Do Consumer Loans Really Lead to Debt Traps? Empirical Evidence from Armenia

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Abstract: Loans may be a driving factor in economic growth, having their usage in almost every sector and level of the economy, but they can also be harmful – especially to individuals who are already financially vulnerable. In Armenia, users of consumer loans are at a high risk of falling into a debt trap – forced to take out another loan or extend the duration of the existing loan, thereby turning a short-term consumer loan into a long-term liability. The aim of this study was to investigate debt traps in Armenia and a survey among users of consumer loans was conducted and analysed using logistic regression. The results showed that a significant amount of borrowers fall into a debt trap, while a large portion are at a high risk of falling into one. The main factors contributing to a debt trap were the duration and interest rate of the loan, as well as the family size of the borrowers. Falling into a debt trap was strongly correlated with a short loan duration - those with a loan that had a repayment period of 6 months or less were at the highest risk. Furthermore, a significant percentage of those in a debt trap had taken out a consumer loan mainly for non-essential purchases. The author suggests regulating loan durations for high-risk individuals and raising financial awareness to discourage the use of consumer loans for the purchase of non-essential goods.

JEL Classification: D14, D18, G21, G28.
Keywords: Debt trap, consumer loan, interest rate cap, usury ceiling, consumer protection.

INTRODUCTION

Loans play an important role in the modern economy as an irreplaceable yet sometimes controversial financial tool. Though loans are used in almost every sector and level of the economy – helping businesses grow, covering budget deficits, allowing millions to buy homes, and satisfy personal needs, they can also be somewhat dangerous. Certain types of loans, such as high-interest, short-term consumer loans (which allow financially vulnerable individuals to make ends meet and pay for food, rent, utilities, medical bills or other essential needs in the short term) can place individuals under a significant amount of financial stress and in some cases – lead to what's known as a "debt trap". Although there is no legal definition for a debt trap, nor is there a universally accepted consensus on what constitutes a debt trap, it is usually considered a cycle of debt that a borrower cannot afford to pay off for good (King and Parrish, 2007). Another way of defining it is a situation where an individual spends more than they earn and borrows against their credit to facilitate that spending. Some of these borrowers often find it difficult to pay off that debt (especially if the loan carries a high interest rate) and cannot save up as a result of their increased debt-to-income ratio. Even if they are able to make minimum payments on these loans, they struggle to pay off the loan completely and, if any unforeseen expenses come up, their debt is compounded (as they don't have sufficient savings to fall back on), keeping them in a cycle of debt, or – a debt trap (United States Department of Defense, 2022).

This term does not only apply to individuals, but also countries, when, for example, they base their borrowing decisions on economic growth projections that fail to materialize, leaving them in excessive debt, which they are unable to pay off (Daseking and Kozack, 2003). This is analogous to an individual that assumes that they will be able to pay off their loan on time, perhaps after they receive their salary/or an expected payment, but fail to do so when they incur unexpected expenses or receive less than they had anticipated. In these cases, they can extend the duration of their loan (rollover), take out another loan to pay off the initial one, or sell an asset to pay off their debt. The latter case does not place the individual in a debt trap but is detrimental to their financial wellbeing. The former two cases are indicative of a debt trap, though only if they turn into a long-term liability ("long-term" is not defined as a specific amount of time and differs from case to case). High-risk loans that can lead to debt traps are regulated in many countries around the world (Maimbo and Henriquez-Gallegos, 2014), as they increase the likelihood of filing for bankruptcy and, according to different consumer advocacy organizations, can lead to a cycle of poverty (Marston and Shevellar, 2014), (DeYoung and Phillips, 2013).

1.1. Payday loans

An example of a high-risk loan is payday loans, which have been banned in a number of US states. These loans usually carry a very high annual interest rate (often over 390%

