Influence of Demographic Variables on Saving Behaviour of Rural Households – A Study with Reference to Sriperumpudur, Chennai

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Abstract

Saving is really a good habit particularly for the common layman. With the understanding of the above, a study was conducted in Sriperumpudur near Chennai about the saving behaviour of households and the influence of demographics over them. Objectives: The study was conducted by the authors to know the influence of demographic variables on a whole in saving behaviour and specifically, to know the level of influence of demographic factors in savings, to identify the level of saving of the people from their income and to identify the nature of investors. Analysis: The descriptive research design is adopted by the researchers in this study. They have adopted the non-probabilistic convenience sampling method for the collection of sample and the exact sample size of the study is 457. The respondents are approached with the systematic self-administered questionnaire for data collection. The researcher has used the chi-square test and the cluster analysis for the data analysis and further execution of the study. The study was concentrated on Sriperumpudur town near to Chennai only. Findings: The study has major findings that demographic variables like gender, age, marital status, number of earning members in the family, annual income have influenced annual savings. It is also found that there is an association between different heterogeneous groups of households' investment in financial market and their annual savings. But it has been indentified that there is no association between education and annual savings. Hence it is concluded that the demographic variables are playing vital role in influencing the saving behaviour of the individuals. Applications: The study has contributed for the improvements in the area where saving behaviour can be investigated from the dimension of influence of demographic variables. There are different applications that are made to identify the demographical behaviour of the respondents towards their investment choice. This study can also extensively be applied in the case of classification of demographic and psychographic variables. Improvements: Different educational qualifications of the respondents found in this study and they are considered as School Education, UG, PG, and Professional Education. They have different qualifications and aims in the determination of the investment avenues but at the same time the qualification does not influence them to choose the investment avenue. But all other demographic variables have an influence over the choice of investment avenues and change the behaviour of the investors towards the investment process. It is also found that there are certain developments in the behaviour of the individuals regarding their investment choice by their demographics.

Keywords: Demographic Variables, Dynamic and Extrovert Clusters, Mechanical, Saving Behaviour

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1. Introduction

Saving is really a good habit particularly for the common layman. With the understanding of the above, a study was conducted in Sriperumpudur near Chennai about the saving behaviour of households and the influence of demographics over them. This is a place of rural completely until the factories have been established in the recent past. Though, the town is an extraordinary rural place wherein different people have come and occupied the residences for their employment, particularly shifted from very deep rural places in and around the town. Hence this research attempt is opted to have done at the rural place of Sriperumpudur come under Kanchipuram, district near to Chennai. This attempt is also to express how the rural people think on their savings and investments, how their demographi9cs work together to derive whether work out positively or negatively in particular.

It is studied from an article that the saving behaviour of Japanese households and analyses the theories of savings. The results show that owning a house was the key factor in determining the saving behaviour of people in Japan[1].

The rise in wealth and the deregulation have played a vital role and has a direct impact in the decline of personal saving rate in 1980s is the result viewed in the study. It is found that the exogenous short-run fall in saving over a period of time is due to the financial deregulation[2].

The article written by the scholars made an attempt to study the difference between the American and Japanese saving behaviour and identify the characteristics of small households. The results prove that only a considerable portion of large scale households contribute for 76 per cent of savings. The upper income group dominate majority of saving in Japan. So we can draw a conclusion that role of small scale households is insignificant[3].

The study related to the household savings has been made with an attempt to identify the determinants of household saving in Australia. The following are the conclusions drawn from the article. Income and savings play a significant role. Age also plays a dominant role. Results also show that pessimistic individuals save more for future[4].

The study reveals the investment decisions that explore the household decisions on to save or spend towards the aggregate demand. There is a fall in the household savings due to several factors from 1995 to 2007. After 2007, it has got a gradual increase. But it is found that sometimes the lesser of household savings upkeeps the corporate savings more. This may be due to the fall in the interest rates, credit status and a greater decline in macro-economic status in long term[5].

The study of smart phones buying and the expectations of the senior citizens revealed that how their intentions work out towards the purchase overcoming several factors. The factors found that affect the senior citizens in purchasing decision of smart phones. The youth preferred mostly rather the elders due to the features. Even then the industry targets the senior citizens segment to keep them purchasing the smart phones beyond their household expenses[6].

It is determined from the study of the author that how the natural disasters affect the risk-taking behaviour and also how it exploits the geographic variation. They had used the risk games by using real money for which selected the individuals in random basis in Indonesia. They found that how they get risk aversion due to the flood and earth quake than others residing in other places. The impact is sustained for several years and lost their income. It is also found that it has not made any change in the risk preferences. The disaster suggests that more risk aversion. It exhibits that their disinterest to insurance. Due to this the respondents does not want to take much risk, rather the livelihoods is implied and discard the economic development[7].

