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IMPACT OF FEMALE LABOUR FORCE PARTICIPATION ON HOUSEHOLD'S CONSUMPTION: AN EMPIRICAL OBSERVATION FROM ODISHA

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Abstract: This study examines the consumption expenditure pattern of working women engaged in different economic activities on time saving goods and services. Field survey data were collected from working-wife and non-working wife households of Bhubaneswar Municipal Corporation, the growing capital city of Odisha. The state registers in India with the 16.8% labour market participation of women in the organised sector. The empirical result shows that there are differences in consumption expenditures and time-saving consumption expenditures of both households in the study area. The dual-earner households spend more on durable and non-durable goods and services than the single-earner households.

Keywords: Consumption, households, labour market
JEL Classification: E21, D19, E29

1. Introduction

In modern age people have become more time conscious, they treat time as more precious and valuable thing. So time is one of society's most important economic resources. The decisions taken at the household level influence not only the market outcomes but also have significant policy implications. The interest in the study of the households received grate impetus with the increase in the women's participation in paid employment. The study of the working-wife

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households/dual-earner households is important for many reasons. There exist considerable differences in the ways in which the male and female members of the households allocate the economic resources among the various needs of the household. This has great implications on the standard of living of the household in general and nutrition levels of the children, especially the girl children, of the household in particular (Mathew & Goyari, 2011). Various empirical studies have shown that, there exists a difference in the consumption preferences of men and women income earners. It is observed that income earned by women is generally spent on those goods and services that enhance the standard of living of the households. Empirical studies held in various parts of the world have shown that, even after controlling for income differences, female headed households are more food secure and register a lower incidence of poverty than the male headed households. Also the children of these households, especially girl children, get a better treatment in terms of schooling, nutritional levels etc.

The pattern of consumption expenditures differs among those households where both the spouses are working and where only husband is working for wages. In dual-earner households, working-wives are supposed to spend more on time saving consumer durables, non-durables and services, arising from the increased opportunity cost of time of working-women. Though, it is supposed that the labour market participation of women increases the household income, it also leads to extra costs in terms of transportation, child care etc. (Mathew & Goyari 2011). It is also not necessary that the saving rate of those families increases as the total income of the households increases. Various economists like (Strober, 1970, 1977, Kaplan, 1938, Agarwal and Drinkwater, 1972, etc.) have theorized on the pattern of consumption expenditure of those families where both the spouses are working.

With the increase in the market participation of women, the attention of researchers was turned to the households. But, it was focused more on the implications of women's labour force participation on the well-being and empowerment of women. When the wives start working outside the home, the value of their time increases and this is expected to change the consumption expenditure pattern of the households. Studying consumers' expenditure is important as the parameters which determine this form an integral part in the mechanism of income generation in the macro model. A micro level study of the consumption decisions taking

place within the households is important because, in addition to the financial factors, it depends on wide-ranging factors like social, anthropological, demographic etc. of the household. Participation of women in the labour market is an important parameter in the analysis of consumption behaviour of the households due to the diverse ways in which it influence the pattern of consumption. Firstly, on analysis of the pattern of consumption expenditure, the working-wife households attain significance arising from the fact that the consumption pattern changes as the opportunity cost of time of the working-wives are greater than of their non-working counterparts. As Strober (1977;142) states 'since the total work for employed wives is much longer than for non-working wives, working-wives families should tend more often than non-working wives families to substitute time-saving (and probably fatigue-saving) goods for home production'. Secondly, the differences in the allocation of resources controlled by both men and women differ and this has major micro and macro implication.

2. Objectives of the study

The objectives of the study are as follow:

1) To examine the consumption expenditure patterns of single-earner and dual-earner households on time-saving durable, non-durable goods and services.

2) To estimate econometrically the consumption function of dual-earner and single-earner households with a view to examine the variables influencing the time-saving consumption expenditure.

All the objectives have been analyzed with the primary survey data.

3. Data Sources and Methodology

The study is based mainly on primary data. Data are collected from both the dual-earner (working-wife) and the single-earner (non-working-wife) households (families) for comparing the differences in income, expenditure and saving pattern of both kinds of households. For this purpose of comparing the consumption pattern of the single-earner and dual-earner households, a sample consists of 120 households, 60 families (HHs) each from both categories of households were surveyed using stratified purposive sampling method. The data have been collected with the help of a structured questionnaire having questions pertaining to the income, expenditure, saving, ownership of durables, consumer goods etc. of both kinds of households. As the study aims to

look at the differences in the consumption pattern of employees in the organized sector, the survey has been done among the employees working in various government and semi-government departments in an around Bhubaneswar, capital of Odisha during August 2017.

Time-saving consumption expenditure incorporates both the expenditure on time-saving non-durable goods and time-saving services incurred by the working and non-working wife households. 'Ready to eat food', 'instant breakfast mixes', 'semi cooked' and 'frozen' foods were included under the category of time-saving nondurables. Time-saving services included in this study are particularly laundry services, employing a maid and arranging day care facilities for children. All variables like income, consumption, savings, expenditure on time-saving non-durables and services, unless otherwise specified, are estimated and listed on a monthly basis. In addition, the field survey also showing the ownership of time-saving durable commodities, such as a Mixer Grinder, Washing Machine, Dish Washer, Refrigerator, Dryer, Roti Maker, Vegetable Cutter, Rice Cooker, Presser Cooker, Microwave Oven, Vacuum Cleaner, Two Wheeler and Four Wheeler.