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APY), a short repayment period (usually 2-4 weeks), and have a relatively small size (20-40% of the individual's monthly salary) (Bureau, 2013), (Stegman, 2007). Individuals who use these loans expect to pay them off at the end of the month after receiving their salary (hence the name – payday), but are often unable to within such a short time period. This can lead to the borrower rolling over the loan (i.e. they extend the duration of the loan) or taking out another loan to pay off the initial one (Badarinza et al., 2016). As a result, the short-term loan transforms into either a long-term loan or a cycle of borrowing. In both cases, the individual falls into a debt trap. Users of payday loans are often financially vulnerable individuals who are exploited by loan providers, who know that those individuals will not be able to pay off their loans on time and will end up in a debt trap (Valenti and Schultz, 2016). In fact, some studies suggest that many payday lenders generate most of their profit from borrowers who are in a debt trap (King et al, 2006), (Stegman and Faris, 2003) and this type of loan, by design, encourages continuous borrowing (Nicholson, 2008). According to the CFPB (Consumer Financial Protection Bureau), approximately 70% of those who take out a payday loan in the US are forced to take out a second payday loan within a month to pay off the first loan, while 20% end up taking out at least 10 other payday loans to pay off the previous ones (Martin and Keown, 2017). According to another study, 50% of those who take out a payday loan are forced to take out 7 other payday loans within 12 months, which is a significant indicator of being in a debt trap (Ramirez, 2019). That is because payday loans are more expensive than many other types of consumer loans and individuals would only use them if they had no other choice.

1.2. Consumer Loans in Armenia

In Armenia, loans that are provided by banks are regulated by law and their effective interest rate cannot exceed 24%. However, the second largest loan providers in the financial market are so-called "universal loan organizations" (Central Bank of Armenia, a) which have no limitations on the interest rate or duration of their loans and can, theoretically, provide high-risk loans. Banks and universal loan organizations in Armenia are both prudentially regulated, though the requirements for loan organizations are less strict (e.g. minimum capital requirements) considering the fact that they cannot collect deposits from the public. They both offer a range of services (lending, currency exchange, leasing, etc.), though banks dominate the financial market in terms of asset ownership (Central Bank of Armenia, b). From a lending perspective, the most notable difference between banks and loan organizations, as mentioned above, is the fact that banks have an interest rate cap on their loans whereas loan organizations don't, which is why advocates of consumer loan regulation mainly focus on the interest rates of loans provided by universal loan organizations.

A previous study by the author showed that there are over 550,000 borrowers in Armenia (approximately 20% of the population) and consumer loans have, on average, risen by 30% every year from 2018 to 2020 (Gabrielyan, 2021). In addition to that, 43.8% of the population in Armenia lives in poverty (as of 2020) (Statistical Committee of the Republic of Armenia, 2020), which allows us to make a logical assumption that a certain percentage of the 550,000 borrowers are financially vulnerable individuals who use high-interest, short-term consumer loans to make ends meet. This is likely because a significant amount of these individuals are not eligible for low-interest bank loans (considering their risk rating). Loan organizations, on the other hand, can offer high-interest loans and compensate for the additional risk with higher interest rates.

Furthermore, the study found that the median household income of an average-size family in Armenia was, in many cases, not enough to pay off consumer loans in the time period that loan organizations and banks claimed they were being paid off in. According to the study, a significant portion of borrowers were paying off consumer loans within 1-6 months, even though that should have been impossible considering the median monthly disposable income of average-sized families, the minimum size of loans being offered by those banks and loan organizations, and the interest rates of those loans. *This meant that there was a high risk that borrowers were rolling over their loans (i.e. borrowers often ended up in debt trap), selling assets or taking out other loans to pay off their initial loans (i.e. borrowers were at risk of falling into a debt trap).*

1.3. Definitions

It is important to note that debt traps cannot be discovered by analyzing financial statements and no financial institution or regulator has access to the information required to prove/disprove the existence of debt traps as there is no way of knowing if the consumer sold an asset to pay off a loan or if they formally/informally borrowed money from another institution or from a friend/relative to pay off their loan. Furthermore, extended (rolled over) loans are often reflected in financial statements as new loans, thereby making it even more difficult to tell whether the initial loan was paid off or if the borrower was forced to roll it over.

- Selling an asset to pay off a loan doesn't place an individual in a debt trap but is an indicator that the borrower cannot afford to pay off their debt with their disposable income, which means that they are at risk of falling into a debt trap when borrowing.
- Taking out another loan to pay off the initial one can turn into a debt trap, but only if the borrower has trouble paying off the second loan as well. If the second loan is more affordable (e.g. lower interest rate), the borrower may be able to pay off both loans and avoid a debt trap. As this scenario may or may not result in a debt trap, for the purposes of this study, taking out another loan was considered a risk factor of falling into a debt trap but not an indicator of a debt trap itself.
- Rolling over a loan multiple times is a clear indicator that the borrower cannot afford to pay off their loan on time and is in fact in a debt trap.

The points above are used later in the study to provide operational definitions of what constitutes a debt trap and what the risk factors are.

