Socio-economic demographic factors, financial literacy, personality traits, and Indian Households' borrowing behaviour: An Empirical Study

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Abstract:
The study examines the determinants of borrowing behavior among rural and semi-urban households in India. It investigates the purpose of borrowing, the differences in borrowing behavior between income groups, and the influence of socio-economic, demographic, financial literacy, and personality factors on household borrowing behavior. The key findings are: 1. Households borrow for both productive (e.g., house construction, business investment) and unproductive (e.g., medical expenses, consumer durables) purposes. 2. There is no significant difference in excessive borrowing and excessive consumption between the two income groups (≤Rs.25,000 and ≥Rs.26,000). 3. Age, family income, and family size do not significantly influence borrowing behavior, but financial literacy and personality factors do. Higher financial literacy and positive personality traits are associated with better borrowing behavior. 4. The study highlights the importance of improving financial literacy and understanding the role of personality traits in shaping household borrowing decisions.

Key Words: *borrowing behavior; socio-economic; demographic; financial literacy; personality traits; Households;*

Introduction

The household sector savings as a percentage of Indian Gross National Domestic Income was 20% in 2018-19 and has come down to 18% in 2022-23. The household sector financial liability raised to Rs.8,07,127 crore in 2021-22 from Rs.2,90,120 crore in 2011-12 which is equivalent to 3 times increase between the two periods. This means the Indian household sector debt has consistently increased, especially in the post-COVID period. The liability is in different forms like loans payable to others (cash loans and kind loans), amounts to be payable to grocers, milkmen, etc, the rise in household borrowings is due to many reasons and a few are: supply of credit by many NBFCs especially in rural areas, preference of borrowers on short and long-term loans, easy access and availability of credits and youth consumer behaviour and availability of credit and youth consumer behaviourtowards loan products.

The empirical and qualitative studies on individual and household borrowing behaviour have highlighted several factors that lead to borrowing behaviour. A few empirical studies noted demographic variables (Rana et al 2023; Sarkar et al 2023; Ali et al 2023; Mishra and Bharadwaj 2022; Carswell et al 2021; Malik et al 2021; Qureshi et al 2020; Rahman et al 2020). Other factors namely financial literacy (Sudindra and Naidu 2018; Sayinzoga et al 2016; Rena et al 2023; Malik et al 2021; Morendo and Mutsonziwa 2017), financial inclusion (Davutyan & Belma Öztürkkal (2016); Joseph et al 2017; Sarkar et al 2023),personality traits (Pinjisakikool 2018; Lubis et al 2022),interest rate and financial institution factors (Yusuf et al 2020), lack of financial participation (Andoko and Martok 2020); lack of collateral and guarantee (Lotto 2019) were also identified as the determinants of borrowing habits of individual and/or households.

The majority of the earlier studies have portrayed the effect of socioeconomic and demographic factors on borrowing behaviour; however, a few studies have empirically examined critical factors like personality factors, financial inclusion, and/or financial literacy, and psychological factors. Further many studies have concentrated on the farmers borrowing behaviour and firms. In this context, this study attempts to study the following objectives:

1) To know the purpose of borrowings by the rural households
2) To examine the differences between income groups and the construct of borrowing behaviour and
3) To study the effects of family income, age, size of the family, personality factors, and financial literacy on borrowing behaviour.

Review of literature

Che-Cheong poon (2008) identified income and gender as the determinants of loan behaviour of households. Andreou (2011) noted that regular (smooth) income, not current income determines the Cyprus household borrowing behaviour. The finding of the study by Sevimet al (2012) exhibited that the households' varied financial literacy results in differences in household borrowing habits. Kariuki et al (2016) found that there is a positive association between borrowing behaviour and employees' indebtedness; however, the borrowing behaviour explained only a 2 percent variation in the debt-income ratio. Elias (2018) identified the factors like household demographic attributes, ownership of livelihood assets, risk aversion behaviour, and institutional constraints and their effect on borrowing behaviour. The author found that education (under the demographic attributes) strongly predicts Ethiopian's borrowing habits.It is also noted that risk aversion attitudes play a pivotal role in accessing credit. Nyhus and Webley (2001) demonstrated that emotional stability, autonomy, and extraversion are robust predictors, while agreeableness, inflexibility, and tough-mindedness explain saving and borrowing habits.The personality traits and their effect on borrowing behaviour by Cude et al (2020) demonstrated that conscientiousness negatively influences borrowing behaviour compared to the other four traits Neuroticism, Extraversion, Openness, and Agreeableness. Yu and Brands (2018) described that a higher level of financial literacy results in low borrowing habits. Bostedtet al (2021) found there is a strong association between strong financial training and borrowing habits.