All households covered in this study are patriarchal in their set-up and the male income earner has been regarded as the head of the household. Parents/in-laws above 60 years of age is not considered as household heads. The income they receive, if any, in the form of transfer payments, however, is included in the total household income. Only working men/household heads alone in the case of SHHs, and both the household head and his spouse in the case of DHHs are considered as main income-earners. Female-headed households remain outside the purview of the present analysis. Incomes of children working and staying abroad and of daughters married off are also not included in the total household income. The terms 'household' and 'family' are used synonymously. The term 'working-wife/women households' is used synonymously with the dual-earner households (DHHs). Similarly, the term 'non-working wife/women' is used to refer to single-earner households (SHHs).The respondents comprised doctors, lecturers, engineers, chartered accountants, nurses, bank employees, teachers, peons and clerks etc. of various government and semi-government departments.

The time-saving consumption expenditure patterns of working-wife and nonworking-wife households are examined by tabulating the collected data. Then, in order to understand the influences of various variables on the time saving consumption of households, econometric models on consumption are estimated. To examine the objective under study, we estimate mainly two sets of models. The 1st model (Model 1) is the total consumption expenditure function and the 2nd model (Model 2) is the time-saving consumption expenditure function. Both models are multi-variable linear regression model and are estimated for single-earner and dual-earner households and total sample. In the regression models, per capita consumption expenditure is taken as dependent variable and monthly disposable income as independent variables. Due to the nature of sample data and the issue stated above, some important variables are taken into account; those are per capita monthly disposable income of the households, educational qualification of the women of the households, proportion of children and proportion of adult dependent members in the households.

4. Profile of the Sample Households

This section expounds the various aspects of the data used in the study and examines elements, namely demographic characteristics, educational status, occupational structure, income and expenditure on time-saving non-durable goods and services of the sample. In terms of demographic characteristics, of the total 120 sample households, both categories (60 each from the SHHs and DHHs) showed almost similar characteristics with regard to household size and other demographic characteristic. While the largest number (37) of males' respondents was in the age group of 51-55 and the largest number (37) of female respondents was in the age group of 46-50. The age of both male and female respondents varied in the range of 25 and 60 in both categories of households. On an average, the differences in age between the spouses are found to be greater in the SHHs. The mean difference in age between the husband and wife is 5.55 years in SHHs and is 3.47 years in DHHs. Thus the sample households are favouring more the nuclear family than joint family. When the SHHs, the highest numberof46 (76.7%) households belong to nuclear family than 14 (23.3%) joint family. In case of DHHs, 38 (63.3%) households are living in nuclear family and only 22 (36.7%) households are living in joint family. The majority of families in both household categories had four members, mostly parents and two children. Among DHHs, 23 households had four members and 21 households had three members, together

constituting 73.33 per cent of the households surveyed. The majority of NWHHs also had four members (45 per cent), followed by three members (31.7 percent), together forming 76.7 percent of the total surveyed. 6 SHHs households and 10 DHHs had at least one parent of the household head staying with the family. The largest share of households covered in the study (41.7 per cent of the DHHs and 55 per cent of the SHHs) had two children. While 30 DHHs and 15 SHHs had only one child each. Field survey data show that 12 SHHs and 3 DHHs had three children each. None of the households included in the sample had more than three children and only in two DHH had child less.

When both kinds of households are taken together, it can be seen that the majority of the respondents have a graduate degree, with 84 of 120 female respondents and 91 of 120 working men holding at least a graduate degree. The next highest education level was Higher Secondary 22of the 120 female respondents and 30 male respondents of 120 had attained higher secondary education. Of the 240 respondents, except for 9 men and 14 women in the SHHs, all respondents had at least some secondary education. Thus, on the whole, the educational qualification of the non-working women is marginally lower than their spouses. This becomes quite interesting and leads one to the conclusion that factors other than education have a major role in determining the labour force participation of women.

In terms of occupational structure, the majority of the employees in the sample, 46 of the total 180 employees, were in clerical (23) and professor (23) posts, while following 16 employees were lecturer. Largest numbers of male respondents (21) of the DHHs were found to be working under class-1 category then WW respondents (10), only 9 male respondents of the SHHs are comes under this Class-1 category. Thus, in total, 40 respondents were employed in Class-1 jobs such as State Civil Services, Professors, Doctors, AGM, Chartered Accountants and central govt. jobs. 13 male respondents of the SHHs and 21 male and 25 female respondents of the DHHs are part of the Class-2, such as Teacher, Engineers, Journalists, Section Officers, Managers, Bank POs, Accountants, Postal service, Demonstrator, Lecturers. There were a large number of takers for the teaching profession among women (6 teacher and 11 lecturers). 23 male respondents of the SHHs and 17 male and 23 female respondents of the DHHs are part of the Class-3, such as

Clerks, Nurses, and Pharmacists etc. In Class-4 category 15 male respondents of SHHs, and one male and two female respondents of DHHs are such as Peons, Watchman, and Gardeners.