1.4. Aims of the Study

To find out whether debt traps exist in Armenia for users of consumer loans, this study was carried out and aimed to answer the following questions:

1. Do debt traps exist in Armenia and if they do - how common are they?
2. What demographic characteristics do people in debt traps have in common?
3. Of the people who fall into a debt trap, are there any similarities between the characteristics of their loans (e.g. interest rate, duration, etc.)?
4. Which percent of borrowers take out their loans from non-bank lenders and why?
5. Which independent variables have the strongest influence on the likelihood of falling into a debt trap and how can they be regulated to combat debt traps?
6. Why do consumers take out these loans in the first place? Do they need them to pay for essential needs or can they live without them?

The answers to these questions will allow us to understand whether this market requires regulation and, if yes, how the effectiveness of that regulation can be maximized (by focusing on certain components of loans when developing the appropriate regulatory policies).

Special emphasis was placed on the analysis of interest rates as usury ceilings/interest rate caps are the most common tool used in regulating the loan market and combating debt traps. Implementing usury ceilings, however, has been proven to be a dangerous practice that can often backfire and limit the accessibility of loans for those who rely on them, thereby hurting the very people they are designed to protect (those that are the most financially vulnerable) (Vandenbrink, 1982), (Helms and Reille, 2004), (Ferrari et al., 2018), (Zinman, 2010), (Brief, 2009). In fact, most regulations that target payday loans often have unintended, negative side effects for consumers, if they are not carefully calculated, analysed and tested beforehand (Zywicki and Arca, 2009). For example, when payday loan regulation was introduced in the US state of Oregon, many consumers lost access to payday loans (which they relied on) and turned to pawn shops and informal sources of credit, which were much more expensive than the payday loans they previously used (Peirce and Klutsey, 2016).

A bill was proposed in 2019 by members of parliament in Armenia to implement usury ceilings for non-bank lenders as they were apparently "exploiting financially vulnerable individuals" and making profits much higher than those of other financial institutions, due to high interest rates on consumer loans (Draft 376, 2019). However, the market average interest rate for consumer loans provided by non-bank lenders had not been calculated and no analysis was presented to justify why a usury ceiling at a specific interest rate was proposed. The bill did not pass, but the idea of implementing a usury ceiling for non-bank lenders remains relevant and may be discussed again in the future by lawmakers seeking to regulate the loan industry. This is why it's crucial to understand whether people in debt traps truly have abnormally high interest rates on their loans and whether or not limiting those rates will effectively reduce the likelihood of falling into a debt trap without significantly reducing the accessibility of loans for financially vulnerable individuals.

2. METHODOLOGY

2.1. Data Sample

The analysis in this study is based on an online survey (via Google Forms), which was outsourced to a market research agency (IMR Armenia) and carried out from 10.06.2022 – 20.06.2022. The participants were selected randomly from a national database of mostly teachers and people working in the field of education aged 18 to 65 living in Yerevan (the capital city of Armenia) and other parts of Armenia. Teachers were chosen as the target population as they have an above-average educational background and are more likely to be financially literate and less likely to fall into a debt trap. The survey ended once 385 eligible respondents had filled out the survey (respondents had to have had a consumer loan within the last 10 years to be considered eligible for participation). The target amount of respondents was 385 as this was the representative sample size for the population in this study, with a 95% confidence level, .5 standard deviation, and a margin of error (confidence interval) of +/- 5%.

After confirming that they had had a consumer loan within the last 10 years, respondents were asked about their age, gender, educational background, employment, household income, family size (including the number of children they have), the size of their loan, its interest rate, duration and purpose, the size of the monthly installment, and whether or not they had rolled over the initial loan, borrowed money/taken out another loan or sold an asset to pay off the initial loan.

2.2. Purpose and Origin of the Loans

Understanding the purpose of the loans is important as some regulatory policies (like interest rate caps/usury ceilings) limit the accessibility of loans and we need to know whether the loans were being used to pay for essential needs (e.g. rent, food, utilities, medical bills, etc.) or if they were being used for consumer needs (e.g. to buy a new phone, to buy a gift, etc.).

Respondents were also asked where they obtained the loan from, considering the fact that non-bank lenders provide loans that are relatively high-risk compared to the ones provided by banks. Those who had taken out a loan from a non-bank lender were also asked what advantages non-bank lenders had to offer as banks usually offer loans with the lowest interest rates and should, logically, be the first choice for potential borrowers when applying for a loan.

2.3. Debt Trap Criteria

The 2 criteria for being in a debt trap were defined as the following:

1. Those whose monthly disposable income was not enough to pay for the monthly installment of their loan (disposable income – monthly installment < 0).

