

# IMPACT OF DIFFERENTIAL DISPOSAL INCOME ON EXPENDITURE AND SAVINGS PATTERN AMONG URBAN HOUSEHOLDS OF COIMBATORE DISTRICT

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## ABSTRACT

*The present paper attempts to find out the relationship between the savings and economic growth at the macro level and the impact of socio economic factors and the income on the savings behaviour. Community, the size of the family, number of dependents, age, playing a vital role in determining the level of consumption and savings pattern, it becomes essential to understand how the middle income families spend and save their disposable income. What is the pattern of their savings? What is the level of risks taking attitude of the investors? Whether there are differences in the consumption and savings pattern across various social strata of the middle income groups.*

**Key words:** socio economic, middle income families, National Income and Private gross domestics savings

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## 1. INTRODUCTION

Savings and investments are the harbingers of economic expansion. In the developing countries like India the domestic resource mobilization decides greatly the growth in National Income. It is evident that in many countries, particularly, the developing countries, that the level of private savings has contributed for a higher growth of the economy (Dreze et.al., 1997). However, the amount and the pattern of savings differ across the socio groups indicating the significant

influence of the socio economic and demographic factors on the amount and the pattern of savings. (Gagneet K. Bhatia, 2018). The present paper attempts to find out the relationship between the savings and economic growth at the macro level and the impact of socio economic factors and the income on the savings behaviour.

## 2. DISPOSABLE INCOME AND SOCIAL STATUS

In India, a lion's share of the families belongs to the middle income groups. Their major source of income is the earned income. Hence, the heads of the family have to make a judicious use of the available scarce resources. However, with the increasing commitment and the increasing inflationary pressure it is really difficult for these middle income families to allocate their hard earned resources optimally to their alternative uses. (Suman Yadav et.al..2014 & 2015). This is because, a majority of these groups depend on the unorganized sector for their livelihood (Muna Kalyani, 2016). With the slumping economy, while there is a reduction in their nominal disposable income on the one hand, the ever increasing cost of the essentials reduces the real value of their disposable income on the other. These, not only reduces their purchasing power but also results in the reallocation of their available disposable income frequently on the one hand and a considerable reduction on their savings and investment on the other (Mishra, 2011). Hence, there prevails an uncertainty in having a constant real disposable income resulting in skepticism in the continuous savings and consumption behaviour of the middle income groups. With the consumption having a greater bearing on the growth of the economy such uncertainty created among the major consumer segments may result in the poor economic performance (Mishra, 2011). Community, the size of the family, number of dependents, age, playing a vital role in determining the level of consumption and savings pattern, it becomes essential to understand how the middle income families spend and save their disposable income. What is the pattern of their savings? What is the level of risks taking attitude of the investors? Whether there are differences in the consumption and savings pattern across various social strata of the middle income groups. These issues require understanding and the present paper is devoted towards this end.

## 3. PROBLEM DESIGN

The level of economic growth depends on the level of savings of an economy. That is, the higher growth rate of savings determining the higher level of economic growth. There are reviews that have indicated a strong positive correlation between the gross savings level and the growth in the national income economy. However, it is also to be noted that the socio economic background has got a pivotal role in the savings behaviour of the individuals of a country. Hence, generalization of one country's conclusion to other countries would only lead to erroneous conclusion. (Deaton, 1989).

With the liberalization of the Indian economy, the level of domestic savings have increased manifold. Hence, it becomes pertinent to understand is there a causality that exist between economic growth and domestic savings. This is an attempt at the macro level. As it has also been pointed out that the level of income has differential impact on the savings and investment it is also essential from the policy point of view whether there is a significant difference in the level of income and savings across various social groups. This is a micro level analysis. Thus, the present paper attempts to examine the pattern of expenditure and savings of the families and savings of the various income groups – mostly the middle income and higher income families of different social strata living in the urban areas of Coimbatore, a district in Tamilnadu which is industrially well developed and is said to have a higher disposable income due to its higher district income of the state. So as to have an empirical verification of the theoretical issue of

the causality between income and savings, it is also attempted to examine the causality between National Income and Private gross domestics savings.

#### 4. OBJECTIVES OF THE STUDY

Based on the above issues, the objectives of the present paper are:

- To know the causality between National Income and the Private savings
- To examine the social and demographic profile of the sample respondents
- To study the pattern of expenditure and savings of the disposable income
- To identify the impact of differences in income on savings and expenditure

#### 5. METHODS AND MATERIALS

To study the above objectives both secondary and primary data were collected.

