Household Characteristics of Indebted Households with Members Working in the Public and Private Sector

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Abstract

The research analyzed the influence of different household characteristics on household debt, including mortgage debt. Using data from Thailand's Household Socio-Economic Survey in 2019 and 2021, the study implemented a logit model to identify household characteristics with significant impact on household debt. By analyzing data from two different periods that varied in social and economic contexts, the study highlighted critical factors that influenced household debt demand. The datasets were divided into nine categories according to household work status, with a focus on households with only public sector workers, only private sector workers, and only public and private sector workers. The study found that, in 2019 and 2021, different household characteristics influenced the households' likelihood of having debt at varying levels of significance and directions. The household work status was a significant factor regarding the probability of having household debt in specific households, such as households with only private sector workers. However, for household mortgage demand, household work status significantly impacted the probability of all household categories having a mortgage except for households with only public sector workers. The study also discovered that households' location, education attainment, number of children, gender of household members, and average household compensation significantly impacted the probability of household debt and household mortgages in both years. For household assets, the significance and influence on the likelihood of households having debt and household mortgages differed by asset and year.

Keywords*: *Household debt, Mortgage, Public sector, Private sector, Workers, Thailand

1. Introduction

In the past decade, Thailand's household debt increased dramatically from 60% in 2010 to 90% in 2020 compared to Thailand's GDP. According to the Bank of Thailand (2023), the rise in household debt to GDP could be a result of the country's GDP decreasing in 2020 due to disruptions from the COVID-19 pandemic as well as the increase in household debt due to the implementation of previous economic policies to stimulate the economy in 2011-2012. Despite household debt dropping to 87 % of Thailand's GDP in the third quarter of 2022, the probability of household debt increasing is still significant and measures will need to be put in place to control the issue. Previous studies have reported on multiple factors that influence the rise in household debt including household mortgages. Magri (2002) and Crook (2001) found that household income was positively related to household debt while Ling and McGill (1998) discovered that income and mortgage was also positively related. In Thailand, Amornlerdphanich (2008) reported that demographic characteristics of the household head such as age, gender, marital status, and education level had a strong influence on household debt demand. Whilst Lerskullawat (2020) highlighted that social factors as well as economic factors including household income and household expenditure played a key role in determining the household debt burden. Similarly, Intarapak and Supapakorn (2020) found that household size, number of people earning wages, remittance receiving, and loan for emergency affected the level of household debt.

Although multiple studies have analyzed the key factors driving household debt in Thailand, most use the household head as the household representative. However, to better understand the influence of the household as a unit on the probability of household debt, the research analyzed household-level data from Thailand's Household Socio-Economic Survey (SES) from 2019 and 2021. The SES datasets for both years consisted of over 45,000 households with around 20,000 indebted households. Using data on the household

level allowed the study to look at households as a whole instead of as selected individuals. Furthermore, by analyzing data from 2019 and 2021 that differ in context as a result of the COVID-19 pandemic, the study highlighted crucial factors that affected household indebtedness. Hence, the study provided a clearer picture of the critical factors that impacted household debt demand in Thailand.

2. Objectives

The research's main objective was to examine the influence of different household characteristics on household debt including debt in the form of loans for the purchased or hire-purchased of a house and/or land. The research aimed to identify household characteristics with a significant impact on household debt as well as disaggregate the relationship between the two factors.

3. Materials and Methods

This research used Thailand's Household Socio-Economic Survey (SES) cross-sectional data for 2019 and 2021 collected by the National Statistical Office of Thailand. The data contained a range of information, including income, expenses, consumption, assets, and liabilities of every member in the household. For the research, data on the household level was used with the focus on households with the work status of only public sector workers, only private sector workers, or only public and private sector workers. Public sector workers were those who reported being government employees while private sector workers were those reported as private company employees. Apart from work status, other key variables include:

Table 1 Table of the key variables used in the analysis

Variable	Description	Unit
Work status	Overall work status of the household	Categorical
Region	The region in Thailand that the households are in	Categorical
Education level	The household's overall educational attainment	Categorical
Household members under the age of 15	The number of members in the household who under age 15 and below	Continuous
Household Gender	The overall gender of the household	Categorical
Household compensation	Average compensation including money and welfare at the household level	Continuous
Household asset 1	Value of dwelling for living and temporary dwelling owned by household members	Continuous
Household asset 2	Value of land/business building/others owned by household members	Continuous
Household asset 3	Value of vehicles owned by household members	Continuous
Household asset 4	Value of financial assets in baht	Continuous
Household debt dummy	Whether the household has debt currently or not	Categorical
Mortgage dummy	Whether the household has a mortgage or not	Categorical
Mortgage	Average size of the formal and/or informal loan for the purchased or hire-purchased house and/or land	Continuous