2. Those who had rolled over their loan 3 or more times as they were unable to pay off the loan within the time period agreed upon with the lender.

The two points above logically support one another as those who are unable to pay their monthly installment will most likely rollover their loan and vice versa. These two criteria were present simultaneously in 98% of cases, with 2% of borrowers being unable to pay their monthly installment but not rolling over their loan. As the latter is a negligible percentage, these cases were not investigated any further.

The poverty line in Armenia as of 2020 was used to calculate the minimum required expenditure of households for essential resources and used to determine the maximum monthly disposable income that households could have. The minimum required expenditure for each adult is AMD 44,482 (Statistical Committee of the Republic of Armenia, 2020) while children under the age of 14 require half of that amount for essential resources (Myanmar Ministry of Planning and Finance and World Bank Group, 2017). By subtracting these numbers from the household income of the respondents, their maximum monthly disposable income was calculated. Disposable income was used for analyzing debt traps as loan payments are made from an individual's disposable income.

The 3 criteria for being at risk of falling into a debt trap were defined as the following:

1. Those who had rolled over their loan once or twice as they were unable to pay off the loan within the time period agreed upon with the lender.
2. Those who had sold an asset to pay off the loan as they could not afford to pay it off otherwise.
3. Those who had taken out another loan or borrowed money to pay off the initial loan, which they could not afford to pay off otherwise.

Those who had only rolled over their loan once or twice were not considered to be in a debt trap as those could be one-off exceptions. The last two cases were risk factors and not indicators of being in a debt trap for the reasons given in the *Introduction* section.

The demographics and loan characteristics of those in a debt trap, those at risk of falling into a debt trap, and those not in a debt trap were compared to find out what features people in debt traps had in common and whether or not there were any similarities between the loans they had taken out. This information was used to provide insight into what components potential anti-debt trap policies should focus on.

2.4. Debt trap analysis

The results of the survey were analysed in Microsoft Excel and EViews, using binary logistic regression in the latter. The independent variable was the existence (1) or non-existence (0) of a debt trap, while the dependent variables were family size, amount of children, loan size, loan duration, interest rate, monthly installment and monthly income. Variables with a p-value larger than 0.05 were discarded, and the same was done for variables with a coefficient smaller than 0.001. "Family size', "interest rate" and "loan duration" were the only variables that remained significant and had relatively strong correlations. Since "family size" is not a variable that can be regulated through policy, and "interest rate" had a much weaker correlation compared to "loan duration", the probabilities of falling into a debt trap for different loan durations (keeping "family size" and "interest rate" constant) were calculated and used to show how the regulation of the duration of a loan can potentially be used to decrease debt traps in Armenia. The influence of "family size" on the likelihood of falling into a debt trap was cross-examined with the amount of children in those families and used to provide insight into which families are more likely to fall into a debt trap.

3. RESULTS

All of the survey participants had had a consumer loan within the last 10 years, with 42.8% of them having taken out a consumer loan within the last 4 years (2018-2022). 82.4% of the surveyed individuals were females and the average age of the participants was 36 (median = 33). 67% of them held a university degree, 22.1% had received vocational education, while 10.9% had not pursued a higher education after finishing school. The average family size was 3.9 people (median =4), while the average amount of children in a given family was 0.8 (median = 1).

The majority of the participants were employed and had relatively high household net incomes (see Appendix 1), considering the fact that the monthly median household net income for an average-sized family in Armenia was 133,450 AMD as of 2020 (Gabrielyan, 2021). The average loan size was 7.38 times larger than the monthly median household net income, with an average monthly installment of 40,000 AMD, a loan duration of 37 months and an interest rate of 21%.

As can be seen from the chart below, most of the participants had taken out a consumer loan to pay for a new phone or TV, followed by renovation expenses and medical bills. If we consider a new phone/TV, gifts, gambling and starting a business as non-essential needs, then approximately 25% of the consumer loans were spent on non-essential needs (19.5 + 4.4 + 0.5 + 0.5).

