CHANGE IN CONSUMPTION PATTERN OF HOUSEHOLDS AFTER COVID-19 AND THE FACTORS BEHIND THE CHANGE: A MICRO-LEVEL COMPARATIVE STUDY OF BALASORE DISTRICT, ODISHA

Biswajit Sarangi
Post-graduation Student (2020-22)
Department of Analytical & Applied Economics
Utkal University, Vani Vihar, 751004
Email:*brbbiswajit2182@gmail.com*

ABSTRACT

The Covid-19 pandemic has changed the lifestyle and consumption patterns of households drastically. Thus, the study aims to investigate how the consumption pattern of households has changed after the pandemic and what are the prime factors behind this change in the study area. Then for the comparative analysis, pre- and post-pandemic household expenditures are compared based on resident area, income level & family size of the households and the factors are analyzed accordingly, to compare the category-wise change in consumption pattern and influential factors in the study area respectively. The data was collected from 120 households in the study area via multistage random sampling through personal interview method and tools like descriptive statistics, percentage analysis, multiple regression and collinearity diagnostics etc are used for the analysis purpose. However, increase in the price of essential commodities, travelling costs, housing rent & other bills after the pandemic, are found to be the most influential as well as statistically significant factors responsible for the change in consumption pattern of households in the study area i.e., Balasore District of Odisha, India.

Key Words: Households, Consumption Pattern, Comparative Analysis, Covid-19, India & Odisha
JEL Classifications: D10, D31, G51 & P52

1. INTRODUCTION:

"Consumption is the sole end and purpose of all production." – **Adam Smith**

Consumptionis the beginning and end of all economic activities. It refers to the using up of the utility of a commodity for the satisfaction of human wants, while Consumption Pattern means the way through which consumers purchase and consume goods & services to meet their needs. Hence, *Consumption Pattern of households* implies the expenditure pattern of households of different income groups, family sizes and regions, across a variety of products like medicine, food, clothing, travelling, etc. Because household income, family size and residence area have a direct association with the level & composition of consumption expenditureas a whole.

Consumer expenditure is one of the important determinants of the economic situation of a country and significantly affects the country's GDP, since more consumption of some goods and services leads to an increase in their demand and plays a vital role in the determination of income, output, and employment in the country. By observing the consumption pattern of the households in the pre and post covid-19 period, relevant and significant information can be collected, such as the country is moving in which direction, how to efficiently utilise the public budget in the most important areas for the benefit of the households and thus, can serve as a useful tool for policy making.

The Government of India on March 24, 2020, called for a strict lockdown in the entire country to check the spread of the corona virus. The quick and massive spreading of the virus during 2020-21 has changed the way of living of many Indian households. The loss of social and economic life for a very long period during Covid-19, has long-lasting effects on people. People were becoming more health conscious and changing their lifestyles.Along with these, self-isolation, seclusion, social distancing, social lock-downs, restricted mobility, fear of job loss and infection etc. leads to psychological and behavioural changes in individuals. As a consequence of the economic, social and psychological impacts of Covid-19, many people have altered their consumption patterns. But the nature and extent of the impacts of Covid-19 are not similar across all individuals depending on their economic condition, age, residential area, and the like.

However, the above changes have attracted researchers to explore how the consumption pattern of individuals have changed due to Covid-19. Lots of studies have already made viewing the impact of Covid-19 on the consumption pattern of individuals and consumers, but only a few of them deals with the consumption patterns of households. This paper along with studying the way consumption pattern of households changes after the pandemic, also focuses to analyse the socioeconomic factors responsible for the change in the consumption pattern of households. Unlike many other papers, this paper does not blame Covid-19 as the sole cause for the change in consumption patterns of the households, but has considered Covid-19 as an abnormal period and tries to find out the major reasons for the change in consumption patterns of households after this abnormal period. Moreover, the study brings a comparative analysis of the factors responsible for the change in consumption patterns of the households based on resident area, income level and family size.