To test the causality between savings and national Income, the secondary data on private savings and GDP for 29 years from 1991-92, the year of the inception of New Economic Reforms to 2019-20 were collected from the Annual Reports of Reserve bank of India.

In the case of the collection of Primary Data, 200 samples were selected by the method of convenience sampling from the urban areas of Coimbatore district. The required data were collected through direct interview method using a structured Interview schedule. Simple Percentage Method and Granger Causality test were applied to analyze the collected data.

#### 6. RESULTS AND DISCUSSIONS

For the National level Secondary data collected, to understand the stationary status of GDP and Gross Domestic Savings the Augmented Dickey Fuller Test and to understand the flow of causality between Gross Domestic Product and the Private Gross Domestic Savings, The Granger causality test are attempted.

##### Test of Stationarity

The stationarity test attempted indicates that in the case of private savings, the variable reaches stationarity at first difference with constant and trend included. In the case of the GDP, it becomes stationarity only at second difference.

**Table 1** Results of Stationarity Test

	I Difference			II Difference		
	Without constant	With constant and trend	None	Without constant	With constant and trend	None
GDP	0.8916	0.4427	0.9154	0.0003	0.0020	0.0001
Gross domestic Savings	0.9035	0.0001	0.9071	0.0000	0.0001	0.0000

##### Granger Causality

The results provided in the form of the table indicate that we cannot reject the hypothesis that Gross domestic Savings does not Granger cause GDP but we reject the hypothesis that GDP does not Granger cause Gross domestic Savings. Therefore, it appears that Granger causality runs one-way from private Gross National Savings to GDP. This means, increase in savings of the economy increases the income of the economy.

**Table 2** Granger Causality Test Between Gdp And Gds

Null Hypothesis (Lag 2)	Observations	F-Statistic	Prob.
D(Gross Domestic Savings) does not Granger Cause D(GDP)	26	3.29429	0.057
D(GDP) does not Granger Cause D(Gross Domestic Savings)		12.0258	0.0003

## 7. DESCRIPTION OF SOCIO ECONOMIC BACKGROUD OF THE SAMPLE RESPONDENTS

As it is seen in table 3, in the case of the distribution of age of the urban sample respondents the highest percentage (31 per cent) are in the age group of 45-55 years which is closely followed by the age distribution of 35-45 years. With a higher share of male employment due to higher education attainment and male dominated society, in the sample it is found that the share of (87.50 per cent) male respondents is found to be more than seven times the female respondents. The table indicates that the married respondents (96 per cent) are far higher than the unmarried. With higher access to education and other social infrastructure in the urban areas, the professional and technical degree holders are found to be the highest forming almost two third of the total sample. This is expected because, with higher level of education and eventually the ability to earn more, the migration level towards urban and metropolitan areas is expected to be favourable for such group. The occupational distribution also helps to establish the above argument. It is found in the table that the business men (46 per cent) form almost half of the sample size followed by self-employed with 30 per cent. With Coimbatore constituting a big industrial centre the business sector also thrives due to higher migrants and floating population. The self-employed forms the small manufacturer. With higher level of education and living condition, the nuclear families (84 per cent) also found to be on the higher side. Given the definition of a family by the Planning commission that a family constitute four members, the highest share of sample families (63 per cent) constitute the four member family. As a result the average size of the family for the entire sample is also worked out to four members. The status of the family is reflected in the number of dependents also. The highest share of the sample families has just one dependent. With a higher opportunity to earn, it is seen that the highest share (29 per cent) of the sample families earn Rs.15-20 lakhs per annum implying a monthly earnings of at least Rs.1.25, lakhs.

**Table 3** Distribution of Socio Economic Background of Samples

Sl.No.	Description of Variables	No. of Sample Respondents	Percentage
<b>I.</b>	<b>Distribution of Age</b>		
1	Less than 25	12	6.00
2	25-35	38	19.00
3	35-45	58	29.00
4	45-55	62	31.00
5	55-65	18	9.00
6	Above 65	12	6.00
	Total	200	100.00
	<b>Distribution of Gender</b>		
1	Male	175	87.50
2	Female	25	12.50
	Total	200	100.00