Data analysis

The method used was based on La Cava and Simon (2005), who examined the relationship between the probability of being financially constrained and the economic and demographic characteristics of households in Australia. The paper used a logit model to explore how changes in household characteristics might have led to constraints on cash flow to Australian households. The estimated logit equation is stated below.

$$\ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \sum_{k=1}^{N} \beta_k X_{ki} + \varepsilon_i \quad (1)$$

In the equation, P_i is the probability of household i having household debt. X_{ki} is the set of N independent variables for household i and the independent variables include both demographic and economic factors including work status, education level, and household compensation etc. After equation (1) was ran using the data from both 2019 and 2021, comparisons have been made.

Next, as the research also focuses on whether household's characteristics influences households' decision to acquire debt in the form of loans for the purchased or hire-purchased house and/or land or not, equation (2) was constructed.

$$\ln\left(\frac{A_i}{1-A_i}\right) = \beta_0 + \sum_{k=1}^{N} \beta_k X_{ki} + \varepsilon_i \qquad (2)$$

In the second equation, A_i is the probability of household i having a mortgage with X_{ki} being the set of N independent demographic and economic variables for household i. Similar to equation (1), equation (2) was ran using data from 2019 and 2021 and differences between households were later analyzed.

4.1 Results

Overall household characteristics

For 2019, the SES dataset consisted of 45,586 households which increased to 46,840 households in 2021. In both years, most households were in the central region of Thailand followed by the northeastern region and northern region, respectively. The educational attainment level of most households was upper secondary and lower. In addition, over 70 percent of households in the datasets had members of both genders. Apart from the previously mentioned factors, the number of members aged below 15 years old, average household compensation per month, and household assets were also analyzed.

Debt characteristics

Using the SES data from 2019 and 2021, indebted households were disaggregated according to the type of loan that they acquired (e.g., formal, informal, or both formal and informal). The number of households with loans in 2019 was 21,308, while in 2021, the number of households was 24,511. In both years, over 90 percent of indebted households had formal loans followed by informal loans at around 5 percent and both formal and informal loans at 3 percent. The single main objective for households to obtain either a formal or an informal loan was for household consumption. Interestingly, in both years, households that acquired multiple formal loans for different purposes accounted for over 20 percent of households with loans while those with multiple informal loans for different uses accounted for less than one percent.

For loans specific to the purchased or hire-purchased house and/or land, the research found that in 2019, there were 2,519 households with loans to purchased or hire-purchased house and/or land, while in 2021, the number increased to 3,102 households. For both years, over 97 percent of households acquired formal loans while only around 2 percent of households had informal loans. When further examining the loans, it was found that the average loan size for formal loans was more than twice the size of informal loans.

Households that have debt in 2019 and 2021

This section focuses on the main objective of the report which is to examine whether households' characteristics influenced the probability of households having debt, specifically loans for the purchased or hire-purchased of a house and/or land. A logit model was used to examine the probability with households with both public and private sector workers being the base category. As previously mentioned, the study specifically focused on 3 types of households: 1) Households with both public sector workers and private sector workers, 2) Households with only public sector workers, and 3) Households with only private sector workers.

The study began by examining whether the work status of the household affected the probability of households having debt in 2019 and 2021. In comparison to households with both public and private sector workers, households with only public sector workers as well as households with only private sector workers had a lower probability of having debt in both years. Moreover, if the work status of the household was all private sector workers, it significantly impacted the probability of household debt demand.