Größl and Fritsche (2007)identified information asymmetry related to income and repayment patterns influences borrowing behaviour. Mpogole et al (2012) found that families that select maximum loan volume may not borrow more in no-default scenarios and may borrow less in symmetric income instances. Kłopocka (2016) described that the consumer confidence index in terms of unemployment level expectations strongly predicts saving and borrowing habits. Fan and Chatterjee (2017) discussed the relationship between internal sources (financial literacy, perceived financial knowledge, risk tolerance, and educational level) and external sources of information and other factors (age, gender, marital status, income level, and employment) and mortgage loans.

Dhungana and Chapagain (2019) noted that the number of microfinance institutions results in multiple borrowings by the Nepalhouseholds. Mahdzanet al (2023) borrowing behaviour among Malaysian public sector employeesis influenced by demographic and socioeconomic factors, religious beliefs, excessive consumption, materialism, and financial literacy.

Hindun and Reza (2016) addressed and found that the significant factors that affect borrowing behaviour are total borrowing money (previously), and assets owned positively affect borrowing behaviour, whereas, income negatively affects loan behaviour. On the other hand, age, religion, and household number are insignificant in determining the borrowing habits of Indonesian households.

Methodology

The research approach applied in this study is descriptive research to find the relevant determinant of rural household borrowing behaviour. The sample unit of the study is the individual who borrows credit or a loan from any source namely, friends, relatives, banking, and non-banking financial institutions. Since the population of the households who have borrowing habits is unknown, a non-probability random sampling method namely purposive sampling method is applied for the identification and selection of the sample. With the purposive sampling method, the primary data related to socio-economic and demographic data, purpose of borrowing, personality traits, financial literacy and borrowing behaviourare collected through an interview schedule. The scaled items related to the constructs namely personality traits, financial literacy, and borrowing behaviour were adopted from the previous studies. With the interview schedule and personal interview method, the relevant data were collected from 166 rural households in Virudhunagar District. Secondary data was sourced from government reports and academic studies.For data analysis and to answer the identified research objectives, one-way ANOVA and multiple regression analysis used to analyse were used.

Hypotheses

H1: There is no difference between the two income groups in terms of excessive borrowing as well as excessive consumption

H2: Age is negatively affecting the borrowing behaviour

H3: There is a negative influence of Family Income on borrowing behaviour

H4: The size of theFamily positively affects the borrowing behaviour

H5: Financial Literacypositively influences the borrowing behaviour

H6: Personality Factorspositively affect the borrowing behaviour

Profile of the Respondent

Out of 166 respondents, 89.8% are male and 10.2% are female. 25.9% of the respondents belong to less than or equal to 41 years of age and 74.1% of them are in theage group of 42 years and above. The majority of the participants are from rural and semi-urban areas and this is reflected in their educationalqualifications the respondents. The majority of the respondents are married (90.4%) in comparison with unmarried (9.6%). Related tothe nature of employment, 46.4% of the respondents are with their business, 44.6% of them are working as a full-time employee in a private organization and 9% are with the government sector.

On the family income side, 51.8% of the respondents belong to the income bracket of less than or equal to Rs.25,000 and 48.2% are in the family income range of Rs.26,000 and above. About the size of the family, 72.7% of the respondents have informed that the size of the family is less than or equal to four. When the joint family prevails in the rural or semi-urban areas, 27.3% have revealed that their family size is more than five.

On the savings and borrowing behaviour of the respondents noted that 68.1% of the respondents stated that they have saved a few amounts of money during the last year and only 31.9% have not saved. Out of 166 respondents, 56.6% of the respondents informed that they had borrowed money during the last year whereas 43.4% stated that they did not borrow any amount.