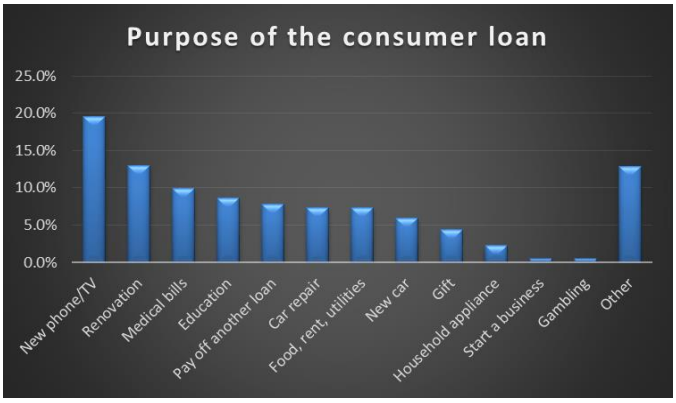

Fig. (1). Why the survey participants had taken out the loan.

Of the 385 participants, 71 (18.44%) had fallen into a debt trap, while 84 (21.8%) were at risk of falling into a debt trap (according to the definitions given in the *Methodology* section). Of those at risk of falling into a debt trap, 25% were at high risk (they satisfied 2 of the criteria listed in the *Method-*

Table 1. A Comparison of the Demographics and Loan Characteristics of Individuals in 3 Different Categories (no Debt Trap, at Risk of a Debt Trap, Debt Trap).

	No Debt Trap	At Risk of Falling into a Debt Trap	Debt Trap
Gender*	54.78% female	71.4% female	74.6% female
Education	70.4% higher education	63.09% higher education	60.5% higher education
Employment	94.3% employed	84.52% employed	87.3% employed
Average household income	356,000 AMD	323,000 AMD	180,000 AMD
Average family size	3.7 people	3.8 people	4.3 people
Average amount of children	0.77	0.85	1
Average loan size	917,000 AMD	1,125,000 AMD	1,045,000 AMD
Average monthly instalment	29,670 AMD	36,860 AMD	78,000 AMD
Average interest rate	20.7%	22%	22%
Average loan duration	42.3 months	40.9 months	15.3 months

*Gender was not analysed as a contributing variable as the majority of the participants of the survey were females and any conclusions regarding this variable would be inaccurate.

Table 2. The Logistic Regression Analysis Output in Eviews of the Independent Variables influencing the Likelihood of Falling into a Debt Trap.

Dependent Variable: DEBT_TRAP				
Method: ML - Binary Logit (Quadratic Hill Climbing)				
Included Observations: 385				
Variable	**Coefficient**	**Std. Error**	**z-Statistic**	**Prob.**
C	5.48017	2.196231	2.495261	0.0126
CHILDREN	-0.05504	0.478741	-0.11497	0.9085
FAMILY_SIZE	1.042097	0.449078	2.320526	0.0203
INCOME	-3.9E-05	8.93E-06	-4.36105	0
INTEREST_RATE	0.088787	0.030341	2.926279	0.0034
LOAN_DURATION	-0.24785	0.061032	-4.06094	0
LOAN_SIZE	1.83E-07	1.12E-06	0.163941	0.8698
MONTHLY_INSTALLMENT	7.93E-05	2.96E-05	2.67849	0.0074

ology section) while 8.3% were at critically high risk (they satisfied all 3 of the criteria).

Similar to those that weren't in a debt trap, approximately 25% (19.7 + 2.8 + 2.8) of those in a debt trap had taken out the loan to pay for non-essential needs (new phone/TV, gifts, gambling, respectively). 15.5% had taken out the loan to pay off another loan (which is a potential indicator of being in a debt trap), 11.2% had used the loan for renovation, 9.9% had used the loan to pay for medical bills and another 9.9% had used the loan to pay for food, utilities and rent. The rest had used their loans to buy a new car/repair their existing car (7% each), to pay for education (4.2%) and for miscellaneous needs.

As can be seen from the table above, those with a higher education (bachelor's degree or above) and full-time employment were less likely to fall into a debt trap or be at risk of falling into one. However, the most significant differences for those in a debt trap and those not in a debt trap were in household income, family size, monthly instalment and loan duration (the last 2 variables are interdependent). Logically, the shorter the loan duration, the larger the monthly instalment will be – resulting in a larger loan-to-income ratio. 12.5% of the 385 participants had a loan–to–disposable income ratio (monthly instalment/disposable income) of over 50%, which is an indicator of over-indebtedness (Bańkowska et al., 2015), (Rani et al., 2017) and a significant determinant of household vulnerability (Anderloni et al., 2012). Over 83% of the participants with a loan-to income ratio above 50% were either in a debt trap or at risk of falling into one. From a macroeconomic perspective, high levels of over-indebtedness among the population also make economic

recessions more severe and more difficult to overcome (Igan et al., 2013). Furthermore, studies show that the level of over-indebtedness among the population is reversely proportionate to the GDP growth of the country (Alter et al., 2018). For a more in-depth look at the influence of the above-mentioned variables on the likelihood of a falling into a debt trap, a logistic regression analysis was carried out in Eviews.

