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## **Chapter II**

### **Theoretical Background and Review of literature**

#### **2.1 Introduction:**

The present chapter throws light on the literature works both theoretical and empirical on saving and investment behavior and factors determining it. The empirical studies related to saving and investment in India and abroad are helpful to get a better insight into the study area. For a systematic understanding of the various aspects related to the research area, the chapter has been divided into three sections.

The first part focuses on the various theories on saving and investment which gives a basic idea about the concepts used by eminent economists.

The second part examines the empirical studies related to trends and determinants of saving. The third part deals with studies related to behavior and preference pattern of savers and investors.

#### **2.2 Theoretical literature on saving and investment**

There are many notable theoretical literature related to saving and investment. The classical addressed the concept of saving as synonymous with the concept of capital accumulation. This has culminated in Mill's (1871) "fundamental propositions respecting capital". Investment and development processes are led by savings. The prior – savings approach focuses on policies to raise the level of voluntary and involuntary saving as a prerequisite for investment. The dominant neo-classical view as enunciated by Fisher (1930) considered saving in an inter-temporal utility maximization exercise of the households, involving a choice between present and future consumption. The emphasis given to current and future consumption determines the volume of savings. The neoclassical theory state that rate of investment is determined by the speed with which firms adjust their capital stocks towards the desired level, the wider the gap between existing stock of capital per period and actual stock of capital higher will be the rate of investment. Later the neo classical theory of over consumption or under saving was taken as the principle cause of great depression. Subsequent to this Keynes challenged the traditional economics and Keynesian approach related consumption and saving solely to current income. Later works emphasized the

importance of other related factors that influenced the level of saving and investment in the economy.

### **2.2.1 Absolute Income Hypothesis**

Keynesian absolute income hypothesis is based on psychological law which states that “men are disposed, as a rule and on average, to increase their consumption as their income increases but not as much as the increase in their income” (Keynes, 1936). The theory presents positive relationship between income and marginal propensity to consume. As income increases, a part of it is used for consumption and the remaining is saved. He states that consumption and savings are positive functions of the absolute levels of current income and savings increase with an increase in current income. The Marginal propensity to consume is less than one which indicates that savings does not proportionately increase with increase in income. Savings is carried out for meeting future needs and it becomes productive when it is properly pooled to investment. Investment decisions are taken by comparing the marginal efficiency of capital and the real rate of interest.

### **2.2.2 Relative Income Hypothesis**

According to relative income hypothesis proposed by Duesenberry (1949) “a household’s consumption expenditure is a function of the relative income of the households”. The households always try to maintain a standard of living in par with their neighbours and a decline in income reduces savings but consumption standards are maintained without a fall in standard of living. The main reason is that the short run Average Propensity to Consume is high while the short run Average Propensity to save is low. Based on strong psychological and sociological reasons, an individual’s preferences are interdependent with the preferences of other individuals in the community as such the aggregate saving ratio was independent of the absolute level of aggregate income.

### **2.2.3 Permanent Income Hypothesis**

The permanent income hypothesis is based on Kuznets empirical works on saving and consumption ratios for the USA. It explains that the total wealth of a household encompasses the present as well as the future value of income flows. Friedman distinguishes sharply between income as measured and the income to which the consumer adapts their behavior,

which he called permanent income. Permanent income is the stock of wealth multiplied by the annual return on wealth. The difference between measured income and permanent income is termed as transitory income and it exhibits changes due to temporary and unanticipated changes in current income. Permanent consumption is carried out on the basis of permanent income and the relationship between the two variables is proportional. The factors underlying MPC and APC is assumed to depend on the household's saving decisions, namely, household preferences, the nature of uncertainties facing the household, the rate of interest and the ratio of human to non-human wealth. The higher the ratio of human to nonhuman wealth the greater is the incentive to save and acquire non-human wealth. Thus positive changes in transitory income are saved and not spend for consumption (Friedman, 1957).

