (<19 percent) shows the weak effect. R-Squared value for DB is 0.475 (direct effect) which means that the variance of debt behavior can be explained by the variance in attitudes, subjective norms, behavioral control and debt intention by 47.5 percent in the > 33 percent category, which means that the effect is significantly large. R-squared value for HC is 0.078 (direct effect) which means that the variance in household consumption can be explained by the variance in debt intention and debt behavior by 8 percent, in the <19 percent category which means the effect is weak. Simultaneous path analysis using SEM-warpPLS shows that all measurement models achieved the level of fit indices as recommended by Hair et al. (2014). The low R-squared value can be considered to be acceptable in the behavioral study (Kimiyagahlam et al., 2019).

4.1 Hypothesis Testing

Hypothesis test was carried out to find out the level of significance among the variables in the study. The path coefficient can be considered significant if T-Value is greater than 1.96 at 5% significant level. Table 4 presents the hypothesized path relationships of dependent and independent variables, direct effect, indirect effect and total effects. Overall, the Model fit indices and P-values of the estimated model shows that the results are acceptable and meet the specified requirements. After obtaining the test results from the model in general, the advanced model tests were conducted to determine the direct effect, indirect effect, and the total effect to test the hypothesis of the study. The model shows the hypothesized relationships between latent constructs and their corresponding standardized path coefficients (Table 4).

Table 4. Summary of hypothesized path relationships, direct effect, indirect effect and total effect.

Paths	Direct Effect			Indirect Effect			Total Effect		
	Coeffi cients	p-value	Effect size	Coeffi cients	p-value	Effect size	Coeffi cients	p-value	Effect size
ATB to DI	0.104**	0.019	0.011				0.104**	0.019	0.011
SN to DI	0.158***	<0.001	0.029				0.158***	<0.001	0.029
PBC to DI	-0.155***	<0.001	0.026				-0.155***	<0.001	0.026
ATB to DB via DI	0.085**	0.045	0.012	0.070**	0.024	0.010	0.155***	<0.001	0.023
SN to DB via DI	0.017	0.371	0.002	0.107**	0.001	0.014	0.123***	0.007	0.016
PBC to DB via DI	-0.019	0.356	0.002	0.105**	0.002	0.010	-0.123***	0.007	0.012
DI to DB	0.676***	0.001	0.462				0.676***	<0.001	0.462
DI to HC via DB	-0.151***	<0.001	0.037	0.111**	<0.001	0.027	-0.262***	<0.001	0.064
DB to HC	-0.164***	<0.001	0.041				-0.164***	<0.001	0.041

Source: Results of the survey data using SEM-warpPLS
Significance levels are denoted by two asterisk (**) at the 5% level, three asterisk (***) at the 1% level.

A specific indirect effect is performed to analyze the mediating effect of the model. In this case, the aim of the study is to know whether debt intention and debt behavior can have an indirect effect on household consumption. Table 5 shows the relative strength of the relationships, either partially or simultaneous effects on household consumption. The results show that ATB has a direct effect on debt intention and debt behavior, with a standardized coefficient of 0.104. The results indicate that debt intentions have indirect effects on real debt behavior and household consumption decision, debt supported 42% of total household consumption (Table 5).

Table 5. Hypothesis test results of Partial and Simultaneous mediating effects

Hypothesis Path	Direct Effect	Indirect Effect	Total Effect = DE + IE	VAF = IE/TE	p-values
Behave Partial Mediation Effects					
ATB to DB	0.085	0.10 x 0.68 = 0.068	0.085 + 0.068 = 0.153	0.44	0.023
SN to DB	0.017	0.18 x 0.68 = 0.1224	0.017 + 0.1224 = 0,1394	0.88	0.002
PBC to DB	-0.019	-0.17 x 0.69 = -0.1173	-0.019 + -0.1173 = -0.1363	0,86	0.004
DI to HC	-0.151	0.68 x -0.16 = -0.1088	-0.151 + -0.1088 = -0.2598	0.42	0.001
Simultaneous Mediation Effects					
ATB to DB via DI	0.155	0.10 x 0.68 = 0.068	0.155 + 0.068 = 0.223	0.30	0.001
SN to DB via DI	0.123	0.16 x 0.68 = 0.1088	0.123 + 0.1088 = 0.2318	0.47	0.006
PBC to DB via DI	-0.123	-0.15 x 0.68 = -0.102	-0.123 + -0.102 = -0.225	0.43	0.008
DI to HC via DB	-0.262	0.68 x -0.16 = -0.1088	-0.262 + -0.1088 = -0.3708	0.30	0.001