2. REVIEW OF LITERATURE:

This section presents a brief review of the literature relating to the change in consumption patterns of consumers and households due to Covid-19. Normally, consumers with higher crisis perception reported more behavioural changes due to COVID-19 (Hasan S. et al., 2021). The pandemic greatly affects the lifestyle and consumption pattern of the consumers, especially in the consumption of foods, where the consumers switched to organic, nutrient and home-made foods (Saxena S. et al., 2021). Since the income of the individuals declined during the Covid period, the mean consumption of all occupational groups falls, but the consumption falls less than income (Gupta A. et al., 2021). Though household income falls and thus, the overall consumption expenditure decreased, but the expenditure on food increased and that's why people had to break their savings to purchase food during this situation (Choudhuri T. et al., 2022). Because during the pandemic, consumers had

developed a stockpiling mentality, fearing the unavailability of necessary products like food and medicines (Satish K. et al., 2021 and Saini A. et al., 2022). Hence, there was a decline in the consumption of luxury items or high-value commodities and the consumption of staple foods increased (Shivaramane N. et al., 2020). Sofar as the change in consumption pattern is concerned, the focus was shifted toward essential products such as food & grocery, followed by healthcare products during the pandemic in India (Kumar R. et al., 2021 and Gupta m. et al., 2021). Also, among adolescent girls, the consumption of immunity booster foods was found to be increased (Singh J. et al.,2021). So, Covid-19 has skewed the consumption of healthy diets (Mbijiwe J. et al., 2021). Butthere was a significant decline in the household consumption of milk, paneer, butter and ice-cream during the pandemic, comparatively more in the case of urban households and low-income class, whereas no significant change was observed in the consumption of ghee, curd and buttermilk (Bhandari G. et al., 2021). The consumption of meat was severely affected during the pandemic in India (Faslu et al., 2021) andthetourism sector was also adversely affected by this serious pandemic, where the number of tourists decreased and many physical travel agencies were displaced by online platforms (Toubes D. R. et al., 2021). A majorshift was also observed toward packaged products and online delivery services during the pandemic in India (Bhandari G. et al., 2021). Covid-19 provides a new direction to entertainment, by increasing the use of OTT platforms and social media. The pandemic has brought a change in habits of the consumers, since the changes in demographics, public policy and technology are the major factors for developing new habits and for giving up old habits (Sheth J. et al., 2020). And the pandemic has increased the use of technologies and changed demographics like income, of the consumers. In short, during the Covid-19 period, there was not only lower demand, but also a shift in consumption expenditure toward essential products in India and the pandemic severely dented consumer confidence in India (Mishra A. et al., 2022).

3. RESEARCH GAP:

From all the reviewed literature above, it is evident that the majority of the past studies were interested in searching for the changes in consumption patterns of households before and during the Covid-19 period, not after Covid-19. No prior research again, tried to simultaneously demonstrate the consumption pattern of households and the factors responsiblefor the change in consumption pattern of the households after Covid-19, separately for the households of rural and urban areas as well as for the households of different family sizes & income groups. A comparative study in this particular area only a few. Moreover, many papers considered Covid-19 as the main factor responsible for the change in consumption pattern of the households, but in this paper, Covid-19 is taken only as an abnormal period and efforts are made to investigate the socioeconomic factors responsible for the change in consumption pattern of the households after the abnormal period in the study area. Last but not the least, before this study, no research has been conducted on this ground, to the best of my knowledge, by taking Balasore District of Odisha as the study population. So, this micro-level comparative analysis tries to fill these gaps.

4. OBJECTIVES:

The study aims to demonstrate, in what way the consumption pattern of households has changed after the Covid-19 period as well as to ascertain the socioeconomic factors responsible for the change in consumption patterns in the study area. It also tries to explore how the consumption patterns of households of different regions, income levels& family sizes have changed after the pandemic and to find out the category-wise socioeconomic factors responsible for the change in the study area. Moreover, comparing the results of the category-wise change in consumption patterns and the factors is the prime focus of the study.

The following hypotheses have been developed for empirical testing to accomplish these objectives.

➢ **H_{01}:** There is no change in the consumption pattern of households ofdifferent regions, family sizes and income groups, in the study area after Covid-19.

➢ **H_{02}:** There is no difference between the factors responsible for the change in the study area's consumption patterns of rural & urban households.

➢ **H_{03}:** The factors responsible for the change in the consumption patterns of households of different income groups in the study area, are the same.

➢ **H_{04}:** Causes for the change in consumption patterns of households of different family sizes are the same in the study area.

➢ **H_{05}:** There will be no multi-collinearity among the factors responsible for the change in consumption patterns of the households.

5. DATA SOURCE & METHODOLOGY:

The present study is based upon primary data, collected via a multi-stage random sampling method, through a direct interview from 120 households (*60 each from the rural and urban area*) of Jaleswar Block, Balasore District, Odisha, in the months of June and July of 2022. The data about the urban households were collected from the households living in the area of Jaleswar Municipality, and that of rural households were collected from Rajpur and Ulinda Villages, which come under the Rajpur panchayat of the block.

