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## INCOME CONSUMPTION RELATIONSHIP AMONG PUBLIC SECTOR BANK EMPLOYEES : A STUDY BASED ON LIFE CYCLE HYPOTHESIS



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**ABSTRACT :** *Life cycle hypothesis tries to explain the consumption pattern of an individual over his life time. Accordingly, during the initial and final stages of life, there is dissavings and it is during the middle years that an individual saves. This paper examines the compatibility of consumption pattern of government employees with life cycle hypothesis. Correlation between age and savings and thereby finding as to what extent the age affects saving is also examined. Further, whether age is an important determinant of wealth is also analyzed. Primary data is collected through a well-structured questionnaire. Secondary data is collected from books, journals and other e - resources. Study area includes employees from public sector banks in Ernakulam, using simple random sampling method. Data are tabulated and depicted using pie charts, bar diagrams, regression line. Also, certain statistical methods such as correlation, regression, ANOVA, along with certain test such as t-test have been made use of. Hypothesis are stated and tested so as to accept or reject the claim and infer the results. Findings are summarized based on the analysis.*

**Keywords :** *Life Cycle Hypothesis, Consumption Pattern, Determinant, Correlation, Age, Wealth and Savings*

## **Research Paper :**

### **INTRODUCTION :**

Consumption is of great importance in determining the economic performance of the country. The consumption of young people often exceeds their income, this is because they need housing, education and often are low on income or are dependent on their parents. In middle age, earning rises and through that the debt is paid off, saving raises to keep the consumption smooth for retirement. Finally, in old age saving starts to vanish and consumption rises. The life-cycle theory maintains that the level of savings depends on the age of consumers, and hence on the demographic structure of society.

Life cycle hypothesis tries to explain the consumption pattern of an individual over his life time. Accordingly, during the initial and final stages of life, there is dissavings and it is during the middle years that an individual saves.

### **REVIEW OF LITERATURE**

The LCH model provides the main framework to study the accumulation of saving and wealth. The contribution lies precisely in the adaptation of this theory to the aggregate savings of households both in a stationary as well as dynamic context Deaton (1992) and Modigliani (1993). At the centre of the theory of saving is a hump-shaped age-saving profile. The young, whose incomes are below their permanent income, borrow to finance consumption; the middle-aged save for retirement; and the old dissave. Thaler (1990). There seems to be an agreement emerging among economists that consumption is too sensitive to current income to be consistent with a lifetime conception of permanent income Thaler (1990). Various studies report that the young and the old consume too little, that consumption is sensitive to short run income fluctuations, that individual behaviour and reasoning ability affect an individual's decisions, that consumption is not sensitive enough to expected future changes in income, and that consumption is improperly sensitive to the composition of wealth and income Christopher Carroll, John Shea (1995). It is here that the life cycle hypothesis is taken and put into empirical analysis by incorporating various techniques and testing is done based on the consumption pattern of government employees. Though various studies have been made on various aspects related to consumption, much study has not been done on the consumption pattern among the government employees. Whether age really affects the wealth

of the government employees and if so with what extend is another area which has to be focused upon.

### RESEARCH GAP

Despite a large number of empirical literatures explaining the validity of life cycle hypothesis among people in the US, much light has not been thrown on the compatibility of consumption pattern of government employees with life cycle hypothesis.

Therefore, this study aims to fill the research gap by investigating the same and also by moving a step further by analyzing whether age is an important determinant of wealth. Also, to what extent age affects saving. These analyses are made with respect to government employees in a particular district, in this study it is confined to Ernakulum district, Kerala.

### OBJECTIVES

- To study the compatibility of consumption pattern of government employees with life cycle hypothesis
- To examine whether age is an important determinant of wealth
- To study the correlation between age and savings and thereby finding as to what extend the age affects saving.

### DATA SOURCES AND METHODOLOGY

Both primary and secondary data is included. Population selected for study was public sector banks and two banks were selected for collecting samples. 60 employees were selected from these banks as samples using simple random sampling methods. A structured questionnaire was used to collect primary data from these employees. Secondary data is collected from books, journals and other e-resources.