The main source of income of the sample households is the salary from the labour force participation in the organized sector. In few households, transfer payment, house rent and land etc. from part of the income. However, this position is very negligible in such households. The total income of the single- and dual-earner households differs significantly. As the labour market participation in the organized sector is the primary source of income for the sample households, total per capita income is considerably less in SHHs compared to the DHHs. In the case of DHHs, the total income of the households is comparatively high as both the spouses are working. When the total monthly income of the household of the single-earner category ranges between Rs.15000 and Rs.125000, it is between Rs.30000 and Rs.221000 in the dual-earner category. The average monthly income of the SHHs is Rs.38116.7 and that of the DHHs is Rs.88016.7. On the basis of the total monthly income, households are classified into different classes and this shown in Table-1. Of the total 120 households surveyed, 16 (13.3%) of the SHHs, and there is no of the DHHs belong to the low income category. The middle and high income categories of households from respectively 55 percent and 31.67 percent of the total 120 households observed.

Table-1: Income class and no. of sample households

Income class (Rs.'000 per month)	Single earner HHs	Dual earner HHs	Total Sample	
	No.	No.	No.	%
Below 15	2	0	2	1.7
15 to 20	14	0	14	11.7
Low income group	**16**	**0**	**16**	**13.3**
20 to 30	20	2	22	18.3
30 to 40	5	4	9	7.5
40 to 50	10	15	25	20.8
50 to 60	1	9	10	8.3
Middle income group	**36**	**30**	**66**	**55**
60 to 1lakhs	6	11	17	14.2
Above 1lakhs	2	19	21	17.5
Higher income group	**8**	**30**	**38**	**31.7**
Total(A)	**60**	**60**	**120**	**100**

Source: Field survey, 2017

From the above observation, it comes clear that a comparison of the absolute amounts allocated for consumption and saving fails to give clear results. In order to make a comparison of both

kinds of households, it becomes necessary to look at the proportion of income assigned for consumption and saving, and it's given in Table-2 The average propensity to consume (APC), i.e. the proportion of consumption to income (C/Y), of the two kinds of households taken together is 0.84. When categorised in to different income group, APCs are respectively 0.93, 0.85 and 0.79 for the low, middle and high income categories. Thus, it is seen that the APCs is high for low income group and vice-versa. Thus, the APC of the SHHs category is even higher (0.87) than the DHHs (0.81) in the combined sample. When the income classes are classified into low, middle and high income categories, the ratio of consumption to the total disposable income of the SHHs are 0.93, 0.87 and 0.80 respectively. Thus the observed pattern ascribes to the well-established theories that as income increases, consumption increases, but in a less than proportionate level. The ratio of saving to the total disposable income is 0.07, 0.13 and 0.20 respectively for SHHs. In the case of DHHs, C/Y is 0.82 and 0.78 for the middle income and higher income categories respectively, and the ratios of saving to disposable income are respectively o.16 and 0.22. Thus, it has been observed that the DHHs, on an average show a lower APC and higher APS than the SHHs.

Table-2: Average propensity to consume (APC) and save (APS) of sample households.

Income class (Rs.'000 per month)	Single earner HHs		Dual earner HHs		Total sample	
	C/Y	S/Y	C/Y	S/Y	C/Y	S/Y
Below 15	0.93	0.07	NA	NA	0.93	0.07
15 to 20	0.93	0.07	NA	NA	0.93	0.07
Low income group	**0.93**	**0.07**	**NA**	**NA**	**0.93**	**0.07**
20 to 30	0.89	0.11	0.85	0.15	0.87	0.13
30 to 40	0.85	0.15	0.86	0.14	0.85	0.15
40 to 50	0.85	0.15	0.84	0.16	0.85	0.15
50 to 60	0.88	0.12	0.81	0.19	0.84	0.16
Middle income group	**0.87**	**0.13**	**0.82**	**0.16**	**0.85**	**0.15**
60 to 1lakhs	0.78	0.22	0.8	0.2	0.79	0.21
Above 1lakhs	0.82	0.18	0.76	0.24	0.79	0.21
Higher income group	**0.8**	**0.2**	**0.78**	**0.22**	**0.79**	**0.21**
Total(A)	**0.87**	**0.13**	**0.81**	**0.19**	**0.84**	**0.16**

Source: Field survey, 2017

Having found the differences in the APC and APS among the two categories of households, the next step is to find the specific ways in which the income is spent for consumption. In order to make a comparative study of the consumption patterns of the both kinds of households, an analysis of the ownership/consumption of time saving durables, non-durables and services is necessary. Items included in the category of durables are vehicles and time-saving household contrivance. As a first step, the details of the ownership of vehicles by both kinds of households are listed in Table-3.When both categories of households are taken together, 79 (65.9 %.) of the total 120 sample households own a two-wheeler. It is only 8(6.7%) in the case of only four-wheelers. Out of the 120 sample households, 27 households own both two- and four-wheelers. A total of 114 (95%) households own at least one vehicle. The ownership of only two wheelers and only four-wheelers are respectively 76.7 and 0 percent (no one has only four-wheeler) for SHHs. It has also been found that 13.3 percent of these households own both the vehicles and 90 percent own at least one vehicle. In the case of dual-earner households, the ownership of two-wheeler and four-wheeler is respectively 55 percent and 13.3 percent. It is also observed that 31.7 percent of these households own both the vehicles and 100 percent own at least one vehicle.