Source: SEM-warpPLS output processed data--
Signifikan p-value pada *≤ 0.10, **≤ 0.05, ***≤ 0.01
VAF > 80 % full mediation, 20 % to 80 % partial mediation, < 20 % almost no mediating effect.

Table 6 presents a summary of the hypotheses, proposed relationships, and hypothesis test results. Analysis of 9 hypotheses of direct influence (H_{1a}, H_{1b}, H_{2a}, H_{2b}, H_{3a}, H_{3b}, H_{4a}, H_{4b}, $H_{5,}$) and 4 hypotheses of indirect effects (H_{1c}, H_{2c}, H_{3c}, H_{4c}) can predict the relationship between debt intentions, debt behavior and household consumption.

Table 6. Summary of direct hypothesized path relationships

Hypothesis	Path	Direct Effect			Result	Explanation
		Coefficients	p-value	Effect size		
H_{1a}	ATB → DI	0.104**	0.019	0.011	Significant	Supported
$H_{1b,c}$	ATB → DB plus via DI	0.085**	0.045	0.012	Significant	Supported
H_{2a}	SN → DI	0.158***	<0.001	0.029	Significant	Supported
$H_{2b,c}$	SN → DB plus via DI	0.017	0.371	0.002	Not Significant	Not Supported
H_{3a}	PBC → DI	-0.155***	<0.001	0.026	Significant	Supported
$H_{3b,c}$	PBC → DB plus via DI	-0.019	0.356	0.002	Not Significant	Not Supported
H_{4a}	DI → DB	0.676***	<0.001	0.462	Significant	Supported
$H_{4b,c}$	DI → HC plus via DB	-0.151***	<0.001	0.037	Significant	Supported
H_5	DB → HC	-0.164***	<0.001	0.041	Significant	Supported

Notes: Significant p-value at *≤ 0.10, **≤ 0.05, ***≤ 0.01, Effect size: 0.02 = weak, 0.15 = strong enough, 0.35 = strong
ATB = attitude toward behavior, SN= subjective norms, PBC = perceived behavior control, DI = debt intention, DB = debt behavior, HC = household consumption
Significance levels are denoted by two asterisk (**) at the 5% level, three asterisk (***) at the 1% level.

The results of the hypothesis H1a and H1b suggests that the attitude towards debt has a significant effect in predicting debt intention and debt behavior. Hypothesis H2a suggests that the subjective norm has a significant effect in predicting debt intentions. Hypothesis H3a suggests that the perceived behavioral control has a significant effect in predicting debt intention. Hypothesis H4a suggests that debt intention has a significant effect in predicting debt behavior. Hypothesis H4b suggests that debt intention has a significant negative effect in predicting household consumption. Hypothesis H5 suggests that debt behavior has a significant negative effect in predicting household consumption. Thus, 7 hypotheses were supported and hypothesis H2b and hypothesis H3b were not supported (Table 6).

4.2 Discussion

In this study, TPB has been applied to examine how the psychological factors including attitude, subjective norms and behavioral control influencing an individual's intentions towards consumer behavior and household consumption. The important results of the study suggest that attitudes toward behavior has a significant positive effect on debt intention for household consumption. Similar results were found from other studies (Fan, 2021: Georgarakos et al., 2014: kumar & Mukhopadhyay, 2013; Mehrotra & Yetman, 2015; Cardaci, 2018) consumers' psychological characteristics are positively associated with credit using behavior.