Data is tabulated and depicted using pie charts, bar diagrams, regression line. Also, certain statistical methods such as correlation, regression, ANOVA along with certain test such as t test have been made use of. Hypothesis are stated and tested so as to accept or reject the claim and infer the results.

Hypothesis stated and methodology employed is as follows:

- To study the compatibility of consumption pattern of government employees with life cycle hypothesis, Government employees of various age groups from below 35 to above 55 are to be included. Variables to be taken are disposable income, consumption, age. Use of multiple regressions is employed.

- To study whether age is an important determinant of wealth, we require data on several age groups (below 35 to above 55) divided into various classes and the variables used in this are age, income, saving and their wealth. Regression analysis is made use of. Hypothesis to be stated is as follows :

Ho: age is not a determinant of wealth.

H1: age is a determinant of wealth.

Statistical tool such as T test is used with a level of significance, say 5 %.

- To examine whether age and savings are correlated, given the sample and the above mentioned age groups, the variables such as age and savings are taken. Correlation is found and the result would specify whether they are highly correlated, least correlated or zero correlation and can thereby be concluded. Based on the correlation value a hypothesis can be also be tested as follows :

Ho: Age has insignificant effect on the saving.

H1: Age has significant effect on the saving.

T test is used with a level of significance, say 5 %

### TERMS AND DEFINITIONS

- Disposable income = Income – Taxes
- Consumption is defined as the final purchase of goods and services by individuals at a particular period of time at a given price.
- Savings = Income – consumption
- Wealth = land, house, vehicles, financial assets etc.
- Ho= null hypothesis: a statistical hypothesis stated for the purpose of possible acceptance.
- H1 = alternate hypothesis : when the null hypothesis gets rejected, it means alternate hypothesis is accepted
- Net Wealth = Total Wealth - Liabilities + Savings

### FINDINGS

- Age is a determinant of wealth.
- Age of entry into the service is maximum at the age of 25 years and accounted to 53.3 percentages.
- Majority of the respondents (86.7 %) depended on their parents for consumption before entering into the service. Among these there were 31.7 percent respondents who also

depended on borrowings for consumption. However, about 7 percent of the respondents depended on part time jobs and scholarships each for consumption.

- All the respondents have spent a part of their income on consumption and saving. Investments were also made out of their incomes. Majority of the respondents (72%) used a part of their income for repaying debts.
- As many as 65 percentage of the respondents consumed between 30-50 % of their income. About 22 percentage respondents have either purchased or constructed house after entering into the service of which 16 % respondents receive rent from the same. However, the respondents used their income to repay the housing loans incurred from the purchase or construction of house.
- About 10 percentages of respondents have purchased land after entering into service of which 7% respondents receive income from the same.
- About 93% of respondents have other source of income of which 92.9% receive interest, 7% respondents receive income from land and 16 % receive income in form of rent.
- Majority of the respondents ( about 87 %) made investments in the form of bank fixed deposits and life insurances. Only 7 percentage respondent made investments in the form of gold. However, majority of the respondents (64% ) made investment of about less than 15 %. 20 % of the respondents made investment between 30-50 %
- Almost all the respondents made savings in the form of provident fund. About 90% of the respondents saved in the form of bank deposits. As many as 56.7 % respondents made savings above Rs 12,500.
- Age and savings are highly correlated.
- Life cycle hypothesis of government employees follows a path where income and consumption are u shaped and income is above consumption level.

In this study, while analyzing whether age is a determinant of wealth, we got a p value (2.88021E-09) which is less than .05 and so we reject the null hypothesis and accept the alternate hypothesis that age is a determinant of wealth.

With respect to the calculation regarding the significant relationship between age group and wealth saving, we arrive at a t value of -6.983. Therefore we reject the null hypothesis, and accept the alternate hypothesis, hence there is a significant relationship between the age group and wealth saving.