#### **2.2.4 Life Cycle Hypothesis**

The life-cycle hypothesis developed by Franco Modigliani and Richard Brumberg describes the spending and saving habits of people over the course of a lifetime. People plan their spending, throughout their lifetimes by factoring in their future income. An individual's spending overtime thus shows a hump-shaped graphical pattern in which wealth accumulation is low during youth and old age and high during middle age. The theory assumes that households save to meet the needs of the future especially in their old age where income flow is less and there are dissavings. The major determinants of the saving rate are the rate of growth of per capita income, the age structure of the population, the real interest rate, wealth, credit availability and social security.

#### **2.2.5 Theories of investment**

John.M.Keynes and Irving Fisher both argued that investments are made until the present value of expected future revenues, at the margin, is equal to the opportunity cost of capital. Investment decisions are taken by comparing the marginal efficiency of capital and the real rate of interest. Hayek (1941) and Fisher (1930) regarded investment as an optimal adjustment path towards an optimal capital stock. Modern investment theories have emerged by incorporating various aspects of Keynes and Fisher. Jorgenson (1963) has developed a neoclassical theory of investment. According to this theory, rate of investment is determined by the speed with which firms adjust their capital stocks towards the desired level. Maximizing profits in each period will yield an optimal capital stock. The neoclassical theory, accelerator principle and Tobin's Q theory of investment, assumes optimization

behavior on behalf of the investor. The flexible accelerator theory removes one of the major weaknesses of the simple acceleration principle and states that there are lags in the adjustment process between the level of output and the level of capital stock. This theory is also known as the capital stock adjustment model and has been developed in various forms by Chenery, Goodwin, Koyck and Junankar. Duesenberry's Accelerator Theory of Investment explains that an increase in income will have a smaller immediate effect on expenditure than would occur in a simple multiplier-accelerator model. The Profits theory of investment developed by Edward Shapiro regards profits vary directly with the income level. The interest rate and the level of profits, in turn, determine the optimal capital stock. James Tobin has proposed the q theory of investment which links a firm's investment decisions to fluctuations in the stock market. When a firm finances its capital for investment by issuing shares in the stock market, its share prices reflect the investment decisions of the firm.

The prospect theory states that the investor evaluates the risk and return from an investment by giving more thrust on the amount invested. As per the regret theory the investors avoid making any decision that generates loss and usually adopts a safer path by following the market.

Apart from the above theoretical literature psychological and sociological theories of savings assume that changes in the information received, environment, other psychological factors like consumer's expectations and sentiments, affects the response and decision of the household. Behavioral Theories focused on household's behavioral incentives and constraints to savings. Household's savings are influenced by the rules as well as opportunities faced internally and externally. Thus along with economic variables various sociological and behavioral factors determines households saving and investment.

### **2.3 Empirical studies related to trends and determinants of saving**

Hua and Erreygers (2019) analyse the determinants of the saving behaviour of Vietnamese households, the heterogeneity of household saving propensities and the effects of household characteristic on saving rate by using regression approach. The marginal propensity to save of households at low quartiles is higher than those at high quartiles. The gender of the household head does not seem to be a crucial factor in the saving behaviour of

urban households but ethnicity is less crucial for urban areas. Empirical evidence revealed that children and elderly members have a positive effect on household saving rates.

Nathridee and Piyarat (2015) examine the major determinants of the forms of saving in Thailand. The saving behavior showed that household tended to move along with risk averse financial instruments like bank deposits, insurance policies etc. Also among the Physical assets, Gold has an upper hand over other instruments. The preference towards financial assets such as bonds, mutual funds, corporate bonds, stocks etc was less. The main purpose of saving was for post-retirement spending.

Amudha and Varathan (2015) assess the main determinants of the saving pattern among rural population. The changes in lifestyles and consumption patterns have brought changes in household savings. The household savings is not only dependent on income but also on the consumption pattern of the individuals. As income moves in the positive direction savings are encouraged and dis-savings occur with the old generation as due to less or no income as postulated in the life cycle hypothesis.

Samantaraya and Patra (2014) attempt to review and empirically reassess the role of various factors influencing domestic savings under the post reform period in India. They have analyzed the trends in saving, investment and growth of Indian economy during the period 1950-51 to 2010-11. The study employed ARDL approach for this purpose and the results explicitly showed that that household saving in India is directly influenced by variables such as GDP, interest rate, and inflation.