<b>Marital Status</b>			
1	Un Married	8	4.00
2	Married	192	96.00
<b>Education</b>			
1	School Education completed	12	6.00
2	General Graduation and Post Graduation Degree	54	27.00
3	Professional & Technical Degree	132	66.00
4	Others	2	1.00
<b>Occupation</b>			
1	Pvt. & Govt Employees	8	4.00
2	Professionals	40	20.00
3	Businessmen	92	46.00
4	Self Employed	60	30.00
<b>Nature of Family</b>			
1	Nuclear	168	84.00
2	Joint	32	16.00
<b>Size of Family</b>			
1	Two	4	2.00
2	Three	52	26.00
3	Four	126	63.00
4	Five	14	7.00
5	Above five	4	2.00
	Average Size of Family	760/200 $\approx$ 4.00	
<b>No. of Dependen</b>			
1	One	78	39.00
2	Two	60	30.00
3	Three	42	21.00
4	Above Three	20	10.00
	Average No. of Dependents	396/200 $\approx$ 2.00	
<b>Annual Income (in Rs. Inakhs)</b>			
1	Less than 5	22	11.00
2	5-10	38	19.00
3	10-15	44	22.00
4	15-20	58	29.00
5	20-25	30	15.00
6	Above 25	8	4.00
	Total	200	100.00
	Average annual Income Per Family (in Rs. Lakhs)	2800/200= 14.00	

## **8. SAVINGS AND INVESTMENT PATTERN OF SAMPLE RESPONDENS: A VIEW**

Given the social background and the annual earnings of the sample respondents, in the present paragraph it is attempted to discuss the savings and investment preference and to examine is there a difference exist in savings and investment due to differences in the social and economic status of the sample respondents.

## 9. DESCRIPTION OF THE SAMPLE RESPONDENTS BY PATTERN OF INVESTMENT

As it is given in table 4, the highest 34 per cent of the sample respondents save Rs.4-6 lakhs annually while the least share of 12 per cent of the sample households save less than two lakhs rupees. Given the distribution of savings, the average annual savings per sample household is worked out to Rs.3.81 lakhs. Given the annual earnings per family as Rs.14 lakhs, the share of savings is worked out to Rs.27.20 per cent. This share is found to be higher than the RBI estimated average National Household Financial Savings of 21.4 per cent of GDP in 2018-19. (RBI Bulletin, 2019). An examination of the source of awareness on the various investment avenues indicated that friends and relatives (32 per cent) formed the highest share of awareness followed by internet (27 per cent). The duration of investment is the major deciding factor on the returns and its contribution to economic growth as the savings becomes investment. As it is seen in the table, because of the reason that the sample families of the urban areas have satisfied their essential requirements, the short run usage or need for money is found to be less and as a result, the duration of savings is found to be highest with 5-10 years. This is being followed by the duration of 10-15 years (27 per cent). The purpose of investment forms the major reason for the amount and the duration of savings. As it is seen in the table, with the prevalence of dowry system in India which is pervasive among all caste and communities (Srinivasan, Sharada (2005)), the highest share (32 per cent) of the sample respondents save a considerable portion of their income to perform their daughters' marriage. Another 29 per cent save for their children's higher education. It is known that different types of investments involve different types of risks and returns. Generally, a higher risk taking investor expects high returns from his investment. The risk taking attitude of the investors depends on their marginal utility of money. Generally, the marginal utility of income is expected to decline with the increase in income and hence, the risk taking attitude of the investors varies across the income group. An examination of the attitude of the investors given in the table indicates that the highest 58 per cent of the respondents prefer no risk and hence, they invest in no risk instruments that carry low interest rate that compensates at least the rate of inflation. Another 26 per cent of respondents take moderate risk with neither too high returns nor too low returns, namely moderate returns. Only one sixth of the investors are ready to take higher risk for want of higher returns. Thus, the table indicates that even at higher levels of income, the marginal utility of income is treated higher by the sample respondents. This may be due to the families' low total net worth namely the value of other real assets. An examination on the product of investment would help to understand the investment attitude of the sample respondents. As seen in the table, the highest 30 per cent of the sample respondents save their earnings in fixed deposits of the commercial banks. Another considerable share of 23 per cent invest their money in gold and other ornaments. With higher level of risk involved, only two per cent of the respondents invest in commodity trading. Any investor has some objective behind their investment. As provided in the table, the ranking of the preference for investment indicates that the highest share of 32 per cent of the respondents ranked safety of their investment as their foremost preference with rank one. The investor ranked liquidity, tax benefits, capital appreciation and higher returns as their second preferences. The weighted ranking indices on the overall preference indicated the order of the objective of investment as Safety (rank 1), Liquidity (rank 2), Regular income (rank 3), Tax benefits (rank 4), Capital appreciation (rank 5) and Higher returns (rank 6).