Correlation obtained is 0.7476. This shows that there is a positive relation between age and wealth and is highly correlated. If R Square is greater than 0.50, as it is in this case, there is a good fit to the data.

Thus, it is predicted that 0.7476 given under the Multiple R row is multiple correlation coefficient. The variables are correlated significantly. Also f value is greater than the table value, null Hypothesis is accepted, hence there is a significant relationship between the age of an individual and his wealth savings. Since the P value is lesser than the table value at 95%, null Hypothesis is accepted, hence it is understood that there is a significant relationship between the age of an individual and his wealth saving.

The residuals are the difference between the Regression's predicted value and the actual value of the output variable.

With a normal probability plot, it can be easier to see individual data items that don't quite fit a normal distribution. In the analysis, every point sets right to the graph and so every data fits the distribution.

The correlation is found to be 0.96 which states that there is high level of correlation between age and savings. In this case, age versus age is 1 (perfectly correlated). Age versus savings is 0.9616 (a strong positive correlation). If the correlation is greater than 0.96 (or less than -0.96), there is a strong relationship. P value is 2.73. If the p-value is equal to or smaller than the significance level (here  $\alpha = 5\%$ ), it suggests that the observed data are inconsistent with the assumption that the null hypothesis is true and thus that hypothesis must be rejected (but this does not automatically mean the alternative hypothesis can be accepted as true). Here p value is greater than level of significance and so the null hypothesis is accepted i.e. there is a correlation between age and savings using the t test, since p value (1.77453E-21) is less than .05 we reject the null hypothesis and accept the alternate hypothesis that age has significant effect on saving.

The findings of many economists bring out a problem in the life-cycle model that in the analysis it is clear that the elderly do not dissave as quickly as has been said in the model. Overall research shows that the life-cycle model cannot completely explain consumer behavior. Providing for retirement is an important reason for dissaving. However, precautionary saving and bequests are also important. However, certain technical errors due to sample selection or due to sampling as such cannot be neglected. In our cross section, we

may have a selectivity bias problem. Elderly are more efficient consumers in the sense that they can substitute time for money in purchasing and using commodities and because of their experience can also avoid most trial-and-error experiments in consumption. The details of this story are much too complex to be accommodated well in a simple Life Cycle Hypothesis framework. In any event, the expectation created by the Life Cycle Hypothesis about the relationship between savings and age which underlies much theorizing, many measures of economic well-being, and important policy judgments do not appear to accord with the facts.

### **CONCLUSION**

Thus to conclude, the life-cycle hypothesis (LCH) is a model trying to explain individual's consumption patterns. The life-cycle hypothesis implies that individuals plan their consumption and savings behavior over their life-cycle. They intend to even out their consumption in the best possible manner over their entire lifetimes, doing so by accumulating when they earn and dis-saving when they are retired.

The consumption of young people often exceeds their income, this is because they need housing, education and often are low on income or are dependent on their parents. In middle age, earning rises and through that the debt is paid off, saving raises to keep the consumption smooth for retirement. Finally, in old age saving starts to vanish and consumption rises. The curve obtained in this study is "U" shaped for both income and consumption where income curve is above consumption curve which clearly states that the consumption is well within the income obtained.

Many people today save in the form of assets that could be due to two main reasons, the first is that they may gain benefit from that asset and later in life they can sell it off to smooth their consumption in retirement, second to gain income or profits on assets and again sell them of later in life if needed. The life-cycle theory maintains that the level of savings depends on the age of consumers. In this study, it is found that age is an important determinant of saving and wealth and age is highly correlated with savings.

### **LIMITATIONS**

- Sample size may not be exact representative of the universe. There is possibility of some error to a limited extent. According to K.E.Boulding "These difficulties are aggregative paradoxes which are true when used to one person, but false when used to the economy as a whole".

- Time, cost and location factors become major difficulties in completion of research.
- Problem in defining wealth, consumption and assets.

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