The results also support the findings of other studies which indicate that changing attitudes and emotions toward financial management can influence budgeting intentions among the students

(Shahrabani, 2012; Brown et al., 2016). Werner (2014) found that the attitude of the households plays an active role in determining the debt behavior. Attitude towards debt can be indirectly influenced by debt intention, which means that debt can be reduced by debt intention and this is manifested in real behavior (Shi et al., 2014). Attitudes towards debt and individuals' decisions to borrow are strongly correlated with psychological characteristics and biases, such as self-control problems (Gathergood, 2012). Study suggests that financially literate people are more prone to indebtedness possibly because they have the confidence in managing their debt (Rahman et al. 2020; Flores and Vieira, 2014). In Malaysia, household borrowing was an act of preserving "wants" rather than meeting "needs" since factors that explained household debt position are individual's propensity to use credit such as attitude, and social comparison (Zakaria et al., 2018; Cai et al., 2020).

The result of the study indicates that subjective norms have a significant positive effect on debt intentions. The results of the study is consistent with other studies which indicate that subjective norms affects the intention of a person (Sommer, 2011; Kennedy, 2013; Nguyen & Cassidy, 2018). Several studies report that social environment, relationship with neighbors, friends and relatives, household beliefs have strong influence towards debt intentions into debt behavior (Lindern & Mosler, 2014; Legge & Heynes, 2009; Sweet et al., 2014). Recent study show that subjective norms significantly affect the intention to use credit cards in Indonesia (Anastasia & Santoso, 2020).

The results of the study show that the magnitude of intention to the real behavior of debt in household consumption was predicted between 30 percent to 42 percent, meaning that the households in the study area have incurred a debt of 42 percent to expedite their consumption within a certain period. The results support previous studies. Kumar & Mukhopadhyay (2013) and Mehrotra & Yetman (2015) have found that households use debt to cover their budget constraints and maintain stability of consumption. The authors have highlighted that subjective norms and behavioral control can be separated from households if they faced with urgent and sudden conditions that forced to take loans.

The results of the study show that perceived behavioral control (PBC) has no significant relationship with intention to incur household debt. The results support previous studies (Boonroungrut and Huang, 2021; Chudry et al., 2011; Xiao & Wu, 2008), students perceive a lack of ability to control their budget in managing their finance. The result of the study shows that the perceived behavior control has significant positive effect on debt intention. The results indicate that behavioral control factors i.e., beliefs about barrier factors and supporting factors are important for performing a behavior. The findings are supported by other studies which indicate positive effects of behavioral control on debt intention and debt behavior (Denan et al., 2015; Kimiyagahlam et al., 2019). Individuals with perceived behavioral control have self-regulation, can significantly affects their decision making and intention of using their credit. However, the results of this study contradicts with the study conducted by Ajzen (1991) which indicate that intention does not have significant relationship with behavioral control. Individuals fail to control over their behavior due to their urgency and sudden necessity (Kumar & Mukhopadhyay, 2013; Mehrotra & Yetman, 2015).

The results confirm that debt intentions and debt behavior have a significant positive effect on household consumption. Similar results were found by other studies (Patterson, 2000; Denan et al., 2015) which explains that the intention of the household influences on the real behavior of household debt. Previous studies have indicated that households are close to debt because of their lack of income, savings, family burden and to maintain consumption stability (Baker 2014; Kim et al., 2014).