**Table 4** Distribution of Sample Respondents by Source of Awareness and The Pattern and The Preference for Investments

Sl.No.	Description of Variables	No. of Sample Respondents	Percentage
<b>I.</b>	<b>Annual Average Savings/Investment (in Rs. Lakhs)</b>		
1	Less than 2	52	12.00
2	2-4	68	18.00
3	4-6	48	34.00
4	6-8	22	22.00
	Above 8	10	14.00
	Total	200	100.00
	Average Annual Savings (in Rs.Lakhs)	$761/200=3.81$	
<b>II.</b>	<b>Source of Awareness of Investment avenues</b>		
1	New papers/magazines	34	17.00
2	Spouse	8	4.00
3	Friends/Relatives	64	32.00
4	Internet	54	27.00
5	Agents	12	6.00
6	Media	28	14.00
	Total	200	100.00
<b>III.</b>	<b>Usual Duration of Investment (in years)</b>		
1	Less than 2	16	8.00
2	2-5	38	19.00
3	5-10	64	32.00
4	10-15	54	27.00
5	Above 15	28	14.00
<b>IV.</b>	<b>Purpose of Investment</b>		
1	Real Asset Creation	42	21.00
2	Higher Education of the children	58	29.00
3	Marriage of the daughters	64	32.00
4	Family Security	36	18.00
	Total	200	100.00
<b>V.</b>	<b>Risk taking attitude</b>		
1	No risk with low returns	116	58.00
2	High risk with High returns	32	16.00
3	Moderate returns with moderate risk	52	26.00
<b>VI.</b>	<b>Product of Investment</b>		
1	Bonds and Debentures	32	16.00
2	Mutual Funds	18	9.00
3	Fixed Deposits in banks	60	30.00
4	Gold and Ornaments	46	23.00
5	Insurance	34	17.00
6	Post office savings	6	3.00
7	Commodity Trading	4	2.00
	Total	200	100.00

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**Table 5** Objectives of Savings and Investment: Ranking

	RANK						Total	Rank Sum Total	Rank
	1	2	3	4	5	6			
Safety	64	50	32	24	20	10	200	516	1
%age	32.00	25.00	16.00	12.00	10.00	5.00	100.00		
Liquidity	38	69	58	9	17	9	200	525	2
%age	19.00	34.50	29.00	4.50	8.50	4.50	100.00		
Regular income	58	46	39	27	24	6	200	531	3
%age	29.00	23.00	19.50	13.50	12.00	3.00	100.00		
Tax benefits	50	56	41	26	16	11	200	535	4
%age	25.00	28.00	20.50	13.00	8.00	5.50	100.00		
Capital appreciation	40	62	51	22	16	9	200	539	5
%age	20.00	31.00	25.50	11.00	8.00	4.50	100.00		
Higher returns	38	59	47	19	16	21	200	579	6
%age	19.00	29.50	23.50	9.50	8.00	10.50	100.00		

## 10. DISCRIMINANT ANALYSIS

### 10.1 Discriminant Function on Gender

Given the discussion on the level of income and the level of savings with the risk taking attitude of the sample income earning households, in the present and in the subsequent section it is attempted to discuss the impact of gender and the occupational factors on the level of income, risk taking attitude and the level of savings of the sample respondents.

In the case of gender, it is expected that the given the similar social and education background, due to the discriminatory practices in the society, on the average, the female folks are expected to earn less than their counterparts (Oaxaca, Ronald, 1973). However, the desired savings of the female folks is expected to be more than the males. In the case of risk taking behaviour the female folks are less risk taker than their male counterparts. Thus, in the present section it is attempted to examine how gender is related to income, risk taking behaviour and savings level. For this purpose, the discriminant analysis is being used.

**Table 6A** Summary of Canonical Discriminant Functions OF GENDER VARIABLE

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.562 <sup>a</sup>	100.0	100.0	.600

a. First 1 canonical discriminant functions were used in the analysis.