The average urban household saving rate is increased by 7 per cent of points in China, to about one quarter of disposable income. This is happened in 1995 to 2005. This is a point of the author of this paper with a question that why the households postpone their consumption even they had a rapid growth in their income. There is a virtual absence of consumption smoothing over the life cycle while the cohort is traced over a time for this purpose. Both the younger and elder is having high saving rates, though the saving rates have increased across all demographic groups. But the age profile of savings has an unusual pattern in recent years. These are all only due to the rising private burden of expenditures on housing, education, and health care. It may also be found out those effects and precautionary motives that have been augmented by financial development lesser as they reciprocally reflected in the restriction on borrowing against the future income and low returns on financial assets[8].

The study reveals the interdependent factors of household savings. 17585 Australian households are tested that enables to link several household characteristics for saving behaviour. But the researcher may not be able to find

out all are available. The profit estimation method shows that the current incomes are most determinants in the saving behaviour recognition off the respondents. The final result says that the demographics and households level of economic optimisation played a key role in the purchasing behaviour[9].

The major observations of this study are derived from the estimation of the household saving functions based on the cross-section data. This is also contained the fruitful information. It is also attempted to test various theories of the savings behaviour that are empirically conveys the theories particularly, the life-cycle saving hypothesis. These data contain numerous variables that are useful but not used earlier in any of the study. But the particular attention is sticky on to the influence of those household characteristics on saving behaviour[10].

This study tests a hypothesis that if information access to foreign investors expands after the adoption of eXtensible Business Reporting Language (XBRL) and the associated information is incorporated into their trading behaviours, then their trading turnover ratio would significantly increase. As expected, it is to find that the trading turnover ratio of foreign investors significantly increases after XBRL adoption compared to before XBRL adoption. Furthermore, this study examines the difference in foreign investors' trading behaviour between small and large firms. It is found that the increase in the foreign investor's turnover ratio in small firms is more pronounced and economically significant than that of large firms. Overall, this study presents evidence that XBRL adoption affects the trading behaviours of foreign investors[11].

From the reviews it is clearly understood that the house hold saving behaviour is greatly influenced by the factors like income and age. It is also found that the factors like interest rates, age, family size, occupation and direct taxation have some effect on savings. It is also found that financial deregulation has considerably resulted in increase in savings.

Table 1. Gender of the respondents and annual savings

Gender of the Respondents	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	above 5 lacs	
Male	97	120	69	36	322
Female	57	47	23	8	135
Total	154	167	92	44	457

Source: Primary data.

H0: There is no association between Gender and annual savings

H1: There is an association between Gender and annual savings

2. Research Methodology

The descriptive research design is adopted by the researchers in this study. They have adopted the non-probabilistic convenience sampling method for the collection of sample and the exact sample size of the study is 457. Among the 625 questionnaires, only 514 respondents returned the filled in questionnaire, out of this only 457 were found usable. Hence, the exact sample of the study is 457.

The data is collected using the well administered questionnaire. The researcher has made this study in a short span of time of two months in November and December of 2015. The study was concentrated on Sriperumpudur town near to Chennai. The researcher has used the statistical and analytical tools respectively as Likert's Scale, Multiple Choice Single Responses, Dichotomous Scale and Cluster analysis and Chi-square analysis for the execution of the study.

3. Results and Discussion

The data collected are analysed systematically to infer the results related to the objectives of the study. At the first step it is assumed that there is no significant difference between demographics and saving behaviour of households. In this view the analysis is made up.

4. Hypothesis

There is no significant difference between demographics and saving behaviour of households.

5. Results and Discussions on Demographics and saving

behaviour of households:

The Table 1 shows that the male respondents are higher than the female respondents in the study and in particular 120 male respondents are doing their savings within the limit of Rs.1 to 3 lakhs of rupees annually.

Table 2. Chi-Square test

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.927[a]	3	.048
Likelihood Ratio	8.054	3	.045
Linear-by-Linear Association	7.518	1	.006
N of Valid Cases	457		

The Table 2 depicts that the chi-square values of 7.927 and P value of 0.048 at 5% level of significance, the null hypothesis is rejected and concluded that there is an association between gender and annual savings.

Table 3. Marital status of the households and annual savings

Marital Status of the Respondents	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	above 5 lacs	
Married	101	126	84	38	349
Single	53	41	8	6	108
Total	154	167	92	44	457

Source: Primary data.
H0: There is no association between Marital Status and annual savings
H1: There is an association between Marital Status and annual savings

The Table 3 exhibits that the maximum of 349 respondents of the study have got married and 126 married respondents are interested in their savings with a limit of Rs.1 to 3 lakhs annually.