The result of the study indicates that debt behavior has a significant negative effect on household consumption. The results support previous study in Europe. Kukk (2016) found that household indebtedness has a significant negative impact on household consumption growth during economic recession. Literature about the behavior of household debt clearly demonstrates that debt can improve the quality of life, however, debt is also a burden and a liability, which can cause stress (Reiakvam & Solheim, 2013; Mutezo, 2014). Zinman (2014) argued that, if properly managed, household debt contributes to the stability of consumption, improvement in quality, lifestyle and household welfare. The low income households were able to fulfill their basic consumption needs through borrowing credit in Indonesia (Arsyianti & Kassim, 2017). The urban households have more access to debt than those staying in small town and village (Keese, 2012). Fan and Chatterjee (2017) found that consumers use both internal and

external sources of information for making important borrowing decisions. In Indonesia, half of the population are reliant on their family and friends as the source of financing for consumption (Arsyianti & Kassim, 2017). The results of the study indicate that the SN to DB pathway and the PBC to DB pathway are not significant. Harlow et al. (2016) found that the effect of SN to DB pathway and the PBC to DB could be insignificant due to several methodological factors. Other reasons may be due to the respondents' demographic characteristics, heterogeneity of social relationship that influence their behavior.

5. Conclusion

The main objective of this study is to examine the relationship between individuals' psychological factors and debt behavior for household consumption in Riau province of Indonesia. Specifically, the study examines the mediating role of household debt intention and behavior on the relationship between the attitudinal behaviors and household consumption. This study adopts the Theory of Planned Behavior (Ajzen, 1991) to predict behavioral debt intention for household consumption.

The results of the study show that household attitudes, subjective norms, behavioral control are the main factors affecting household consumption. Among the determinants, attitude towards debt behavior has significant relationship with household consumption. High attitude towards behavior indicated that households actually have the main purpose of borrowing to fulfill their consumption needs. The results of the study show that the relationship between the debt intention and household consumption is significant. The study suggests that the relationship between the debt intention and household consumption mediated through debt behavior is significant. The results indicate that intention to real debt behavior in household consumption can be predicted between 30 percent and 42 percent. The results suggest that a considerable number of households have taken loans to facilitate their consumption in Riau, Indonesia.

The results show that self-regulation does not affect debt intention and debt behavior. The results suggest that households do not have full control over their behavior to avoid debt burden when there is a necessity. The increasing trend of the debt behavior is expected in the urban consumers in the context of Indonesia. This results support the evidence of previous study in urban areas in Malaysia (Kimiyagahlam et al., 2019) where attitudinal factors significantly contributed to debt behavior. The increasing trend of household debt among urban households is due to the increasing consumer demand. The findings may provide support to the consumers and relevant institutions to reduce the rise of household debt through raising awareness among the households for rational consumption behavior and efficient credit management. The results of the study suggest that the intention and attitude factors influences household to fulfill the urgent needs and to cover their budget constraints. Households in the city areas have relatively more access to the credit compared to the rural areas. More attention should be given to provide better services to the credit recipients in terms of providing favourable terms for credit access.

Implications:

The results of the study have important theoretical and practical implications. Existing literature are limited to understand the influence of behavioral intention on the real behavioral decisions using TPB framework developed by Ajzen (1991). The study results suggest that TPB framework has explanatory power to predict behavioral intentions, behavioral actions to household consumption, therefore, the findings of the study help to cover existing gap in the literature. Furthermore, the present study confirms that the theory of planned behavior can be applied to predict household debt behavior and consumption in the future research.

The results of the study provide better understanding about household debt intention and debt behavior towards consumption in semi urban areas of Indonesia. Previous research has only focused on debt behavior among the low income rural households in Indonesia. The results suggest that the attitude of the household plays an important role in determining debt behavior for increasing consumption. The findings of the study are important to consumer associations, business sector, financial credit institutions, intermediaries, non-government organisations and policy makers to educate consumers for effective financial management and to achieve sustainable consumption. This study is the first comprehensive empirical research to understand the behavioral aspect of debt behavior for consumption purposes in Indonesia.

Limitations:

This study has some limitations. The study was conducted in Riau, with the restricted samples selected from credit recipient households. Population in Riau is heterogeneous in terms of education, culture, ethnicity and level of indebtedness. It is difficult to examine human behavior and social factors with appropriate methodology is challenging in the developing countries such as Indonesia. Further research could include various social groups in both urban and rural areas to generalize the findings. The research did not include credit providing institutions and multiple stakeholders, future research could include various related stakeholders to understand the access to finance and credit service facilities.

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