Further, it is noted that the average age of the surveyed respondents is 47 years and in terms of average family income (monthly) is Rs.85,045.

The purpose of borrowing by the respondents (Table 2) illustrates 26.5% of the respondents borrowed for purchasing house/plats/house construction. The buying of automobiles and meeting medical expenses accounted for 9% of each of the surveyed sample. For the education purpose of their ward, 7.8% of the respondents have borrowed from the lenders – banking as well as from other sources. 6.6% of the respondents have borrowed to buyjewellery products, 4.8% of the respondents have borrowed for the improvement of business, and a minimum percentage (1.8%) is noticed with the repayment of existing debts.

Table 1: Sample Profile

Variables	**Number of Respondent**	**Percentage**
Gender		
Female	17	10.2
Male	149	89.8
Age		
18 – 25	11	6.6
26 – 45	70	42.2
Above 46	85	51.2
Marital Status		
Married	150	90.4
Unmarried	16	9.6
Education		
Post Graduate	33	19.3
School Education	113	68.1
Diploma and Undergraduate	20	12.0
Employment		
Full time in Government	15	9.0
Full time in Private	74	44.6
Own Business	77	46.4
Family Income		
Less than or equal to Rs.25000	86	51.8
Greater than or equal to Rs.26000	80	48.2
Size of Family		
2	2	1.2
3	23	13.9
4	96	57.8
5	32	19.3
Above 6	13	7.8
Saving Behaviour (One Year)		
No	53	31.9
Yes	113	68.1
Saving Behaviour (One Year)		
No	72	43.4
Yes	94	56.6

Source: Primary Data

Table 2: The purpose of borrowing

	Number of Respondents	Percentage
Buying loan to improve my Business	8	4.8
Buying Loan for Jewellery items	11	6.6
Buying loan for Repayment of existing debts	3	1.8
Buying Two Wheelers/Four Wheelers	15	9.0
For Medical Treatment Expenses (Self/Dependent)	15	9.0
Getting loan for Funding Education purpose	13	7.8
Others purposes	47	28.3
Purchase of Consumer Durable Items	5	3.0
Purchase of House /Plats/House Constructions	44	26.5
Receiving loan to Start up my Own Business	5	3.0
Total	**166**	**100.0**

Source: Primary Data

The difference between the two income groups - Family Income Rs. <=25000 and Family Income Rs.>=26000 about the two major constructs of borrowing behaviour namely (a) excessive borrowing and excessive consumption are presented in Table 3. The calculated F-value of excessive consumption between the two income groups is 0.450 and it is statistically highlighting that there is no difference between the two income groups in terms of excessive borrowing as well as excessive consumption as it is noted from the F values (ρ=0.503), thus hypothesis 1.1 is not accepted. Further, the F-value (F=0.038, ρ=0.846) related to excessive consumption reveals that hypothesis H1 is not accepted. The insignificant one-way ANOVA values are supported by the mean values of the two income groups related to excessive borrowing and excessive consumption.

Table 3: The difference between income groups on the borrowing behaviour

		Sum of Squares	df	Mean Square	F	Sig.
Excessive borrowing	Between Groups	.350	1	.350	.450	.503
	Within Groups	127.451	164	.777		
	Total	127.801	165			
Excessive consumption	Between Groups	.035	1	.035	.038	.846
	Within Groups	153.394	164	.935		
	Total	153.429	165			
			Mean Value		Standard Deviation	
Excessive borrowing	Family Income <=25000 (86)		3.6919		.89315	
	Family Income >=26000 (80)		3.6000		.86890	
Excessive consumption	Family Income <=25000		3.5442		.99866	
	Family Income >=26000		3.5150		.93200	

Source: Primary Data

Table 4: Determinants of Borrowing Behaviour

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Hypothesis*
Intercept	0.653	0.289	2.260	0.025	
Age	0.001	0.001	0.916	0.361	H2 - NS
Family Income	-6.7497E-08	1.07E-07	-0.631	0.529	H3 - NS
Size of Family	-0.012	0.037	-0.328	0.743	H4 - NS
Financial Literacy	0.296	0.080	3.668	0.000	**H5 - S**
Personality Factors	0.511	0.085	5.989	1.33958E-08	**H6 – S**
Multiple R	0.684				
R Square	0.468				
Adjusted R Square	0.451				
Standard Error	0.632				
F - Value	2.611 (0.0267)				