Mehta (2013) focuses on the trends and pattern of household savings in Indian economy during the period 1950-2010. An auto regressive model is employed to study the short term and long term impact of saving behavior and saving potentials of the household sector. The results of the study show that the Marginal Propensity to save is higher in the post reform period and the long run Marginal Propensity to save is higher than the short run MPS. The income elasticity of savings has shown a mild decline in the post reform period.

Lewi and Messy (2012) examine the barriers to saving, including limited access to financial markets, complexity of financial products and information asymmetries. In many countries especially under developed and developing economies people have low knowledge

and understanding of saving and investment concepts. There are behavioral and cultural factors which may limit people's propensity to save. Policy makers must develop financial and awareness incentives, financial education as well as behavioral techniques to encourage people into sound saving and investment decisions.

Tang and CH'ng (2012) study the saving growth nexus for the five ASEAN founding economies by taking the annual data for the period 1970-2010. The data has been tested empirically-via a multivariate framework and the Bartlett-corrected trace test for co integration. The results empirically suggested that the major determinants of saving and the variable saving are co integrated among the five countries taken for the analysis. The causality direction between saving and economic growth has been ascertained by the bootstrapping approaches and the study concluded that, saving is a prominent source of economic growth and development among the five countries taken under investigation.

Issahaku (2011) examines the determinants of financial saving and investment in Ghana, estimates the relationship by compound linear regression models. Age composition and asset holdings have a negligible effect on saving while investment is directly influenced by factors such as occupation, asset holdings and saving. Government Policies need to take into account these factors for healthy growth of financial institutions and the economy as a whole.

Hafeez (2010) investigates the determinants of households saving in Multan District of Pakistan. The study analyzed the determinants of household savings through a Multivariate regression model and found that age has a positive relationship and square of age is negatively related to household savings. The findings of the study supported life cycle hypothesis. The socio- economic factors like education, expenditures, family size, financial liabilities, marital status and number of dependents are significantly and inversely affecting household savings.

Chamon and Prasad (2010) study the average urban household saving rate in China by taking the data for the period 1995 to 2005. Saving rates have increased across all demographic groups although the age profile of savings has exhibited a different pattern, with younger and older households having relatively high saving rates. These patterns are as a result of increase in private burden of expenditures on housing, education, and health care.

Abdelkhalek et al. (2010) provide an analysis of the microeconomic determinants of household savings behavior in Morocco according to geographical household residence. The econometric results of the study show that urban and rural households behave differently with regards to savings. In the urban area the major determinant that affects the savings level is household's current income whereas the literacy of the household's head is determinant variable in the rural area.

MOSPI (2009) studies the issue related to the estimation of savings in India. The committee made extensive recommendations to improve the household sector saving through a work sheet approach. The flow of information in the pre-liberalisation era in India was dependent on administrative flow of information, which in the post-reforms period has raised challenges for diverse data needs with reforms having widened the scope for private players.

Bordoloi's (2008) analysis brings out the close relationship between saving and capital formation. An accurate measure of domestic saving and capital formation helps in formulation of apt monetary and fiscal policies. It points out issues related to the methodology compilation of domestic saving and capital formation. Empirically it has been found that the domestic capital formation in India is mainly financed by domestic saving.

Agrawal et al. (2008) study the savings behaviour in five South Asian countries namely India, Pakistan, Bangladesh, Nepal and Sri Lanka, using time series procedures. The main findings of the study reveal that savings in South Asia are mainly determined by income, access to banking institutions, foreign savings rate and dependency rate. The main factors behind low rates of savings are due to a less rapid decline in the age dependency ratio, the moderate to low rates of growth of GNP and the less prudent fiscal management by many South Asian governments and finally interest rates on bank deposits were found to have a positive but less significant effect on savings.

Verma (2007) using annual time series data for the period 1950-51 to 2003-04 examines the relationship between savings, investment and economic growth for India. The study finds that there is an increasing trend in savings and it determines investment and capital formation both in the short run and long run.



Kraay (2007) discusses inter-provincial variations in household saving in China, using a panel of segregated-level data from China's household survey. Expectations of future income growth and subsistence consumption have a very meager role in determining the rate of household savings.