Table-3: Ownership of vehicles in sample households

Income class (Rs.'000 per month)		No. of HHs ownership				No. of households	% of HHs ownership			
		2-wheeler alone	4-wheeler alone	Both 2 & 4 wheeler	Total		2-wheeler alone	4-wheeler alone	Both 2 & 4 wheeler	Atleast one vehicle
Single earner households	Below 15	1	0	0	1	2	50	0	0	50
	15 to 20	12	0	0	12	14	85.7	0	0	85.7
	Low income group	**13**	**0**	**0**	**13**	**16**	**81.3**	**0**	**0**	**81.3**
	20 to 30	17	0	1	18	20	85	0	5	90
	30 to 40	5	0	0	5	5	100	0	0	100
	40 to 50	8	0	1	9	10	80	0	10	90
	50 to 60	1	0	0	1	1	100	0	0	100
	Middle income group	**31**	**0**	**2**	**33**	**36**	**86.1**	**0**	**5.6**	**86.7**
	60 to 1lakhs	2	0	4	6	6	33.3	0	66.7	100
	Above 1lakhs	0	0	2	2	2	0	0	100	100
	Higher income group	**2**	**0**	**6**	**8**	**8**	**25**	**0**	**75**	**100**
	Total(A)	**46**	**0**	**8**	**54**	**60**	**76.7**	**0**	**13.3**	**90**
Dual earner households	Below 15	0	0	0	0	0	0	0	0	0
	15 to 20	0	0	0	0	0	0	0	0	0
	Low income group	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	20 to 30	2	0	0	2	2	100	0	0	100
	30 to 40	4	0	0	4	4	100	0	0	100
	40 to 50	15	0	0	15	15	100	0	0	100
	50 to 60	6	0	3	9	9	66.7	0	33.3	100
	Middle income group	**27**	**0**	**3**	**30**	**30**	**90**	**0**	**10**	**100**
	60 to 1lakhs	3	3	5	11	11	27.3	27.3	45.5	100
	Above 1lakhs	3	5	11	19	19	15.8	26.3	57.9	100
	Higher income group	**6**	**8**	**16**	**30**	**30**	**20**	**26.7**	**53.3**	**100**
	Total(A)	**33**	**8**	**19**	**60**	**60**	**55**	**13.3**	**31.7**	**100**
Total(A+B)		**79**	**8**	**27**	**114**	**120**	**65.9**	**6.7**	**22.5**	**95**

Source: Field survey, 2017

As given in the Table-4, the ownership of time-saving durable commodities is higher among the dual-earner/working-wife households compared to the single-earner/non-working wife households. The ownership of washing machine, Dish washer, Refrigerator, Dryer, Mixer grinder, microwave oven, Roti-maker, Vegetable cutter, Vacuum cleaner, rice cooker and Presser cooker are respectively 93.3%, 15%, 96.7%, 16.7%, 100%, 38%, 56.7%, 80%, 13.3%, 43.3% and 100% respectively. And in the case of single-earner households, 41.7%, 1.7%, 75%, 3.3%,

100%, 13.3%, 18.3%,36.4%, 10%, 8.3% and 100% respectively. With regard to most of the time-saving durables across all the income categories, the ownership is higher among the dual earner households. However Mixer grinder and presser cooker are the100% ownership among both kinds of households. On an average, the incidence of the ownership of time-saving household gadgets is high among the DHHs as compared to the SHHs.

Table-4: Ownership of time saving durables in sample households

	Income class (Rs.'000 per month)	WM		DW		RFR		Dryer		MG		MO		RM		VC		VCC		RC		PC	
		HS	%	HS	%	HS	%	HS	%	HS	%	HS	%	HS	%	HS	%	HS	%	HS	%	HS	%
Single earner households	Below 15	0	0	0	0	1	50	0	0	2	100	0	0	0	0	0	0	0	0	0	0	2	100
	15 to 20	0	0	0	0	7	50	0	0	14	100	0	0	0	0	2	14	0	0	0	0	14	100
	Low income group	**0**	**0**	**0**	**0**	**8**	**50**	**0**	**0**	**16**	**100**	**0**	**0**	**0**	**0**	**2**	**13**	**0**	**0**	**0**	**0**	**16**	**100**
	20 to 30	6	30	0	0	14	70	0	0	20	100	0	0	1	5	6	30	0	0	0	0	20	100
	30 to 40	3	60	0	0	5	100	0	0	5	100	0	0	3	60	4	80	0	0	0	0	5	100
	40 to 50	9	90	1	10	9	90	0	0	10	100	3	30	5	50	5	50	2	20	1	10	10	100
	50 to 60	1	100	0	0	1	100	0	0	1	100	0	0	0	0	0	0	0	0	0	0	1	100
	Middle income group	**19**	**52.8**	**1**	**2.8**	**29**	**80.6**	**0**	**0**	**36**	**100**	**3**	**8.3**	**9**	**25**	**15**	**42**	**2**	**5.6**	**1**	**2.8**	**36**	**100**
	60 to 1lakhs	4	66.7	0	0	6	100	2	33.3	6	100	4	66.7	2	33.3	4	67	4	66.7	4	66.7	6	100
	Above 1lakhs	2	100	0	0	2	100	0	0	2	100	1	50	0	0	1	50	0	0	0	0	2	100
	Higher income group	**6**	**75**	**0**	**0**	**8**	**100**	**2**	**25**	**8**	**100**	**5**	**62.5**	**2**	**25**	**5**	**63**	**4**	**50**	**4**	**50**	**8**	**100**
	Total(A)	**25**	**41.7**	**1**	**1.7**	**45**	**75**	**2**	**3.3**	**60**	**100**	**8**	**13.3**	**11**	**18.3**	**22**	**36**	**6**	**10**	**5**	**8.3**	**60**	**100**
Dual earner households	Below 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	15 to 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Low income group	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	20 to 30	2	100	0	0	2	100	0	0	2	100	0	0	0	0	2	100	0	0	0	0	2	100
	30 to 40	3	75	0	0	4	100	0	0	4	100	0	0	1	25	3	75	0	0	0	0	4	100
	40 to 50	13	86	0	0	14	93.3	2	13.3	15	100	4	26.7	10	66.7	12	80	1	6.7	4	26.7	15	100
	50 to 60	9	100	0	0	9	100	1	11.1	9	100	5	55.6	9	100	7	78	0	0	5	55.6	9	100
	Middle income group	**27**	**90**	**0**	**0**	**2**	**96.7**	**3**	**10**	**30**	**100**	**9**	**30**	**20**	**66.7**	**24**	**80**	**1**	**3.3**	**9**	**30**	**30**	**100**
	60 to 1lakhs	11	100	0	0	11	100	2	18.2	11	100	5	45.5	6	54.5	9	82	3	27.3	7	63.6	11	100
	Above 1lakhs	18	94.7	9	47.4	18	94.7	10	52.6	19	100	9	47.4	8	42.1	15	79	4	21.1	10	52.6	19	100
	Higher income group	**29**	**96.7**	**9**	**30**	**19**	**96.7**	**12**	**40**	**30**	**100**	**14**	**46.7**	**14**	**46.7**	**24**	**80**	**7**	**23.3**	**17**	**56.7**	**30**	**100**
	Total(B)	**56**	**93.3**	**9**	**15**	**58**	**96.7**	**15**	**16.7**	**60**	**100**	**23**	**38.3**	**34**	**56.7**	**48**	**80**	**8**	**13.3**	**26**	**43.3**	**60**	**100**
	Total(A+B)	**81**	**67.5**	**10**	**8.3**	**103**	**85.8**	**17**	**14.2**	**120**	**100**	**31**	**25.8**	**45**	**37.5**	**70**	**58**	**14**	**11.7**	**31**	**25.8**	**120**	**100**