Table 2 Households that have debt in 2019 and 2021 by work status and geographic factors

Variable	Year 1 2019	Year 2 2021
	Dependent variable: Household debt	
Households with workers in other categories	-0.748***	-0.873***
	(0.140)	(0.149)
Households with workers in the public sector, private sector, and workers in other categories	0.104	0.021
	(0.146)	(0.155)
Households with only public sector workers	-0.250*	-0.238
	(0.149)	(0.159)
Households with only private sector workers	-1.304***	-1.340***
	(0.141)	(0.150)
Households with those who are only economically inactive	-2.561***	-2.690***
	(0.143)	(0.151)
Households with workers in the public sector, private sector, and those who are only economically inactive	-0.438***	-0.578***
	(0.139)	(0.148)
Households with workers in other categories and those who are only economically inactive	-0.256*	-0.416***
	(0.139)	(0.148)
Households with workers in other categories, public sector, private sector, and those who are only economically inactive	0.362**	0.153
	(0.142)	(0.150)
Central (exclude Bangkok)	0.493***	0.613***
	(0.050)	(0.048)
North	0.856***	0.860***
	(0.051)	(0.049)
Northeast	1.309***	1.210***
	(0.051)	(0.049)
South	0.398***	0.463***
	(0.053)	(0.051)
Observations	45,586	46,840

Note: *** p<0.01 ** p<0.05 * p<0.1; robust standard errors in parentheses
Source: 2019 and 2021 Household Socio-Economic Survey, National Statistical Office of Thailand

When taking both the work status of the household and geographic factors into consideration, the study found that, for households in Bangkok regardless of the household's work status**,** the probability of having debt did not change from 2019 and 2021. Using households with both public and private sector workers in Bangkok as the base category, both households with only public sector workers and households with only private sector workers in Bangkok were less likely to have debt when compared to the base category. Interestingly, if the household consisted of only public sector workers, the work status significantly impacted the probability of the household debt demand in 2019 but not in 2021, while for households with only private sector workers, the work status was significant in both years. Moreover, Table 2 also showed that location had a positive and significant impact on the probability of households having debt with households with both public sector and private sector workers in other regions (e.g., central (excluding Bangkok), northern, northeastern, or southern) being more likely to have household debt than their counterparts in Bangkok.

Afterwards, when focusing on work status and educational factors, households with both public sector and private sector workers with post-secondary or above education was the base category. Households with only public sector workers and those with only private sector workers whose members had post-secondary education backgrounds or higher were less likely to have debts when compared to the base category. Also, when examining households with both public and private sector workers whose education attainment is upper secondary or lower, the possibility of having debt is less than their counterparts with post-

secondary or above education. The household education attainment level also significantly impacts the household debt demand.

Later, the study investigated the influence of work status and children (household members under the age of 15). Like the influence of previous factors, both households with only public sector workers and households with only private sector workers with children were less likely to have household debt when compared to households with both public and private sector workers with children. Additionally, households with both public sector and private sector workers with children faced a higher probability of having debt when compared to their counterparts without children.

The study then examined the impact of the work status and the aggregate gender of the household with the base category being households with both public and private sector workers of both genders. For households with members of both genders, households with only public sector workers were more likely to have household debt when compared to the base category in both 2019 and 2021. On the other hand, households with only private sector workers had less possibility of having debt when compared to the base category. Also, for households with both public and private sector workers who were either all-male or all-female, gender had a significant and negative impact on the possibility of having debt when compared to households with both public and private sector workers with both genders.

Moreover, when comparing households with the same level of average household compensation, it was found that both households with only public sector workers and households with only private sector workers had less likelihood of having debt when compared to households with workers from both sectors.

Finally, the study investigated the influence of different household assets on the possibility of household debt. In comparison to households with both public and private sector workers, households with only public sector workers were less likely to have debt in 2019 but more likely in 2021. On the contrary, households with only private sector workers had a lower probability of having debt when compared to households with only public and private employees.

Households that have mortgages in 2019 and 2021

This section explored household debt in the form of loans for the purchased or hire-purchased house and/or land by examining whether households' characteristics influences the possibility of households acquiring loans for the purchased or hire-purchased of a house and/or land. Similar to the previous section, a logit model was used to analyze the probability of households having mortgage debt in 2019 and 2021 with households with both public sector workers and private sector workers as the base category.

The study started by examining whether the work status of the household affected the possibility of households having mortgage debt. When compared to households with both public sector and private sector workers, households with only public sector workers were more likely to have a mortgage while households with only private sector workers were less likely. In addition, if the work status of the household was all private workers, it would have a significant impact on the probability of the household having a mortgage.

