DETERMINANTS OF PRECAUTIONARY SAVING MOTIVE

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ABSTRACT
Household savings play a pivotal role in fostering the rate of economic growth of developing countries. Various saving motives influence household savings. Household saving motives and their components has remained an under researched topic and requires due attention. Saving behavior is subjective in nature and this might be a reason why innumerable studies are done on quantum of household savings and its determinants but there is a paucity of studies relating to saving motives of the individuals. A study of possible determinants of household saving motives and their sub motives can go a long way in better understanding of saving behavior. 'Saving motives' are the people's reasons to save which differ from individual to individual based on various situations they are in. They are broadly classified in to Life-cycle, Precautionary and Bequest Motives. This article proposes to empirically investigate the effect of demographic, social and economic factors on the Precautionary motive which is identified as the most important motive at household level. The study is based on primary data and Ordered probit analysis is used to find out influence of various factors. The study considers four broad components of Precautionary motive for analysis. Demographic factors like age, family size and dependency ratio are identified as the main factors influencing some components of precautionary motive. Savings to help dependents in financial difficulties and to safeguard oneself in case of loss of job or business is influenced by age, whereas family size and dependency ratio determine the saving to face risk of sickness and for one's old age support respectively. Profession of the individual influences savings for sickness and for unforeseen circumstances like accidents. Similarly, employment status of the individuals is found to influence savings to safeguard oneself in case of loss of job or business.

Keywords: Precautionary motive, Demographic, Social and Economic factors, Probit analysis

I. INTRODUCTION

The precautionary motive for saving has been recognized by economists since the time of John Maynard Keynes. Moreover, Alfred Marshall stressed the importance of saving to secure against future risks.

Individuals save out of their current income to smooth the expected consumption stream over time. The saving for precautionary motive is realized through its impact on current consumption, as individual differ their current consumption to be able to maintain the utility level of consumption in the future if income decreases. Examples of saving for precautionary motive include saving to face health risk, business risk, unavoidable expenditures and risk of income fluctuation, saving as a contingency fund for retirement, etc.

The purpose of this study is to empirically investigate the extent to which economic, social and demographic factors explain the individual differences in household saving motives with special reference to precautionary motive. This study takes in to consideration Demographic factors like age, gender, locality, family size and dependency ratio, Social factors like profession and education and Economic factors like income, wealth and employment status for analysis.

II. THEORETICAL FRAMEWORK

Existence of precautionary motive was emphasized by Ando and Modigliani (1963) and Bewely (1977) in their seminal work on permanent income hypothesis. Weil (1993) proposed a simplistic multi-period model to analyze determinants of precautionary saving. Analytical findings confirmed the presence of a precautionary saving motive, which is positively correlated with income risk. More extensive research has been conducted in this area and concrete evidence confirmed the presence of precautionary motive for saving building with in the permanent income hypothesis framework.

Due to the lack of subjective data on saving motives, it is often assumed that the strength of the precautionary saving motive is higher the higher the income variability (Carroll, 1997; Lusardi, 1993) or expenditure variability (Dynan, 1993) of the household, with the former being the most common assumption.

The empirical literature shows mixed evidence on the significance of the precautionary motive for saving. Numerical simulations suggested the possibility of precautionary saving ranging from 20% to 60 % of all savings. Dynan (1993) found very little support for the precautionary motive using expenditure variability as a measure of uncertainty.

The buffer–stock model of saving is one example of how a precautionary saving motive can be incorporated in the life-cycle hypothesis framework. Carroll (1997) and Carroll and Samwick (1997) found empirical support for the buffer- stock model. Research by Gourinchas and Parker (2002) supported the finding that it is young people who engage in buffer-stock saving, while older people (older than 42 years) accumulate liquid assets for retirement in line with the standard Life-cycle hypothesis. They interpreted the findings as being a result of the life-cycle profile of expected income, which causes saving motives to change over the life-cycle. Samwick (1998) reported findings suggesting that households save only to maintain a buffer stock until retirement is only a few years away. Arthur B. Kennickell and Annamaria Lusardi (2005) find that a precautionary saving motive exists and affects virtually every type of household. Even though this motive does not give rise to large amounts of wealth for young and middle age households, it is particularly important for two groups: older households and business owners. Every individual faces uncertainty in various forms throughout his/her life- cycle. By nature human beings like to foresee future and plan accordingly. Uncertainty faced in life can be of various types; viz, uncertain income and expenditure in future, risk of sickness or accident, life longevity, etc. In the current study the following aspects of Precautionary motive are taken in to consideration.