Source: Field survey, 2017

WM: washing machine, DW: dish washer, RFR: refrigerator, MG: mixer grinder

MO: microwave oven, RM: roti maker, VC: vegetable cutter, VCC: vaccum cleaner, RC: rice cooker, PC: presser cooker

5. Expenditure on Time-saving Non-durable goods and services

Expenditure on Time-saving non-durable goods (including instant food, semi cooked food, etc.) and services (those of maid/servant, laundry, transport service, day care for small children etc.) is a significant factor that can explain the differences in the consumption pattern of the both kinds of households, arising from the opportunity cost of women's time. The expenditure on time-saving non-durable goods and services by single- and dual-earner households are shown respectively in Table-5.

On an average, in the total sample, the households spend 2.61 percent and 12.53 percent of the total household expenditure for time-saving non-durable goods and services respectively. Taken together, this forms 15.14 percent of the total household expenditure. On an average, the households spend Rs.1352.5 and Rs.8053.33 per month for time-saving nondurable goods and services respectively. Thus, the sample households are spending more on time-saving services than on time-saving non-durable goods. When the SHHs, on an average, spend 12.01percent of the total expenditure on time-saving non-durables (2.28%) and services (9.73%). At the same time, the DHHs devote18.25 percent of the total household expenditure on this time-saving non-durables (2.93%) and services (15.32).

On an average, when DHHs spend Rs.1876.67 per month on time-saving non-durables and Rs.12563.33 per month on time-saving services, the amount spend by SHHs are respectively Rs.828.33 and Rs.3543.33. Thus, the expenditure on non-durable goods by DHHs is about 2.27 times than that the SHHs. Similarly the expenditure on time-saving services is about 3.55 times higher among the DHHs compared to SHHs. It can also be seen that both SHHs and DHHs spending portion or amount for expenditure on time-saving non-durable goods and services is increases, for the cause of income level increases. This shows working women's high emphasis on saving time by spending more on time-saving consumption goods and services.

Table-5: Expenditure on time-saving Non-durable goods and Services of sample households

	Monthly income (Rs.'000)	% of tota expenditure spent for non durable goods(1)	% of tota expenditure spent for services(2)	(1)+(2)	Amount spent for non durable goods per HH(Rs.)	Amount spent for services per HH(Rs.)
Single earner households	Below 15	2.68	7.69	10.37	400	1150
	15 to 20	2.7	10.21	12.91	521.43	1971.43
	Low income group	**2.69**	**8.95**	**11.64**	**460.72**	**1560.72**
	20 to 30	2.18	7.82	10	570	2040
	30 to 40	2.94	8.43	11.37	1080	3100
	40 to 50	1.81	9.28	11.09	790	4040
	50 to 60	2.98	8.77	11.75	1700	5000
	Middle income group	**2.48**	**8.58**	**11.06**	**1035**	**3545**
	60 to 1lakhs	1.48	11.52	13	1133.3	8833.33
	Above 1lakhs	3.72	12.39	16.11	4200	14000
	Higher income group	**2.6**	**11.96**	**14.56**	**2666.67**	**11416.67**
	Total(A)	**2.28**	**9.73**	**12.01**	**828.33**	**3543.33**
Dual earner households	below 15	NA	NA	NA	NA	NA
	15 to 20	NA	NA	NA	NA	NA
	low income group	**NA**	**NA**	**NA**	**NA**	**NA**
	20 to 30	4.56	11.82	16.38	1350	3500
	30 to 40	5.07	12.32	17.39	1975	4800
	40 to 50	3.44	12.9	16.34	1593.33	5973.33
	50 to 60	3.69	14.32	18.01	2066.67	8011.11
	middle income group	**4.19**	**12.84**	**17.03**	**1746.25**	**5571.11**
	60 to 1lakhs	3.07	18.63	21.7	2472.73	14990.91
	above 1lakhs	2.43	15.29	17.72	3357.9	21105.26
	higher income group	**2.75**	**16.96**	**19.71**	**2915.32**	**18048.09**
	total	**2.93**	**15.32**	**18.25**	**1876.67**	**12563.33**
Sample Total		**2.61**	**12.53**	**15.14**	**1352.5**	**8053.33**