Horioka and Wan (2007) give a synoptic view on China's increasing household saving rate, and is dependent on lagged saving rate, the income growth rate, the real interest rate and the inflation rate. The variable age does not have a prominent influence on the household saving rate and upholds the views reflected in both life cycle as well as the permanent income hypothesis.

Schultz (2005) opines that life cycle savings is proposed as one explanation for the increase in savings and economic growth in Asia. Specification tests showed that lagged savings is likely to be endogenous and when estimated there remains no significant dependence of saving on the age composition. Individual saving exhibits more or less uniform pattern independent of variations in age.

Alam (2005) in their study address the dynamic impact of public investment on economic growth in a panel of Asian developing countries. The analysis suggests that, both the public and private investment and public consumption have a long run dynamic impact on economic growth. Private investment enhances growth as proposed by neoclassical theory and complement public investment. Also crowding out effect of private investment may decelerate capital formation.

Athukorala and Sen (2004) examine the determinants of private saving in the growth process of a nation and increase in rate of disposable income raises the saving rate. Private saving is closely correlated with the interest rate pertaining in the economy. The stimulations that is brought about by government with regard to public savings in certain situations leads to crowding out private saving, to a certain extend. The spread of banking facilities has a positive impact on private saving as it increases the accessibility of financial services

Akpokodje et al. (2004) examine the determinants of household saving in Nigeria, goes in line with the life-cycle hypothesis and observed that saving rate is low among the

youth and elderly. The rate of saving is high for middle age group as they generally exhibit higher productivity and income earning capacity.

Khan (2004) considers comprehensive framework for linking the local, national and international levels of analysis with the promotion of human capabilities. It offers a way to recognize the data and linkage through the construction of local and regional social accounting matrix. The central message is that it is possible to operationalise Sen's capabilities approach for investment policy analysis at the micro level while maintaining the micro – macro linkage in a globalised economic setting. It is argued that, by following this approach, poverty reduction along with capabilities enhancement of all households will lead to an increase in an overall productivity as well.

Atukorala and Tsai (2003) analyse the determinants of household saving in the growth and development path of the economy. In order to find out the impact of the determinants on saving, data pertaining to the period 1952-1999 of Taiwan has been used. Crowding out of private saving in a less than proportionate manner is observed. The number of dependents in the household has a negative impact on the level of savings. Better facilities provided by the government, improvements in financial networks reduce the future uncertainties and this reduces the inducement to save.

Salam and Kulsum (2002) study savings behavior in India and analysed the important factors related to it by using multiple regression models. The analysis observed that sound macro-economic environment supported by correct structural reforms help to increase domestic savings substantially.

Hussein and Thirlwall (1999) present the major determinants of differences in the domestic savings ratio between countries using panel data for sixty-two countries over the period 1967—1995. The capacity to save depends on the level of per capita income and the growth of income. The willingness to save depends on financial variables such as the rate of interest, the level of financial deepening and inflation. Inflation exerts a mild positive effect on saving but a strong negative relation is found between the ratio of tax revenue to gross domestic product and the domestic savings ratio.

Athukorala (1998) examines through an empirical study into the interest rate-saving-investment nexus in the Indian economy during the period 1955–95. Higher real interest rates seem to promote total savings and stimulate private investment. On the investment side, the combined salutary effect of increase in interest rate operating through increased debt intermediation and self-financed capital accumulation outweighs the direct cost effect on investment.

Jappelli and Pagano (1997) analyse the ups and downs in the Italian saving ratio and focused on the slowdown in the financial market especially focusing on the insurance sector. The theoretical compatibility of macroeconomic explanations along with microeconomic data in relation to private sector saving has been examined. The study highlighted the close nexus amid saving and growth in the economy and the relevance of understanding the determinants of saving rate in designing economic policies.

Raju (1993) investigates Households Sector Savings in India and has pointed out that the amount of domestic sector, private corporate sector and government sector, during the year 1988-89. The gross household sector savings accounted the major share of the gross domestic savings about 81 percent, while the share of private and public sector was only 9.7 per cent and 9.3 per cent respectively. Further, the household sector savings in the form of financial assets has increased from 8.6 per cent in the year 1950-51 to about 42.5 per cent in the year 1988-89, while the share of household sector savings in the form of physical assets has decreased from 91.4 to about 57.5 per cent in the same period.