Sickness and Accident: There are some certainties in life, for example every person who is born will die one day but the time of death is unknown. Similarly it is almost certain that sickness is inevitable but the time of sickness is uncertain. So in order to secure oneself to face such uncertainties individual makes arrangement through saving by preparing a sort of invisible contingency fund. Similarly there are some unforeseen circumstances like accident of oneself or family member. The saving done keeping in mind all these is one important aspect of precautionary motive.

Saving for Old age: Individuals earn income in his/her working age and there is continuous supply of money but after retirement this supply decreases or comes to an end. Hence the provision is made in order to take care of oneself in case of sickness, regular checkups, etc, in old age in the form of saving through-out the working period. Such a saving is also an important aspect of precautionary motive.

Uncertain income: This type of uncertainty is mainly faced by the individuals, who do not have regular income, for example seasonally employed people and entrepreneurs or business people. At

the same time job certainty is not available in all the professions. So saving done in order to safeguard oneself from these ups and downs of income earning capacity is the third aspect of precautionary motive.

Uncertain expenditure: With ever increasing inflation it is difficult to foresee the exact increase in future expenditure. People may like to maintain a particular lifestyle so the make provision for ever increasing future expenditure. The saving done for this purpose is the fourth aspect of the precautionary motive.

III. METHODOLOGICAL FRAMEWORK

This study is entirely based on the primary data collected by the researcher using survey method through questionnaires by personal visits to the households. The sample for the main study consisted of 300 households in Goa (India). The data is collected from one respondent from each household irrespective of gender, age and education level to give a fair amount of randomness. 'Test -Retest' method has been used to test the validity and reliability since the questionnaire includes the scale to gauge respondent's preference towards various saving motives.

Multistage random sampling technique has been used to select the sample. The study calculated the wealth index using principle component analysis based on the method used in 'demographic and health surveys' worldwide. Two components of wealth were extracted by this method which are used for analysis. The first component includes the type of house the respondents stay in and the number and type of vehicles owned. This wealth can be called as 'Economic Status wealth' since these two things depict the economic status of the people and is called 'Wealth 1' in the study and second component takes in to consideration agricultural land ownership, Plot/s owned besides their residence and its location. This component is considered as 'Asset wealth' since this type of wealth is an asset and is referred to as 'Wealth 2' in the study.

Calculation of dependency ratio is done taking in to consideration number of earning and non earning members in a household. Since the data collected in the present study is not totally quantitative in nature, mainly the dependent variable in this study i.e. precautionary saving motive with its components, the data collected is in the form of a five point rating scale and that too by assigning numerical values that have a natural ordering. Ordered probit analysis is used to find out influence of various factors on the components of precautionary saving motive.

The Ordered Probit model used in this study is in the following form:

$$yi^* = \beta 0 + x1i\,\beta 1 + x2i\,\beta 2 \ldots. xki\,\beta k + \varepsilon i$$

yi*=latent variable using the scale 1, 2….5, one being the least important and the 5 being most important. X1i, X2i, Xki are the independent variables as the factors determining precautionary motives. Three separate ordered probit models are estimated for categories of independent variables, viz, demographic factors, social factors and economic factors. For demographic factors X1i, X2i, Xki, are age, gender, locality, family size, etc. For social factors X1i, X2i, are education and profession. For Economic factors X1i, X2i, Xki, are income, employment and wealth.