Table 4. Chi-square test

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.809[a]	3	.000
Likelihood Ratio	25.938	3	.000
Linear-by-Linear Association	20.146	1	.000
N of Valid Cases	457		

The Table 4 encompasses the chi-square values of 23.809 and P value of 0.00 at 5% level of significance, the null hypothesis is rejected and concluded that there is an association between marital status and annual savings.

Table 5. No. of earning members of the family and annual savings

No. of earning members in the family	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	above 5 lacs	
1 Member	56	32	21	3	112
2 Members	90	111	60	22	283
3 Members	7	17	8	12	44
4 Members	1	7	3	7	18
Total	154	167	92	44	457

Source: Primary data.
H0: There is no association between No. of earnings members and annual savings
H1: There is an association between No. of earnings members and annual savings

The Table 5 exhibits the no. of earning members of the family very much higher as 283 wherein two members are earning and their annual savings is really between Rs.1 and 3 lakhs for 111 respondents.

The Table 6 expose that the chi-square values of 57.402 and P value of 0.00 at 5% level of significance, the null hypothesis is rejected and concluded that there is an association between number of earning members in the family and annual savings.

Table 6. Chi-square tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.402[a]	9	.000
Likelihood Ratio	50.297	9	.000
Linear-by-Linear Association	37.045	1	.000
N of Valid Cases	457		

The Table 7 delivers the age of the respondents and their annual savings amongst which 182 respondents are at the age of 26-35 years and there is a high proportion of 94 respondents of the total with Rs.1-3 lakhs of annual savings.

Table 7. Age of the respondents and annual savings

Age of the Respondents	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	Above 5 lacs	
Below 25	67	31	4	3	105
26-35	61	94	25	2	182
36-50	21	32	48	18	119
51 & Above	5	10	15	21	51
Total	154	167	92	44	457

Source: Primary data.

H0: There is no association between age and annual savings

H1: There is an association between age and annual savings

The above Table 8 shows that the chi-square values of 1.849E2 and P value of 0.00 at 5% level of significance. Hence, the null hypothesis is accepted. Thus, it is found that there is an association exist in the age and the annual savings of the respondents.

The Table 9 exhibits the total of 222 respondents as high in proportion to the total respondents as their earnings of Rs.3 lakhs and above; and the annual savings of 101 respondents is Rs.1–3 lakhs, whose annual income is between Rs.2 and 3 lacs.

Table 8. Chi-square tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.849E2[a]	9	.000
Likelihood Ratio	172.107	9	.000
Linear-by-Linear Association	128.591	1	.000
N of Valid Cases	457		

Table 9. Annual income of the households and annual savings

Annual Income of the respondents	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	Above 5 lacs	
Below 1 Lac	3	1	0	0	4
1-2 Lacs	38	3	0	0	41
2-3 Lacs	85	101	3	1	190
3 Lac & above	28	62	89	43	222
Total	154	167	92	44	457

Source: Primary data.

H0: There is no association between income and annual savings

H1: There is an association between income and annual savings

The Table 10 explores that the chi-square values of 2.371E2 and P value of 0.00 at 5% level of significance and thus the alternative hypothesis is accepted. Hence it is concluded that there is an association found in the annual income and the annual savings of the respondents.

Table 10. Chi-square tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.371E2[a]	9	.000
Likelihood Ratio	268.436	9	.000
Linear-by-Linear Association	166.676	1	.000
N of Valid Cases	457		

The Table 11 depicts that 191 respondents of the total are graduated and 172 respondents are post graduated. Among the under graduated respondents, 67 respondents are with the annual savings limit of Rs.1–3 lakhs.

Table 11. Educational qualifications of the households and annual savings

Educational Qualifications	Annual Savings				Total
	Below 1 lac	1-3 lacs	3-5 lacs	Above 5 lacs	
School Education	9	3	3	1	16
UG	73	67	32	19	191
PG	54	67	36	15	172
Professional Education	18	30	21	9	78
Total	154	167	92	44	457

Source: Primary data.

H0: There is no association between education and annual savings

H1: There is an association between education and annual savings

The Table 12 depicts that the chi-square values of 11.898 and P value of 0.219 at 5% level of significance and due to that the null hypothesis is accepted. Hence, it is found that there is no association between the education and the annual savings.

Table 12. Chi-square tests

Table 14. Awareness on annual savings and households in financial market (clusters)

H0: There is no association between different heterogeneous groups and annual savings

H1: There is an association between different heterogeneous groups and annual savings

Cluster Number of Cases		Annual Savings				Total
		Below 1 lac	1-3 lacs	3-5 lacs	Above 5 lacs	
1	Extrovert Households	46 (32.4%)	53 (37.3%)	24 (16.9%)	19 (13.4%)	142 (100.0%)
2	Mechanical households	31 (30.1%)	35 (34.0%)	24 (23.3%)	13 (12.6%)	103 (100.0%)
3	Dynamic households	77 (36.3%)	79 (37.3%)	44 (20.8%)	12 (5.7%)	212 (100.0%)
Total		154 (33.7%)	167 (36.5%)	92 (20.1%)	44 (9.6%)	457 (100.0%)

Source: Primary data.