3.1. Logistic Regression Results

"Children" and "loan size" were discarded since they were statistically insignificant (p-values >0.05) while "monthly instalment" and "income" were discarded as a result of their low coefficients (<0.001). The only variables that remained significant were "loan duration", "interest rate" and "family size". Loan duration was negatively correlated with the probability of falling into a debt trap i.e. a shorter loan duration has a higher likelihood of ending up in a debt trap. The model is an almost-excellent fit (McFadden R-squared = 0.86) while the actual, fitted and residual graph (see Appendix 2) shows that there are very few statistically significant/extreme outliers in this model.

Of the three statistically significant variables, "interest rate" has the smallest coefficient while "family size" cannot be altered from a policy-making perspective (though it does provide insight into which families fall into debt traps), therefore "loan duration" was chosen as the "modifiable" variable – to test how different loan durations affect the likelihood of falling into a debt trap. The log-of-odds function was used to calculate the probabilities of falling into a debt trap, as shown below:

$$\log\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_y X_y$$

Where P is the probability of falling into a debt trap and P/(1-P) is the odds of the outcome. β_0 is the intercept, X_1, $X_2 \ldots X_y$ are the independent variables and β_1, $\beta_2 \ldots \beta_y$ are the corresponding coefficients for each independent variable. The log of P/(1-P) is the logit function (otherwise called the log of odds) and ranges from minus infinity to plus infinity. To transition from log-of-odds to probability, exponentiation of both sides of the formula is required.

$$\left(\frac{P}{1-P}\right) = e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_y X_y}$$

From this we can derive the formula for calculating the probability of falling into a debt trap:

$$P = \left(e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_y X_y}\right) / \left(1 + e^{\beta_0 + \beta_1 X_2 + \beta_2 X_2 + \ldots + \beta_y X_y}\right)$$

Keeping C (β_0 - intercept) at a constant of 1 (coefficient = 5,48), interest rate at a constant of 21% (this was the average interest rate, coefficient = 0.088) and reducing loan duration from 60 months down to 6 months (in 6-month intervals, coefficient = -0.247), we found that a consumer loan with a duration of 4 years (48 months) or more has less than a 1% chance of ending in a debt trap, while a loan with a duration of 3 years has a 17.1% chance of leading to a debt trap, and this number goes up to 80.1% for loans with a duration of 2 years. The likelihood of falling into a debt trap increases rapidly for loans with a duration of 18 months or less. Those who have a consumer loan with a duration of 1 year or less are almost guaranteed to end up in a debt trap (i.e. disposable income drops below 0 after the consumer pays their monthly instalment/the consumer is forced to roll over their loan 3 or more times) with a probability of 98.7%. This goes to show how important it is to regulate loan duration if we want to combat debt traps.

3.2. Interest Rate Analysis

Interestingly, not only did interest rate not have such a strong influence on the likelihood of falling into a debt trap (compared to loan duration), it (the average interest rate) was also not much higher than the interest rates of consumer loans in states/countries that have implemented usury ceilings. The average interest rate was 21%, the median interest rate was 19% and there were only 22 cases of a loan having an interest rate above 36% (the interest rate cap used in a number of US states (U.S. Senate Committee on Banking, Housing & Urban Affairs, 2021)). Of these 22 cases, only 5 had ended in a debt trap. The highest interest rate was 99% (2 cases) while the rest were 70% or lower. In other words, only 5.7% of the respondents had a loan with an interest rate over 36% and out of those 5.7%, only 5 people had fallen into a debt trap, which is 7% of the total amount of consumers in a debt trap. This goes to show that high interest rates are not the norm and do not significantly contribute to debt traps, therefore implementing interest rate caps would not be the most effective method of combating debts traps in Armenia. Furthermore, loan organizations often provide loans to high-risk individuals (those who have low/unstable income, no credit history, etc.) and compensate that risk by charging relatively high interest rates (Asian Development Bank, 2016). They also reduce their risk by providing loans that are smaller in size (compared to banks), which automatically increases the percentage cost per loan (Brief, 2002). Banks, on the other hand, charge lower interest rates and provide relatively larger loans but avoid serving high-risk customers. This means that the interest rates of universal loan organizations can objectively be somewhat higher. Not understanding this difference between banks and loan organizations often creates a misconception that loan organizations are exploiting consumers. This misconception can cause the general public to demand usury ceilings that are not high enough for loan organizations to be able to operate within – without suffering from financial losses (Christen et al., 2003). In these cases, loan organizations exit the market, creating loan accessibility issues for financially vulnerable customers.