Pandit (1991) studies the main factors affecting the savings rate in India, the pattern and progress related to the saving rate along with the contributions of the three sectors. Among the household, private, corporate and government sectors the influential factors are growth in income, sectoral and functional distribution of income and the increasing number of financial institutions. The improvements in the financial structure along with its components provide a smooth path way for pooling savings.

## **2.4 Studies related to behaviour and preference pattern of savers and investors**

Syed et al. (2017) analyse the saving and investment behavior among different income groups of the urban households of Hayatabad Peshawar. The households saving and investment are affected by a number of variables like income, education, employment status,

the number of dependents and assets. These variables have significant effect on saving and investment, with permanent type of employment, saving and investment behavior changes in the positive direction in line with permanent income hypothesis. Improved education brings changes in choice of children, educated family prefer small family where dependency on head decreases and this enhances income with positive impact on saving and investment.

Umesh and Neelakanta (2017) focus on stepping up savings in the economy by increasing the saving rate of households both in the rural and urban sector. For the individuals saving is a cushion of security against unforeseen contingencies whereas for a country savings provide funds for developmental efforts. Even though many new instruments are available to investors, in the rural regions' people are unaware of the new schemes. The government and non-governmental agencies should take steps to create more awareness among rural population; this will help to improve their financial conditions and standard of living.

Pandey and Ojha (2016) assess the investment behavior on the basis of economic and psychological factors. The economies progress is determined by the small investors together with those who invest large volume of money. Along with financial institutions, individual investors' role is important in the financial market. Asset prices play a key role in the investment decisions of rational investors.

Ramanathan and Sundaram (2015) in their research, analyze the saving pattern and investment preferences of the bank employees towards various products on the basis of demographic factors like age, gender, education, employment etc. Investment is an activity engaged by people who have savings. Generally salaried people invest their savings for their future requirement. A variety of investment avenues such as stock market, commodity market, post office savings, gold, real estate, life insurance products, bank deposits are available in the market, in which the investors allocate their savings. Family and friends lay a significant influence on people when they make investment choices and considers it as more reliable source especially from the perspective of safer returns.

Sood (2015) examines the major factors that influence the financial decision making process of households especially focusing on the regular income earners. An attempt was made to draw out a relationship between annual savings of an individual with his economic

variables like income, sector wise employment and social variables like education and demography like age of people at Chandigarh. The analysis has been done through one way ANOVA and it was propounded that the most preferred investment options are bank deposits and life insurance. The prominent factors influencing investment decisions are safety, high returns and tax benefit.

Selvakumar and Mahesh (2015) have studied the investment behavior of households and focuses on the knowledge and behavior of households towards various investment avenues. The behavior analysis shows that households mostly prefer bank deposits and has an aversion towards shares and mutual funds. The most influential factor governing investment was the priority given to safety. The study suggests measures to create awareness among households about various investment avenues and financial institutions to adopt a broad advertising strategy to create awareness among household investors.

Umamaheswari and Kumar (2013) analyse the demographics, psychographics and some psychological parameters that influence the perception and preferences of savers and investors. The preferences of the investors vary along with the variables and proper planning leads to successful investments. Various social and economic factors exerts influence on the decision making process of investors.

Pandian and Aranganathan (2012) assess the attitude of the salaried people towards savings and investment and stated that an inverse relationship exist between family size and attitude towards saving and investment among the salaried class. The relationship between savings, investment and the size of earning members is assessed by F test and the results show that there is no noticeable difference in the average cognitive score between the three income groups. Conducive investment atmosphere is necessary to attract people to save from their income. As savings is the main factor for investment, the government should take measures to encourage accumulation and with a well organized monetary system the interests of the investors must be safeguarded.

Chaturvedi and Khare (2012) explore the variety of factors that influence the financial decision making process. The awareness level of financial instruments varies and it has a role in selection of various avenues for saving and investment purposes. The key aspects focused were preference and pattern. The portfolio of household sector remains heavily weighted on

physical assets and fixed income bearing instruments. There is a need to initiate steps to inculcate saving habit among the growing middle class families and channelization of savings into productive investments.