Source: Field survey, 2017

6. Modelling Consumption Expenditure

As stated earlier, the main aim of the study is to understand the differences in the consumption of time-saving durables, non-durables and services among DHHs and SHHs. In the previous sections, the main emphasis was on the consumption pattern of the DHHs and SHHs in terms of APC, i.e., the proportion of consumption to total disposable income. However, the rate of change

in consumption with respect to income (i.e. MPC) was not analyzed for the two categories of households. The concept of MPC has several important economic significances, especially in consumption related studies. The value of MPC is assumed to be positive and less than unity (0< MPC<1). This means that when income increases, the whole of it is not spent on consumption. On the other way, when income falls, consumption expenditure does not decline in the same proportion and never becomes zero. This is famous Keynesian hypothesis of MPC as positive as but less than unity, i.e., 0<MPC<1, and he postulated a positive relationship between consumption and income (Gujarati, et al. Fifth Edition, 2012). Thus, MPC tells that consumption is an increasing function of income and it increases by less than the increment in income. At the more economic level, the value of MPC is important in filling up the gap between income and consumption through planned investment to maintain the desired level of income. Another importance of MPC lies in the theory of multiplier. The higher the MPC, the higher the Income Multiplier (M)

M=1/1-MPC

In this section, an attempt is made to estimate the MPC of SHHs and DHHs of the organised employees working in area. As stated in the previous section, a sample of 120 households, 60 each from the SHHs and DHHs were also the total consumption expenditure of the households. Information about consumption expenditure, especially time-saving consumption expenditure, was collected from the sample households. Estimation is done based on the sample data. For this purpose, two models of the two variables linear regression are estimated. The 1st model is the total consumption expenditure model. And 2nd model is the time-saving consumption expenditure model. 1st model can be called MODEL-1 which is given below.

MODEL-1

$$C_i = \beta_1 + \beta_2 Y_i + U_i$$

Where

C_i =Total monthly consumption expenditure of household i. (in Rs.)

Y_i = Monthly disposable income of household i (in Rs.)

β_1 and β_2, known as the parameters of the model, where

β_1 = intercept term

β_2 = slope of marginal propensity to consume (MPC)

U_i = Error term

This Model-1 has been estimated for single-earner households and dual-earner households separately and for the two kinds of households taken as a whole, it has also been estimated for single-earner households and dual-earner households across all income groups. In this model, β_1 and β_2 are the parameters to be estimated. Theoretically, β_2 is nothing but the marginal propensity to consume (MPC). This coefficient measures the change in consumption with respect to a unity change in income. The coefficient β_1 is known as autonomous consumption.

MODEL-2

The second model is the time-saving consumption expenditure model, as given below.

$$C_{(TS)i} = \beta_1 + \beta_2 Y_i + U_i$$

$C_{(TS)i}$ = monthly time-saving consumption expenditure of household i (in Rs.)

Y_i = monthly disposable income of household i (in Rs.)

β_1= intercept term

β_2 = marginal propensity to consume (MPC) of time-saving non-durable goods and services.

U_i = error term

This model (2) has been estimated for single-earner households and dual-earner households separately and for the two kinds of households taken as a whole, it has also been estimated for single-earner households and dual-earner households across all income groups. In this model, expenditure on time saving non-durable goods and services has been taken. Here also, β_1 and β_2 are the parameters to the estimated. In this case, β_2 is the MPC of time-saving non-durable gods and services with respect to income.

7. Total Consumption Expenditure Model

In this section, the results of model (1) are given. Here, the consumption expenditure of both kinds of households taken separately and we estimate the total consumption expenditure model for two categories of sample and high income categories will give a better picture of the consumption expenditure patterns. Since there is no one household in the low income group among the dual-earner households, so the estimation has not done for this category.

Table-6: Estimated results of the Total consumption expenditure function of sample HHs, BMC.

HHs		Coefficients		n	F	D-W	R square
		MPC	Intercept				
SHHs	LI HHs	0.895 (.000*)	714.023 (.670)	16	105.525	2.279	0.883
	MI HHs	0.801 (.000*)	2275.906 (.97)	36	429	1.712	0.927
	HI HHs	0.765 (.000*)	0.765 (.000*)	8	50.395	2.188	0.894
	Total SHHs	0.763 (.000*)	0.763 (.000*)	60	2.820E3.	1.982	0.98
DHHs	LI HHs	.	.	0	.	.	.
	MI HHs	0.744 (.000*)	4180.322 (.204)	30	121.777	1.432	0.813
	HI HHs	0.752 (.000*)	2083.194 (.686)	30	330.406	2.105	0.922
	Total DHHs	0.737 (.000*)	4158.932 (0.21)	60	1.554E3.	2.071	0.964
TOTAL		0.740 (.000*)	4079.253 (.000*)	120	4.868E3.	2.052	0.976