Table 3 Households that have mortgages in 2019 and 2021 by work status and geographic factors

Variable	Year 1 2019	Year 2 2021
	Dependent variable: Mortgage	
Households with workers in other categories	-1.538*** (0.204)	-1.525*** (0.190)
Households with workers in the public sector, private sector, and workers in other categories	-0.655*** (0.210)	-0.723*** (0.197)
Households with only public sector workers	0.245 (0.207)	0.378* (0.193)
Households with only private sector workers	-1.598*** (0.207)	-1.391*** (0.192)
Households with those who are only economically inactive	-2.511***	-2.140***

Variable	Year 1 2019	Year 2 2021
	Dependent variable: Mortgage	
	(0.220)	(0.198)
Households with workers in the public sector, private sector, and those who are only economically inactive	-0.478**	-0.479***
	(0.196)	(0.183)
Households with workers in other categories and those who are only economically inactive	-1.213***	-1.125***
	(0.199)	(0.185)
Households with workers in other categories, public sector, private sector, and those who are only economically inactive	-0.538***	-0.505***
	(0.199)	(0.186)
Central (exclude Bangkok)	-0.443***	-0.225***
	(0.081)	(0.077)
North	-0.623***	-0.422***
	(0.087)	(0.082)
Northeast	-0.473***	-0.529***
	(0.084)	(0.081)
South	-0.532***	-0.356***
	(0.088)	(0.083)
Observations	45,586	46,840

Note: *** p<0.01 ** p<0.05 * p<0.1; robust standard errors in parentheses.
Source: 2019 and 2021 Household Socio-Economic Survey, National Statistical Office of Thailand

Later, the influence of geographic factors was taken into account when analyzing the possibility of households having mortgage debt. For households in Bangkok, households with only public sector workers were more likely to have a mortgage when compared to households with both public sector and private sector workers in 2019 and 2021. On the other hand, households with only private sector workers had a lower probability of having a mortgage when compared to the base category in both years. Also in 2019, if the work status of household was all private sector workers it would have a significant impact on the possibility of household mortgage. However, in 2021 if either the work status of the household was all public sector workers or all private sector workers it would significantly impact household mortgage demand. Table 3 also shows that geography had a significant influence on the probability of household mortgage demand. In 2019 and 2021, households with both public sector and private sector workers situated in other regions in Thailand were less likely to have a mortgage when compared to their counterparts in Bangkok.

Afterwards, the effect of work status and educational factors on the probability of household mortgage was explored. In both years, households of public sector workers with post-secondary or above education had a higher probability of having a mortgage when compared to households with both public and private sector workers with members of the same education level. On the contrary, households with only private sector workers with post-secondary or above education had a lower and significant probability of having a mortgage. Furthermore, households with both public sector and private sector workers who were educated in the upper secondary level or lower were less likely to have a mortgage when compared to households of the same work status but education attainment of post-secondary or above.

The study also examined the impact of work status and children on the probability of mortgage debt in households. Similar to previous factors, households that included only public sector workers and had children faced the higher possibility of having a mortgage when compared to households with both public sector and private sector workers who have children. On the contrary, for households with only private sector workers with children, the probability of households having a mortgage was lower and the work status of the household was significant. In addition, households with both public sector and private sector workers with children faced the higher probability of having a mortgage when compared to their counterparts who did not have children.

Apart from work status, the impact of the aggregate gender of the household was considered with the base category being households with public and private workers of both genders. For households with members of both genders, those with only public sector workers were more likely to have a mortgage while those with all private sector workers were less likely to have a mortgage when compared to the base category. Interestingly, households with both public sector and private sector workers who were either all-male or all-female had the less likelihood of having debt in 2019 and 2021 when compared to the base category. The aggregate gender of the household had a significant impact on household mortgage demand.

When considering households with the same level of average household compensation, it was found that those with only public sector workers had a higher likelihood of having mortgage debt when compared to households with both public sector and private sector workers. However, for households with only private workers, the possibility was lower with the work status having a significant impact on the possibility. Furthermore, the probability of having a mortgage increased as the amount of household compensation increased.

Finally, the study analyzed the effect of different household assets on the probability of households having a mortgage. In comparison to households with both public sector and private sector workers, in 2019 and 2021, households with only public sector workers had a higher probability of having a mortgage while households with only private employees had a lower probability.

4.2 Discussion

Different household characteristics such as household's work status, location, education attainment, and other factors etc., affect a household's decision to take on household debt specifically household mortgage, differently. To understand the impact of these influences, the study began by examining SES data from 2019 and 2021. Analyzing data from two different periods with different social and economic context allowed the study to discover key factors that influenced the household debt demand.