Source: Primary Data

The results of the determinants of householder borrowing behaviour (Table 4) explains that the coefficient value of age (β=0.001, t=0.916) is statistically insignificant, and the hypothesis (H2) is not supported. The effect of family income (monthly) on borrowing behaviour is with a negative coefficient but it is statistically insignificant, and the hypothesis (H3) is not supported. Similarly, the H4 is not supported since the coefficient value of the size of the family (β=-0.012, ρ=-0.328) is statistically insignificant.

On the other hand, the coefficient value of financial literacy (β=0.296, t=3.668) is statistically significant, thus hypothesis (H5) is supported. Further, the personality factors of the household illustrate that the coefficient value of the personality factor (β=0.511, ρ=5.989) is statistically significant, and the hypothesis (H6) is supported.

The value of R-square (R^2 = 0.468) reveals that the 46.8 percent of the variation in borrowing behaviour is explained by the determinants included in the study namely, Age, Family Income, Size of Family, Financial Literacy, and Personality Factors.

Discussion

It is evident from the purpose of borrowing that the borrowers access the credit for both productive and unproductive purposes as well as long-term and short-term expenses. It is noted that one-third of the respondents borrowed money for the improvement of their house as well as buying housing flats or house construction. A few of the respondents have borrowed to educate their ward. The result related to age and borrowing behaviour of the household indicates the insignificant effect of age on borrowing and this finding differs from Fernandez-Lopez (2022) and Lotto (2019) who found there is an effect of age on the borrowing behaviour of the household. Even though less than 90 percent of the sample respondents are with the age of more than 30 years. This might be due to repayment capacity, collateral security issues, guarantee for the repayment, and attitude towards borrowing. The insignificant effect of family income (monthly) on borrowing provides an insight that the family commitment is not facilitating the individual to borrow money from the available sources. It indicates that the borrowing behaviour reduces with an increase in family income; however, the value is statistically insignificant. The finding is not in line with a few findings from Malik et al (2021).

The effect of financial literacy on borrowing behaviour alters the individual borrowing behaviour either positively in terms of accessing a better borrowing facility. The higher level of financial knowledge results in a lower level of excessive borrowing as well as excessive consumption. The finding is in line with Joseph et al (2017). The financial literacy improves the knowledge related to different saving avenues and leads to positive borrowing behaviour especially for productive purposes like house construction (Bostedt et al 2021). The positive effect of personality traits on borrowing behaviour highlighted the intuitive association between personality factors and borrowing behaviour and the finding is in line with the findings of the studies Yazdanparast and Alhenawi (2017) and Lubis et al (2022).

Conclusion

This study attempted to provide insight into a few economic-demographic variables with financial literacy and personality factors affect the borrowing behaviour of rural and semi-urban households. It is noticed that the household borrows money for productive and non-productive expenses as well as short-term and long-term reasons. The finding related to the income group about the borrowing behaviour constructs – excessive borrowing and excessing consumption demonstrates that there is a difference between the income groups on the borrowing behaviour. This reveals that income (family income per month) is not a significant predictor for household borrowing behaviour. Among the antecedents of the borrowing behaviour, the identified economic-demographic variables are not significantly influencing the household borrowing behaviour, and this call for further research in terms of bringing additional socio-economic-demographic variables to predict the borrowing behaviour.

It is noted that financial literacy and personality traits are significant predictors of household borrowing behaviour. The financial knowledge level strongly influences excessive borrowing as well as excessive consumption of the household as highlighted in the purpose of borrowing in terms of purchase of housing plots/construction of a house, educational loans, two or four-wheeler loans, and investing or starting a business. The big-five personality traits of borrowers and their borrowing behaviour demonstrated that positive personality traits strongly affect household borrowings. The future research can be done with the individual personality traits on borrowing behaviour. It is also important to incorporate a few other variables like creditworthiness, the availability of collateral security, and psychological factors for the estimation of the effect on borrowing behaviour.

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