Source: Field survey, 2017

Notes : SHHs- single-earner HHs, DDHs- dual-earner HHs, HHs- households
LI-lower income, MI- middle income, HI- higher income
Figures in parenthesis are p-statistic values
* denotes 1% level of significance
** denotes 5% level of significance
*** denotes 10% level of significance

The result suggests that when both kinds of households are taken together, the estimated MPC is 0.740. This estimated coefficient is in accordance with the popular Keynesian hypothesis that MPC is positive but less than one. This estimated MPC is also statistically significant at 1 percent level of significance. Thus, the total income is affecting the total consumption expenditure significantly and positively. The result shows that as the monthly disposable income of the households increase by one unity (Rs.1), the average total consumption of the households increase by 0.74 unities (74 paisa). The high R squared value of 0.976 suggests that about 98 percent of the variation in consumption is explained by income. About 2 percent of the variation in consumption is explained by variables other than income. The Durbin-Watson (D-W) statistic value is approximately close to 2 (2.052) for the total sample. This indicates no autocorrelation among the error terms. F value is highly significant meaning thereby that the model fits better for all the factors.

In the case of SHHs, the estimated slope coefficient, i.e., MPC, of the given model is 0.763. That is, for every unity (Rs.1) increase in the monthly disposable income of the households, total

consumption of the households on an average, goes up by Rs.0.763. It is seen from Table 4.11: that this MPC for SHHs is much higher than the MPC for the total sample as a whole; the estimated coefficient is significant at 1 percent level of significance. In this case, the D-W statistic is 1.982, which is approximately 2. This result indicates the absence of autocorrelation among error terms. The high R squared value of 0.980, suggests that about 98 percent of the variation is consumption is explained by income. Remaining 2% of the variation is explained by the error term U. So the given sample data set fits the model well.

For the DHHs, the estimated MPC is 0.737. This indicates that the corresponding increase in the average total consumption of the households for every one unity increase in the per capita monthly disposable income is 0.737 units. This estimated value is lower than MPC of the total sample and also that of SHHs. This MPC for the dual-earner is statistically significant at one percent level of significance. This model also does not suffer from the autocorrelation problem since the D-W statistic value is approximately equal to 2 (2.071). The R squared value of 0.964 suggests that about 96% of the variation in consumption is explained by income. Remaining 4% of the variation in consumption is explained by the error term U.

Thus, from the estimated results, it can be seen that for every increase in disposable income, the corresponding increase in consumption expenditure is significantly higher for the SHHs compared to the DHHs. This is even higher than the total sample as a whole. Another important result is observed in case of the intercept term, which is significantly higher for the DHHs compared to SHHs. This indicates the higher subsistence level of consumption among DHHs in the sample in BMC.

8. Time-saving consumption expenditure model

In this section, an attempt has been made to examine the rate of change of time-saving consumption expenditure with respect to changes in total family disposable income. The estimated results of the time-saving consumption expenditure model, i.e., model-2, are given Table-7. The results suggest that when both kinds of households are taken together, the estimated time-saving MPC is 0.190. This estimated time-saving MPC is statistically significant at one percent level of significance. Thus, the total income is affecting the results indicating that as the

monthly disposable income of the households increases by one unit, the average time-saving consumption of the households increases by 0.190 (it means that, when the monthly disposable income of the households increase by Rs.1000, the average time-saving consumption of the households increase by Rs.190). The high R squared value of 0.835 suggests that about 84 percent of the variation in time-saving consumption is explained by income. About 16 percent of the variation in consumption is explained by variables other than income. The D-W statistic is approximately close to 2 (1.476) for the total sample indicating no autocorrelation among the error term.

The estimated results show that the MPCs of time-saving consumption for both the SHHs and DHHs are statistically significant at 1 percent level of significance (i.e., 0.142 for SHHs and 0.180 for DHHs). This shows that the time-saving consumption expenditures of sample households, both single-and dual-earner households are fewer amounts responsive to change in the total family disposable income. When the entire 60 sample together, the result shows that for every one unit of change in disposable income, the average amount spent for time-saving consumption is 0.142 units for SHHs and 0.180 for DHHs (which is not negligible but small amount). It should be noted here that the time-saving MPC for DHHs is marginally higher than that of the SHHs. This shows that DHHs are more responsive than SHHs in the case of time-saving consumption expenditure with respect to change in income.

The high value of the coefficient of determination (R squared value) for both the households also indicates that a high proportion of variation in the time-saving consumption expenditure has been explained by the income variable. That is 75 percent (0.756) for SHHs and 78 percent (0.776) of DHHs. This shows that non-income variables (like employment status of wives, age composition, presence of single-earner family members etc. not included in the present model) explain the variation in time saving consumption expenditure about 25% and 23% respectively for single- and dual-earner households. However all income groups in dual-earner households were having marginally higher R^2 values their counterparts in single-earner households.

Table-7: Estimated results of the Time-saving consumption function of sample HHs, BMC.