IV. RESULT AND DISCUSSION

Analysis of the 'Precautionary motive' with respect to its components

This study finds that Precautionary motive is considered as one of the most important motive of household saving as compared to bequest and life-cycle motive.

A closer look at precautionary motive in this study shows that saving for sickness and accident is the most preferred component of precautionary motive by the respondents.

Table 1. Probit Analysis of Demographic, Social and Economic Factors and Components of Precautionary Motive

Components	Age	family size	Dependency ratio	Profession	Income	Employment
Financial self- reliance in case of difficulties.	.1088	.0555	-.0552	-.0905	.0984	-.0181
	(2.002**)	(.4979)	(-.8403)	(-.5835)	(1.822*)	(-.3782)
Ever increasing future expenses.	.0103	.0433	.0144	-.0534	-.0127	-.0048
	(.1970)	(.3938)	(.2192)	(-.3504)	(-.2417)	(-.1039)
Risk of Sickness	.1554	.2233	-.0886	.3127	-.0563	.0469
	(2.857***)	(1.915*)	(-1.328)	(2.032**)	(-1.052)	(.9752)
Unforeseen expenses like accidents.	.0837	.1904	-.0216	.2912	-.0194	.0072
	(1.552)	(1.659*)	(-.3200)	(1.869*)	(-.3593)	(.1503)
For one's old age support.	.0998	.1469	-.1170	.2458	-.0403	.0613
	(1.841*)	(1.309)	(-1.772*)	(1.598)	(-.7553)	(1.262)
Risk of possible decline in the future income.	-.0243	-.0278	.0079	.0001	.0249	.0126
	(-.4733)	(-.2608)	(-.1249)	(.0010)	(.4848)	(.2735)
Help dependents in financial difficulties.	-.1102	.0457	.06177	.0766	-.0123	-.0070
	(-2.138**)	(.4264)	(.9692)	(.5185)	(-.2408)	(-.1549)
Ever increasing prices of daily goods.	.0162	-.1056	.0589	.1369	.0078	.0417
	(.3146)	(-.9821)	(.9202)	(.9195)	(-.1515)	(.9041)
Overall economic recession.	-.0597	-.0079	-.0645	.1861	-.0201	.0202
	(-1.164)	(-.0742)	(-1.019)	(1.256)	(-.3945)	(.4443)
Loss of job or business.	-.1890	.1062	.0318	-.0519	-.0401	-.1869
	(-3.569***)	(.9530)	(.4881)	(.3449)	(-.7606)	(-3.965***)

*** Significant at 0.01 level. ** Significant at 0.05 level. *Significant at 0.1 level.
Figures in the brackets indicate z values.

The study finds that saving for financial self reliance in case of difficulties, to make provision in order to face the risk of Sickness, for one's old age support, to help dependents in financial difficulties and to prepare oneself to face emergency like loss of job or business are determined by age of the individuals. Family size is found to influence motive to save to face risk of sickness and also for unforeseen expenses like accidents. Profession of an individual influences saving to make provision to face risk of sickness and accident. Income level is found to influence saving for financial self-reliance in case of difficulties and employment status determines the saving in case of Loss of job or business.

The study also finds that dependency ratio determines saving for one's old age support

Gender, locality, education level and both the aspects of wealth do not show any influence over any of the components of precautionary motive.

V. CONCLUSION

The study identifies certain factors influencing various components of precautionary motive. It concludes that saving for sickness and accident becomes the most important component of precautionary motive.

Demographic factors like age, family size and dependency ratio are identified as the main factors influencing some components of precautionary motive. Saving to help dependents in financial difficulties and saving to safeguard oneself in case of loss of job or business , risk of sickness , old age is influenced by age, where as family size and dependency ratio determine the saving to face risk of sickness and for one's old age support respectively. Profession of an individual influences saving to make provision to face risk of sickness and accident. Income level is found to determine savings for financial self- reliance in case of difficulties and employment status determines the saving to safeguard oneself in case of Loss of job or business.

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