**Table 6B** Wilks' Lambda – GENDER VARIABLE

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.640	87.625	3	.000



**Table 6C** Standardized Canonical Discriminant Function Coefficients: GENDER VARIABLE

Variable	Function 1
ANNUAL INCOME	.370
RISK TAKING ATTITUDE	0.993
ANNUAL SAVINGS	-1.481

### Eigen Value

The Eigen value provides the information on each of the discriminant function. The canonical correlation coefficient of 0.60 indicates the strength of the relationship between the grouping variable and the discriminating variable. In our case, we have two groups namely, male and female.

Given the degree of freedom (n-1) the table provides the results of one function. The canonical correlation value of 0.60 indicates the explanatory power ( $R^2$ ) of the discriminant model as 0.36 which implies that the model explains 36 per cent of the variance in the group variable.

Wilks' lambda is a measure of how well each function separates cases into groups. The significant chi square value of the Wilks' lambda indicate greater discriminatory ability of the function.

The wilks' lambda indicates the significance of the discriminant function. The chi-square value provided in the table (87.625) indicates the high significance of the discriminant function. The lambda coefficient of 0.640 implies that 64 per cent of the variability is not explained by the function.

The discrimination functional coefficient indicate the coefficients of Annual Income and risk taking attitude are positive indicating that male folks have slightly higher earning capacity than the female and the male folks are more risk taker than the females. The negative coefficient of the variable on the annual savings indicates that the female folks save higher than the female folks.

### 10.2 Discriminant Function on Occupation

Occupation is an important economic variable. Hence, in the present paragraph it is attempted to examine the impact of occupation on the level of income and savings and the risk taking attitude. It is because of the reason that differences in the occupation attainment may have differences in the level of income, savings and the risk taking attitude.

**Table 7A** Summary of Canonical Discriminant Functions OF OCCUPATION

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	16.626 <sup>a</sup>	98.9	98.9	.971
2	.152 <sup>a</sup>	.9	99.8	.364
3	.031 <sup>a</sup>	.2	100.0	.174

a. First 3 canonical discriminant functions were used in the analysis.

**Table 7b** Wilks' Lambda OF Occupation

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.048	594.683	9	.000
2 through 3	.842	33.723	4	.000
3	.970	6.000	1	.014

**Table 7C** Standardized Canonical Discriminant Function Coefficients

	Function		
	1	2	3
ANNUAL INCOME	.917	1.130	-1.338
RISK TAKING ATTITUDE	-.049	.648	1.065
ANNUAL SAVINGS	.128	-1.698	.832

### Eigen Value

Table 7A indicates that since the occupation variable has been divided into four group, (n-1) three functions are provided in the table. The percentage variance indicates the highest variation on the variable is being brought about by the first group (98.90 per cent) of the occupation variable. As a result, the canonical correlation coefficient is also found to be the highest with 0.971. The Eigen value provides the information on each of the discriminant function. The canonical correlation coefficients of 0.971, 0.352 and 0.174 indicate the strength of the relationship between the grouping variables and the discriminating variable. In our case, we have three groups in the occupational category.

Given the degree of freedom (n-1) the table provides the results of three functions. The canonical correlation value of 0.971 indicates the explanatory power ( $R^2$ ) of the discriminant model as 0.94 which implies that the model explains 94 per cent of the variance in the group variable.

Wilks' lambda is a measure of how well each function separates cases into groups. The significant chi square value of the Wilks' lambda indicates the greater discriminatory ability of the function.

The wilks' lambda indicates the significance of the discriminant function. The chi-square value provided in the table (594.683) indicates the high significance of the discriminant function.

The standardized canonical discrimination function coefficients provided for the three factors indicate that the first occupation factor has the highest influence on the annual income. However, the third occupational category has the highest discrimination on the variables on risk taking attitude and annual savings.

Thus, the socio economic factors are said to have the significant influence on the level of income, savings and risk taking attitude.

## 11. FINDINGS AND CONCLUSIONS

Private savings play a vital role in the growth of the economy and the individual's wellbeing. In the Indian context, a lion's share of savings is being made by the families of the middle income groups. The literature carried out indicated the strong relationship between the national savings and national income. However, at the micro level, the level of private or individual savings is being determined by the socio economic factors and the attitude towards risk taking. The present paper examined the level of income, the pattern of savings and the impact of socio economic factors on income savings and the risk taking attitude of 200 sample respondents from the urban areas of Coimbatore. The study could conclude that the savings level of the respondents are higher with their levels of income and a majority of the savers or investors are risk averters. The gender and occupation variables considered as the proxy variable for social and economic status significantly influence the level of income, savings and the risk taking attitude of the sample respondents.

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