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.898[a]	9	.219
Likelihood Ratio	11.980	9	.214
Linear-by-Linear Association	6.121	1	.013
N of Valid Cases	457		

6. Cluster Analysis

Cluster analysis computes the mean values of the scores marked by the customers in Likerts Five Point Scale. It classifies the household with homogeneous views and dumped them in a heterogeneous cluster. These clusters exhibit significant difference among them and act as entirely uncorrelated objects with certain amount of frequency percentage of households.

Table 13. Number of cases in each cluster

Cluster	1	142	31.07%
	2	103	22.53%
	3	212	46.38%
Valid		457	100.00

Source: Primary data.

The Table 13 shows the status of the cluster and it is identified that the first cluster consisting of 142 (31.07%) of the households are strong in impact of financial liberalization and style of households. Therefore, this cluster is known as **extrovert households.**

The second group consisting of 103 (22.53%) of households in financial market is moderate in knowledge of households on financial liberalization. Therefore, this group of households is known as **mechanical households**.

The third cluster comprising of 212 (46.38%) of households are stronger in all the five factors of house hold investments. Therefore, this group is called as **Dynamic households.**

The cluster analysis revealed that three types of households are prevailing in the financial markets. Some of them are well versed about the financial market investments. A significant group of households are not much aware of the various investments due to lack of information's about new investments and their level of risk.

7. Association between Annual Savings and Clusters of Various Households in Financial Market

The non-parametric chi-square analysis is applied between the number of cluster of households' economic behaviour and their number of years of experience in investments.

The Table 14 brings to light that 37.3 per cent of extrovert households have annual savings of Rs.1–3 lakhs. Similarly, 34 per cent of mechanical households also have same annual income. It is also found 37.3 per cent of dynamic households are found to have annual savings of Rs.1–3 lakhs. The chi-square table is also prepared and

indicated the association between cluster of household and their annual savings.

The Table 15 depicts that the chi-square values of 8.932 and P value of 0.177. Therefore, there is an association between different heterogeneous groups of households' investment in financial market and their annual savings.

Table 15. Annual savings and various households in financial market (clusters)-chi-square test

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.932(a)	6	.177
Likelihood Ratio	9.253	6	.160
Linear-by-Linear Association	2.653	1	.103
N of Valid Cases	457		

8. Conclusion

When a person makes his savings and subsequently invests in the avenues, generally there is an opinion that demographics have their influence in it. There are certain empirical studies also have the same view. In this study also most of the demographic characters like gender, marital status, income, age etc and except education have the influence on the saving decisions of the individuals. Hence though the decision of saving is independent in nature it has been influenced by the demographics.

9. References

1. Bayoumi T. Financial deregulation and household saving. Economic Journal. 1993 Nov; 103(421):1432–43.
2. Berry S, Williams R. Household saving, Bank of England Quarterly Bulletin, 3rd Quarter. 2009; 49(3).
3. Campbell DW, et al. Household savings in Japan. Japanese Economic Review. 2001 Jun.
4. Challe E, Ragot X. Precautionary saving over the business cycle. The Economic Journal. 2015 Jan 23. DOI: 10.1111/ecoj.12189.
5. Jamshidinavid B, Chavoshani M, Amiri S. The impact of demographic and psychological characteristics on the investment prejudices in Tehran stock. European Journal of Business and Social Sciences. 2012 Aug; 1(5):41–53.
6. Sujata J, Roy A, Thakkar D, Banik A, Arora GD, Parashar P. Conceptual paper on factors affecting the attitude of senior citizens towards purchase of smartphones. Indian Journal of Science and Technology. 2015 Feb; 8(S4):83–9. DOI: 10.17485/ijst/2015/v8iS4/62318.
7. Cameron L, Shah M. Risk-taking behavior in the wake of natural disasters. Journal of Human Resources. 2015; 50(2):484–515.
8. Chamon MD, Prasad ES. Why are saving rates of urban households in China rising? American Economic Journal: Macroeconomics. 2010 Jan; 2(1):93–130.
9. Harris MN, Loundes J, Webster E. Determinants of household saving in Australia. Economic Record. 2002 Jun; 78(241): 207–23. DOI: 10.1111/1475-4932.00024.
10. Siruga T, Tachibanaki T. The effect of household characteristics on saving behaviour and the theory of savings in Japan. Journal of Empirical Economics. 1991 Mar, 16(3):351–62.
11. Choi YM. The effect of XBRL adoption on trading behaviors of foreign investors: Evidence from Korea. Indian Journal of Science and Technology. 2015 Sep; 8(21). DOI: 10.17485/ijst/2015/v8i21/78378.