3.3. Loan Origin

Finally, 63 of the participants (16.3%), had taken out their loan from a universal loan organization, 34 (8.8%) had used a pawn shop and 8 (2%) had taken out their loan from a combination of banks, loan organizations and pawn shops. Of those who had taken out their loan from a pawn shop/universal loan organization, 36 were in a debt trap. This makes up 50.7% of the total amount of people in a debt trap. 52.4% of those that had not taken out their loan from a bank (i.e. they had used a loan organization/pawn shop) said that their loan application had been rejected by banks when they

had tried to apply for a loan. Some of them had clarified that the assets they had tried to pledge as collateral were not accepted by the banks (their car was too old, the bank did not accept white gold as collateral, etc.), while the applications of others were rejected since they didn't have any credit history. 42.7% said that loan organizations had special offers/advantages such as not having to pay interest for the first month, offering larger loan amounts (compared to the banks they had applied to), providing the loans quicker (compared to banks), and being more convenient location-wise. The other 4.9% mentioned miscellaneous reasons or no reason at all.

Based on the information above, over half of those who had taken out their loan from a universal loan organization/pawn shop (which usually have higher interest rates compared to banks (Fernando, N.A., 2006), (Hardy et al., 2003)) had done so because they were ineligible for bank loans (due to low income/poor credit history/no assets to pledge, etc.). This goes to show that they are financially vulnerable and rely on access to more expensive loans (an average of 21% on consumer loans from banks *vs*. 30% from loan organizations/pawn shops - in this study). If, for example, usury ceilings were implemented to regulate consumer loans, this customer segment would be the first to experience difficulties in obtaining new loans, as interest rate caps often result in reduced accessibility to loans for high-risk/financially vulnerable individuals (Helms and Reille, 2004). In the scope of this study, if an interest rate cap of 25.6% had been implemented (as proposed by the parliament of Armenia in 2019), 7% of the participants would have lost access to their loans, even though they had been able to pay off their loans without falling into a debt trap. It's also important to understand the purpose of consumer loans and whether they are being used to pay for essential needs (25% of those in a debt trap had taken out a loan for non-essential needs, as discussed above). For those who are using consumer loans for non-essential needs, reduced access to loans would not impact their ability to pay for basic needs such as food, rent, utilities, education, and medical bills.

CONCLUSION

Based on the analysis of the results in the previous section, we can safely say that debt traps do exist in Armenia and they are not uncommon. The 5 major key findings were the following:

1. **Loan duration has a very strong influence on the likelihood of falling into a debt trap.** A shorter duration is correlated with a higher probability of being forced to roll over the loan/end up with a negative monthly disposable income. Consumer loans with a duration of 12 months or less are very likely to place high-risk/financially vulnerable individuals in a debt trap. Therefore, considering the relatively lax regulation of universal loan organizations and pawn shops, an effective measure to combat debt traps would be rather to impose minimum loan durations for financially vulnerable individuals, taking into account their family size, household income, employment stability, and other factors (which are beyond the scope of this study). This may also create accessibility issues as some loan organizations might not be willing to provide relatively long-term loans to high-risk borrowers, but, nevertheless, it would not be as blunt of an instrument as an interest rate cap since the revenue of loan organizations would not be negatively impacted (at least not directly) and they would not be forced to filter out high-risk individuals.
2. **A significant amount of people in debt traps rely on non-bank lenders for consumer loans.** These individuals are not eligible for bank loans and any regulation of the consumer loan market that could potentially limit/reduce access to consumer loans (e.g. interest rate caps) would impact this segment first. Considering the fact that these are the most financially vulnerable customers, losing access to loans could negatively affect their capacity to pay for basic, essential needs.
3. **Interest rate caps/usury ceilings would most likely not be an effective method of combating debt traps**, considering the fact that the median and average interest rates were not high enough to warrant interest rate caps (using the caps implemented in other countries as a benchmark) and taking into account the fact that a very small percentage of people in a debt trap had relatively high interest rates on their loans.
4. **Family size is an important variable that influences the likelihood of falling into a debt trap**. A larger family size was correlated with a higher probability of being in a debt trap, but interestingly, it was not the amount of children that contributed to the increased likelihood. The average amount of children for those in a debt trap vs those not in a debt trap was almost the same. This means that people in a debt trap often have additional, unemployed family members living in the same household, which we can assume are most likely grandparents. That is because 66% of those in a debt trap had children and, in most cases, it would be more logical to assume that the household consists of the children, their parents, and their grandparents (as opposed to children living with their parents and uncles/aunts or other relatives). If we build upon this assumption, we can **put forward a hypothesis that individuals living with extended family underestimate the expenses of the elderly in their household** (e.g. medical bills, which were the third most common reason that individuals in a debt trap had taken out a consumer loan).
5. **Approximately 25% of those in a debt trap had taken out a consumer loan to pay for a non-essential need.** This means that these individuals could have avoided a debt trap, if they had been aware of the fact that they were taking on an unjustified financial risk – a loan that they could not pay off on time, to pay for something that was not a necessity or essential need. In cases like these, raising financial awareness is key. This could be done in multiple ways, including government-mandated no-