HHs		Coefficients		n	F	D-W	R square
		MPC	Intercept				
SHHs	LI HHs	0.239 (.046**)	_2107.043 (.323)	16	4.786	1.84	0.255
	MI HHs	0.119 (.000*)	_391.246 (.619)	36	27.65	1.696	0.449
	HI HHs	0.114 (.229)	2263.706 (.772)	8	1.79	2.149	0.23
	Total SHHs	0.142 (.000*)	803.290 (.084***)	60	177.964	1.988	0.754
DHHs	LI HHs	.	.	0	.	.	.
	MI HHs	0.208 (.000*)	_1753.297 (.316)	30	33.388	2.068	0.544
	HI HHs	0.148 (.000*)	4578.229 (.190)	30	28.706	1.759	0.506
	Total DHHs	0.180 (.000*)	238.508 (.841)	60	201.18	1.595	0.776
TOTAL		0.190 (.000*)	_1554.982 (.007*)	120	596.48	1.476	0.835

Source: Field survey, 2017

Notes : SHHs- single-earner HHs, DDHs- dual-earner HHs, HHs- households
LI-lower income, MI- middle income, HI- higher income
Figures in parenthesis are p-statistic values
* denotes 1% level of significance
** denotes 5% level of significance
*** denotes 10% level of significance

9. Conclusions:

The market participation of women fuels the economic development of a country in various ways. It stimulates changes in the social, political, economic, and cultural set-up of a country. It generates greater income for the households thereby raising the standard of living of the households. The increased consumption arising out of the increased income generates multiplier effects in the economy, leading the economy to higher levels of income, output, employment and consumption. However, the consumption pattern and preferences of working-wife households (DHHs) are different from the non-working wife households (SHHs). Economic theory (Keynes consumption theory) also suggests that the consumption preferences of both kinds of households would be different, arising from the constraint of time on working women.

This study analyzed consumption pattern at a micro level from a household perspective, with focus on those households where women take part in the labour market. The focus was on women working in the organized sector. As the opportunity cost of time of employed wives is higher than that of the non-working-wives, the working-wife families are expected to spend more

on time- and effort-saving goods for home production. It is critical, therefore to understand whether the earned income of women and the increased constraint on time has actually resulted in any preferences in DHHs towards time-saving consumption compared to SHHs. Also, the working-wife families are deemed to incur work related expenses, thereby experiencing greater work related expenditure, and therefore, greater total consumption than non-working-wife families with comparable incomes.

On the basis of the empirical analysis, the following results were found: The market participation of women generates greater income for the households thereby raising the standard of living of the households. The DHHs show lower average propensity to consume (APC) and correspondingly, higher average propensity to save (APS) compared to SHHs. The APC of the SHHs is greater than the DHHs. This is because, on average, the total income of DHHs is significantly higher than the SHHs. In the absolute amounts; total consumption of SHHs is lower than DHHs. Per household monthly expenditure on time-saving consumption (non-durable goods and services) is higher among the DHHs in the sample households. In other words, for every rupee spent, the fraction of the rupee spent for time-saving consumption is higher among DHHs. However, the fraction of income spent for this kind of expenditure does not form a very significant share of the total household expenditure. In both categories of households, per household monthly proportion of income spent for time-saving services is greater than per household monthly amount spent for time-saving non- durable goods. The ownership of vehicles shows a little significant difference among the two categories of households. The existing difference can be explained by the difference in income of the two kinds of households. Per household monthly expenditure on time-saving consumption (non-durable goods and services) is higher among the DHHs in the sample households. In other words, the fraction of the income spent for time-saving consumption is higher among DHHs. However, the fraction of income spent for this kind of expenditure does not form a very significant share of the total household expenditure. In both categories of households, per household monthly proportion of income spent for time-saving services is greater than per household monthly amount spent for time-saving non- durable goods.

From the econometric estimations, for per unit increase in the monthly disposable household income, the increase in the total consumption expenditure of the SHHs was found greater than the DHHs. However, for per unit increase in the monthly disposable income of the households, the increase in the time-saving consumption expenditure of the SHHs was observed that significantly lower compare to the DHHs.

10. Implications of the findings

The study suggests that there exists a tendency among the working-wife households to spend more on time and fatigue- saving consumption. The study also finds that the working-wife families save more and consume less.

The finding that for per unit increase in the monthly disposable household income, the increase in the total consumption expenditure of the SHHs is greater than the dual-earner households does not mean that the consumption expenditure of the DHHs is less. This is because, on average, the total income of DHHs is significantly higher than the SHHs. In the case of the DHHs covered in this study, for every per unit increase in household income, they devote a greater share of this increased income for saving than their SHHs counterpart. This has a greater implication on the growth of the capital market, especially of the mutual funds market, since the entry of such small savers into the capital market is mainly through mutual funds. Another sector influenced is the insurance sector. This is particularly because the saving of the households are mostly in insurance schemes, post office accounts, fix deposits, employees' provident funds etc.

For the households under study, the expenditure on time-saving consumption by the working-wife households (DHHs) is higher than the non-working wife families (SHHs). Not only this, for per unit increase in the monthly household income, the time-saving consumption expenditure of the DHHs is higher than the SHHs. The higher income tax exemption limit for women also means that the women employees have more income at their disposal which is assumed to be spent more on time- and fatigue- saving consumption expenditures. The increased consumption arising both from the increased income of the households as well as the increased opportunity cost of time have important implications for employment, price stability and economic growth. However, the exact impacts of women's employment on the above factors depend on the market

conditions as well as of the nature of the goods demanded. Also, the increased expenditure by the dual-earner households on the time-saving durables and non-durables suggests good prospects for the growth of such industries. Thus, to some extent, it can be expected that the labour force participation of women may lead to the development of those services aimed at saving the time and fatigue of women taking part in organized labour market.

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