Initially, a total of 129 samples was collected and out of the 129 samples or households, 120 households were selected for the research purpose, since 9 households accepted that they have not experienced any change in their consumption pattern after the Covid-19 period, but too admitted that they experience a certain change in their consumption pattern only during the Covid-19 period due to unavailability of some products for lock-down & shut-downs as well as for more diversion towards health care products that time. Hence, all the figures and tables in this study, are merely based on the data provided by the 120 respondents, who accepted that their consumption pattern has changed after the Covid-19 pandemic.

Various statistical tools like Descriptive Statistics, Percentage Analysis, Multiple Regression Analysis, collinearity diagnostics (*Tolerance & Variance Inflation factor*), Cross Tabulation, Pie-Charts and Bar diagrams are used for analysis. All of the calculations and figures used in this study are done through IBM SPSS software and MS Excel.

6. DATA INTERPRETATION& ANALYSIS:

This section focuses on analysing and interpreting the data using various statistical tools to conclude the major findings.

1) Demographic Profile of the Respondents:

This part describesthe socioeconomic information about the households based on their residence area, family type, family size, monthly household income, no. of dependent and working members of the households or families. Itcanbeunderstoodthrough the following frequency-percentagetable.

Table – 1.1 : Respondent'sprofile

Demographic Factors	Category	Frequency	Percentage	Cumulative Percentage
Home Area	Rural	60	50.0	50.0
	Urban	60	50.0	100
	Total	**120**	**100**	
Family Type	Joint	17	14.17	14.17
	Nuclear	103	85.83	100
	Total	**120**	**100**	
Family Size	0 – 4	68	56.67	56.67
	5 – 8	44	36.67	93.34
	9 – 12	08	6.66	100
	More Than 12	00	__	100
	Total	**120**	**100**	
Number Of Dependent members	0 – 2	78	65.0	65.0
	3 – 5	39	32.5	97.5
	More Than 5	03	2.5	100
	Total	**120**	**100**	
Number Of Working Members	01	76	63.33	63.33
	02	23	19.17	82.5
	03	12	10.0	92.5
	More Than 3	09	7.5	100
	Total	**120**	**100**	
Monthly Household Income	Less Than 15000rs	36	30.0	30.0
	15000 – 30000rs	58	48.33	78.33
	More Than 30000rs	26	21.67	100
	Total	**120**	**100**	
Average Monthly Household Income		**19756.84rs**		

(Source: Primary Data)

Table – 1.1 shows that the majority of the households live in nuclear families (85.83%) and most of them belong to the family size 0 to 4 members (56.67%), followed by 5 to 8 members (36.67%). In 65% of families, the number of dependent members is between 0 to 2, followed by 3 to 5, in 32.5% of families &more than 5, in 2.5% of families. Likewise, in 63.33% of families, the number of working members is one, followed by two, three &more than three working members in 19.17%, 10% & 7.5% of families respectively. Majority of the household's monthly income is between 15000rs to 30000rs i.e., 48.33%, while the average monthly income of all the households is 19756.84rs.

However, the region-wise average monthly incomes are, 13748.52rs and 24479.68rs for rural and urban areas respectively. Similarly, the average monthly household income based on income levels are, 8494.31rs, 21718.62rs and 39427.66rs for income levels less than 15000rs, 15000rs to 30000rs and more than 30000rs respectively. Lastly, the average monthly household income based on family sizes are, 21813.14rs, 26411.36rs and 12973.82rs for the family size 1 to 4, 5 to 8 and 9 to 12 members respectively. All of these are presented in the following three figures i.e., from the figure – 1 to figure – 3 respectively.
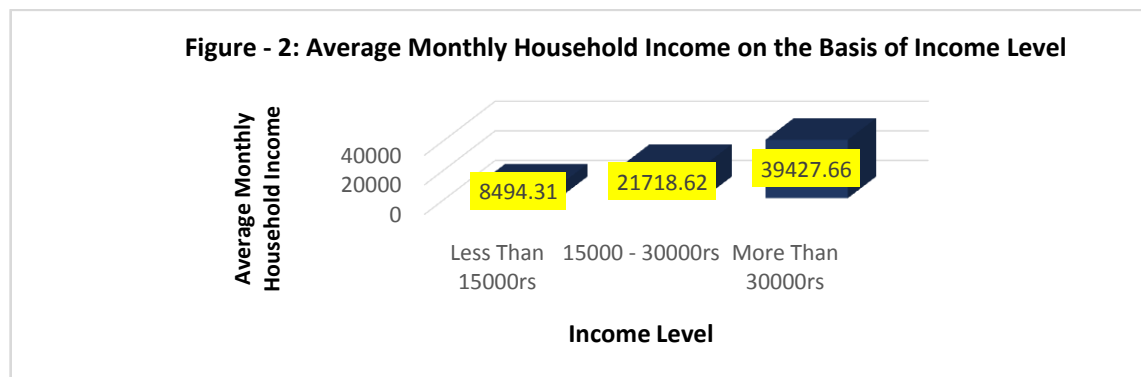