Starting with the household's work status, for certain households including households with only private sector workers, the work status significantly impacted the probability of the household having debt while for households with only public sector workers, the work status did not. Although studies on the impact of household work status by sector on household debt are limited, there is vast research at the individual level. Kim (2017) found that employment at the individual level significantly affected the levels of household debt with the unemployed being more likely to have high household debt levels. Crook (2006) reported that households whose household head was employed were the most likely to be in debt while households with retired household heads had a lower probability of requesting loans. The research also investigated the impact of work status on the likelihood of households obtaining loans for the purchased or hire-purchased of a house and/or land. Regarding mortgage debt, the work status significantly impacted the probability of all households having a mortgage except for households with public sector workers. Furthermore, in the selected households, when compared to the base category of households with both public sector and private sector workers, households with only public sector workers had a higher probability of having a mortgage in both 2019 and 2021 while households with only private sector workers had a lower probability. This finding is inconsistent with Chen et al. (2018) who reported that because of access to subsidies, government employees in China borrowed less to purchase a residence. The study also discovered that workers in government-controlled nonprofit institutions were more likely to obtain a mortgage to fund the purchase of a house since banks treated them more favorably.

Apart from the household's work status, the impact of geography was explored. For households with both public sector and private sector workers in other regions (e.g., central (excluding Bangkok), northern, northeastern, or southern), the location significantly and positively impacted the likelihood of having debt when compared to households with the same work status in Bangkok. Regarding the significance of location on household debt, Magri (2002) reported that area of residence was an important factor that affected loan demand. The paper found that Italian households located in small municipalities were less likely to obtain loans due to higher entry costs into the debt market. While Collins (2008) suggested a link between debt and household geography. He stated that for urban areas, high indebtedness was more extensive among middle to

high-income households, but in rural areas, high indebtedness was found in households at all income levels. In terms of mortgage debt, it was discovered that geography also had a significant influence on the likelihood of having a mortgage. For households with both public sector and private sector workers located in other regions, it was found that the region had a significant and negative impact on the likelihood of household mortgage.

The study then focused on the impact of household work status and educational factors. Households with both public sector and private sector workers with upper secondary or lower education backgrounds were less likely to have household debt when compared to their counterparts with post-secondary or above education backgrounds. This contrasts the finding of Giordana and Ziegelmeyer (2017) who reported that indebted households in Luxembourg were more likely to be younger and have high educational attainment. Even though research focusing on the impact of household work status and education level on loan demand is scarce, there are multiple studies focusing on the link between individual education attainment and household debt. According to Amornlerdphanich (2008), education attainment of the household head was positively related to household debt burdens in northern Thailand with college-educated household heads having the largest debt burden. On the contrary, Rangsipaht et al. (2013) and Turinetti and Zhuang (2011) discovered that individuals with high education level were less likely to have household debt. Afterwards, the study examined the effect of work status and educational factors on the probability of household mortgage. Similar to the findings regarding loan demand, households with both public sector and private sector workers with upper secondary or lower education backgrounds were less likely to have a mortgage when compared to households with the same work status but a post-secondary or above education level. The findings are similar to Chen et al. (2018), who found that individuals with higher education attainment had a higher likelihood of using a mortgage and put a larger share of their monthly compensation towards the repayment. Whilst, Baeck and DeVaney (2003) reported that young household heads who were less-educated and whose household was low income were more likely to acquire a federally guaranteed mortgage. However, Dhillon et al. (1987) discovered that the level of education did not influence the borrower's choice of mortgage contract.

Furthermore, the study also looked into the influence of work status and children (household members under the age of 15). Households with both public and private sector workers and children faced a higher probability of having debt when compared to their counterparts who did not have children. This aligned with findings from Giordana and Ziegelmeyer (2017) who found that indebted households tended to be relatively young and have more dependent children. Similarly, Lenton and Mosley (2008) stated that having a larger number of children had a significant and positive influence on the probability of household debt. In Thailand, Chounlakorn and Kittichotipanit (2016) reported that for civil servants specifically general officials, three common factors including number of family members, capability of making installed payments, and the cost of living affected household debt. Similarly, Intarapak and Supapakorn (2020) highlighted that for households in Bangkok and the surrounding metropolitan area, variables such as household size, number of people who get wages, remittance receiving, and loan for emergency influenced household debt. The study then explored the impact of work status and children on the likelihood of household mortgage. Similar to loan demand, households with both public and private sector workers and children experienced a higher likelihood of having a household mortgage than their counterparts without children. The findings are similar to Worthington (2009), who found that in Australia, couples with children and those who are middle-aged have a higher probability of an owner-occupied mortgage compared to an investor mortgage. Xiao and Yao (2011), who examined American household from 1989-2007 to understand patterns and trends of debts, discovered that married couples with children were more inclined to hold mortgages, credit cards, and vehicle loans. Interestingly, Yilmazer and DeVaney (2005) discovered that the number of children in the household is positively related to the possibility of household mortgage but negatively related to credit card balances.