NCAER (2011) discusses the involvement of the household sector in various level of the financial system. Majority of households treat commercial banks and insurance schemes as their primary choice for savings at all India level. The degree of risk aversion is extremely high in Indian households and this attitude takes the households away from the capital market. One of the main reasons for retardation in the rate of participation by Indian households in markets is due to information asymmetry and poor quality of information.

Alvarez et.al. (2008) examine an overlapping generation's economy where households care about their relative consumption and income. It was found that the households' saving behaviour is guided by the comparison of his lifetime income and the lifetime income of his peer groups. It focuses on the importance given to the present and future flow of income as well as the relative income in deciding the level of savings.

Shukla (2007) examines the financial behavior of Indian households on the basis of how they earn, spend and save. Household savings are held mostly in the form of cash or are deposited in banks as a safer option. Majority of Indian are great savers and generally prefer short term and medium term avenues as their saving option. Even though awareness on life insurance is high ownership of policies is low.

Syndera (2007) studies the investment behaviour of middle income class households in Nagpur. It focused on household's investment pattern, preference towards various instruments and the motives behind household savings. The main economic factor related to it is the income level and the most influential demographic factor is age. As there are variations in these two factors the investment pattern changes. The income level exerts a positive influence and the choice of instruments and the purpose behind savings varies among the different income groups.

Gentry and Hubbard (2004) suggest that entrepreneurial households have high wealth – income ratios and this helps them to maintain higher saving rate. The asset portfolios of entrepreneurial households are less diversified and much of it is used for active businesses.

The saving decisions of the households are highly influenced by the wealth and the role of entrepreneurial decisions. After controlling for the demographic variables also the saving rate has a positive effect along with wealth –income ratios.

Chalam (2003) explains investor preferences especially with regard to mutual funds and how it has helped in saving mobilization. Mutual funds are basically for small investors in the household sector. The empirical study reveals the skewness towards physical assets and the thrust given to the factors like safety and return while investing funds in different options. In order to reduce the risk element and for better returns, households diversify their portfolio by giving weightage to both physical and financial instruments. The household sector divides equally its investment both in real estate and gold ornaments. Investors are more attracted towards debt instruments and public sector mutual funds because of their safety and risk free return.

Kim and Nofsinger (2003) examine the behavior of individual investors in Japanese markets by using market level data and found that investors own risky stocks and trade frequently. The behavior of the investors varied depending on the bull or bear market conditions. The ups and downs in the stock market influences the investors and they can make good returns only with correct reading of the market. The poor performance of Japanese investors owe to the tendency to hold value stocks during advancing markets and high risk stocks during declining market.

Rajarajan (2003) studies the issue of association between investors' demographics and risk bearing capacity. It revealed that individual' demographic characteristics does have strong association with their risk bearing capacity. The element of risk is associated with investment and the level of risk undertaken depends on the amount invested, Investors are willing to undertake more risk in case the amount invested is small mainly because even if loss occurs its intensity is less. Larger volume of investment induces the investor to diversify the investment channels. Individual's willingness to accept risk and his capacity to undertake risk is important and new product demand can be generated on the basis of changes in the preference of risk averse investors.

Deaton and Paxson (2000) study the growth and savings among individuals and households in the light of life cycle hypothesis. The study has used household data for

estimating individual age-saving profiles. It showed that the variation in the growth rate of the economy does not exert a direct influence on the saving level. At different age levels it varies and its impact differs under various circumstances. A consistent influence is not seen as far as economy's growth and saving rate are taken together.

## **2.5 Summary:**

The elaborate review of existing theoretical and empirical studies gives deep insights into the various inter related aspects of saving and investment. The theoretical framework explicitly shows the relationship between saving along with prominent economic and demographic variables in the short run and long run perspective. The empirical studies show the nexus between a nation's growth and saving rate from different dimensions and the two way causality existing between the two variables. Saving and investment decisions are influenced by many variables and their impact varies at the micro and macro level. There are number of factors which affect the saving and investment behavior of household's decisions, only few micro level studies are conducted in the past that demonstrated the saving and investments practices of urban households as such the scope for the research in this area is wide and not conclusive.