Figure - 1: Region-wise Average Monthly Household Income

Figure - 2: Average Monthly Household Income on the Basis of Income Level
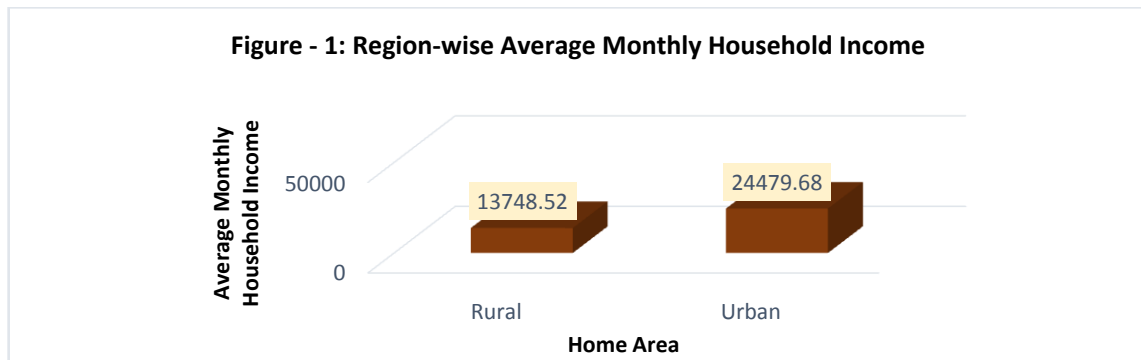
Figure - 3: Average Monthly Household Incom on the basis of Family Size
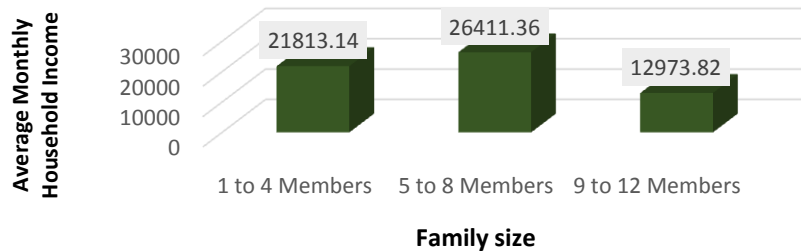
Figure - 4: Occupation of the Working Members
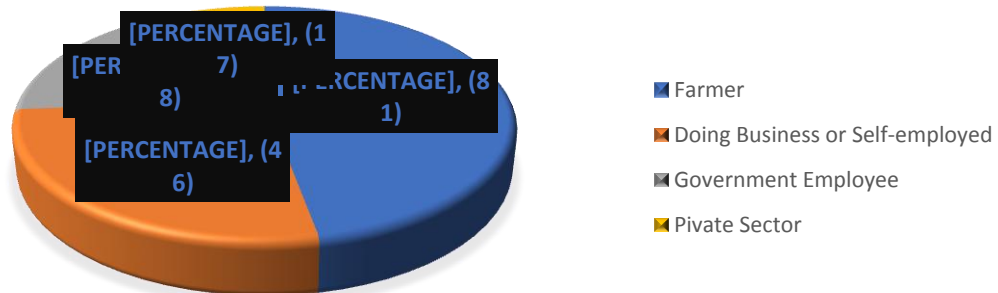
Figure – 4 shows the different occupations of the working members in the families or households. Out of the total 172 working individuals, 47.09% or 81 individuals are farmers, whereas 26.74% are doing some business or are self-employed. 16.28% are government employees and only 9.88% are engaged in the private sector.

Figure - 5: Situation of Farmers & Businessmen after Covid-19

	Farmer	Doing Business or Self-employed
Profitable	8	34
Loss	73	12

Figure - 6: Increase in Income of the Households after the Pandemic

No 9.17%

Yes 90.83%

From figure – 5, it is evident that out of 81 individuals engaged in agriculture, only 8 are making profits, while 34 individuals are enjoying profit from their businesses, out of a total of 46 individuals, after Covid-19. After all, 90.83% of the total households have revealed that their total family income increased after the pandemic, shown in figure - 6.