tices in loan organizations warning customers of the risks associated with consumer loans and discouraging their use for non-essential needs, social media campaigns, TV ads, educational events, etc.

In conclusion, the regulation of the consumer loan market can be justified and would potentially help combat debt traps – which are not uncommon. Furthermore, implementing minimum loan durations for high-risk individuals would most likely be one of the most effective methods of protecting consumers from debt traps, without limiting their access to loans (as much as interest rate caps would), which they often rely on to pay for basic needs.

APPENDIX 1

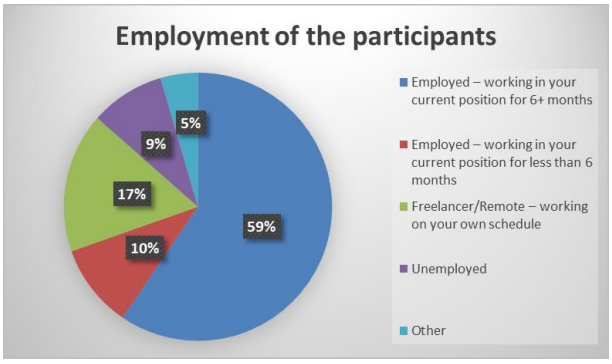

Fig. (2). The employment status of the survey participants.

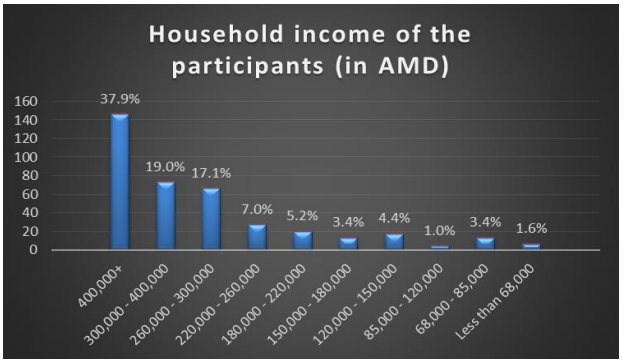

Fig. (3). The net household income of the survey participants in Armenian drams.

APPENDIX 2

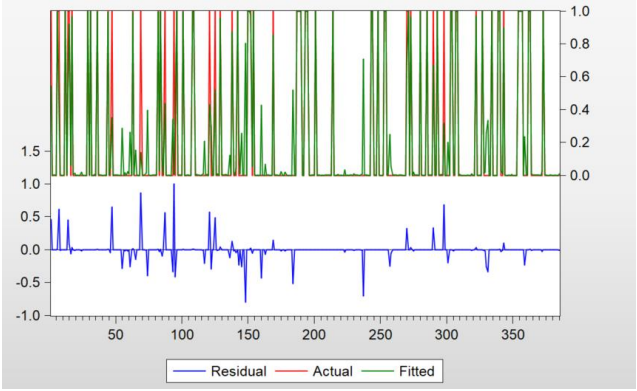

Fig. (4). Actual, fitted and residual graph of the logistic regression analysis in Eviews.

Table 3. Logistic Regression Analysis Output in Eviews.

McFadden R-Squared	0.860222	Mean Dependent var	0.184416
S.D. dependent var	0.388327	S.E. of regression	0.140229
Akaike info criterion	0.175193	Sum squared resid	7.413391
Schwarz criterion	0.257338	Log likelihood	-25.7246
Hannan-Quinn criter.	0.207772	Deviance	51.44924
Restr. deviance	368.078	Restr. log likelihood	-184.039
LR statistic	316.6288	Avg. log likelihood	-0.06682

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