Afterwards, the study then examined the impact of work status and gender of household members on household debt. For households with both public and private sector workers who are either all-male or all-female, the gender of household members had a negative and significant effect on the probability of having

debt when compared to households with public and private sector workers of both genders. In a study on factors affecting debt for farmers in Thailand, Phocapanit and Kenaphoom (2017) highlighted the significance of gender on household debt while age did not have an impact. Furthermore, the aggregate gender of the household had a significant and negative impact on the household mortgage demand for gender-dominated households with both public sector and private sector workers.

Moreover, when comparing households at the same level of average household compensation, it was found that the likelihood of having debt was positively and significantly related to increasing average household compensation. Chichaibelu and Waibel (2018) also suggested that household characteristics including poverty, household size, education, and income were significantly related to the household indebtedness of rural household borrowers in Thailand and Vietnam. Whist, Lerskullawat (2020) reported that economic factors, including household income were key factors that impacted household debt with household income having a negative relationship with household debt. Similar to household loan demand, the probability of household mortgage increased as the amount of household compensation rose. This aligns with the findings by Ling and McGill (1998) which reported that income was positively related to household mortgage demand while Worthington (2009) reported that income had a positive impact on the probability of both owner-occupied and investor mortgage participation. However, Yilmazer and DeVaney (2005) discovered that income had a negative impact on the likelihood of the household holding any type of debt including mortgages.

Finally, the study explored the influence of household assets on household debt demand. When comparing households with public and private workers with household assets to those without, the likelihood of having debt noticeably varied according to the type of household asset. Nonetheless, most household assets significantly influenced the probability of household debt. This is similar to Amornlerdphanich (2008) who reported that average monthly household income and asset values were positively related to debt at a significant level. While Fasianos et al. (2014) suggested that household financial assets were one of the most significant factors in determinants of household debt. On the opposite of household debt, the effect of work status and household asset on mortgage was reported as household assets having a positive and sometimes significant impact on mortgage demand. However, Yilmazer and DeVaney (2005) found that financial assets negatively impacted the possibility of mortgage debt with the impact becoming more serious as the financial assets accumulated. Yet, non-financial assets have a positive effect on the likelihood of having mortgage debt.

5. Conclusion

This research analyzed the impact of different household characteristics on household debt including debt in the form of loans for the purchased or hire-purchased of a house and/or land. Using the Thailand's Household Socio-Economic Survey for 2019 and 2021, the author focused on identifying key household characteristics that determined the likelihood of households having debt. The research divided households into nine categories according to household work status with focus on households with only public sector workers, only private sector workers, and only public and private sector workers. A logit model was then used to analyze the probability of household debt as well as household mortgage with households with both public and private sector workers as the model's base category.

Beginning with household work status, the study found that for certain households such as households with only private sector workers, the factor of work status was significant in the households' decision to obtain a loan in both 2019 and 2021. For household mortgage demand, household work status significantly impacted the probability of all households in having a mortgage in both years except for households with only public sector workers. Moreover, the study found that households' location, households' education attainment, number of children (household members under the age of 15), gender of household members, average household compensation had a significant impact on both the possibility of household debt and household mortgage in both 2019 and 2021. However, the direction of the probability varied according to the impact from each factor. For household assets, the significance and influence of household assets on the likelihood of household debt and household mortgage differed by asset and year.

Further research should be conducted on households with work statuses that were not included in the selected group of households. This is so that a clear picture of the impact of household characteristics on all households can be achieved. Also, the influence of households' age (young/middle-aged/senior) and marital status (married/single) should be further investigated as most research would focus on the age and marital status of the household head but not the household itself.

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