2) Consumption Pattern of the Households Before And after Covid-19:
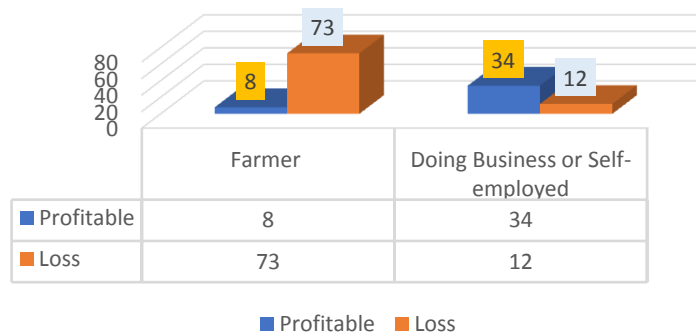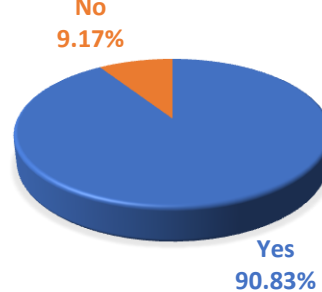
This portion endeavours to describe the consumption pattern of households before & after Covid-19, by considering their family size, residence or home area and monthly household income level, to demonstrate the way, the consumption pattern of households has changed after the Covid-19 pandemic. In all the following tables, the *average monthly spending of households* is taken into account. For the purpose of analysis, the consumption expenditure of the households is divided into twelve categories.

Table – 2.1: Average Consumption Expenditure of Households before And after Covid- 19:

Sl. No	Spending Area	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19
1	Food, Groceries & Cooking Instruments	4533.96	4949.05
2	Dress & shoes	1407.54	1177.35
3	Cosmetics & Toiletries	1495.09	546.22
4	Education	941.22	1269.27
5	Furniture	1543.26	1297.35
6	Ornaments	1630.68	1619.43
7	Medicine & Health Care	624.32	914.42
8	Sanitizer, Mask & PPE Kit	83.14	255.66
9	Travelling	1073.47	1328.30
10	Entertainment	213.20	758.22
11	Saving & Insurance	4169.43	3522.17
12	House Rent	394.33	516.98
13	Mobile, Water & Electricity Bills	920.82	1265.47
14	Others	391.50	307.54
Sum of Average Monthly Spending		**19421.96rs**	**19727.43rs**

Source: Author's Compilation

From the comparison of consumption patterns, before and after covid-19 in table – 2.1, it is found that the consumption expenditure on dresses& shoes, cosmetics & toiletries, furniture, and travelling are highly decreased. The expenditure on ornaments is found to be not significantly decreased. Moreover, the expenditure on saving & insurance also declines. That implies households after Covid-19, spend more and save less, which is supported by the sum of average monthly spending. On the other hand, the consumption expenditure on food, groceries & cooking instruments *(like gas, utensils etc)*, medicine and health care, sanitizer, mask & PPE kit, travelling *(amount spend on fuel, bus fare etc)*, Entertainment *(amount spend on a monthly subscription for TV channels & OTT Platforms, Video games, Sports and Gym instruments etc.)* are massively increased. The expenditure on education, house rent and mobile, water & electricity bills are also highly increased.

Table – 2.2: Average Consumption Expenditure of Households before & after Covid- 19 based on Region:

Spending Area	Rural Households		Urban Households	
	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19
Food, Groceries And Cooking Instruments	4672.84	4984.27	4087.14	4572.58
Dress & shoes	1087.74	954.73	1764.72	1573.28
Cosmetics & Toiletries	367.96	293.68	1293.92	1063.54
Education	424.21	634.11	1517.64	1628.09
Furniture	743.64	644.39	1904.81	1735.87
Ornaments	1334.25	1288.92	1943.38	1887.62
Medicine & Health Care	349.18	574.46	894.69	1056.36
Sanitizer, Mask & PPE Kit	92.84	208.34	96.32	273.02
Travelling	667.26	964.47	956.53	1184.42
Entertainment	196.87	418.92	439.78	1035.64
Saving & Insurance	2192.42	1287.23	6654.06	5243.65
House Rent	287.93	364.87	576.72	968.43
Phone, Water & Electricity Bills	364.74	465.37	1123.56	1428.46
Others	491.53	377.13	435.67	354.51
Sum of Average Spending	**13273.41rs**	**13460.89rs**	**22788.94rs**	**24005.47rs**

Source: Author's Compilation

The cross-tabulation named table – 2.2, represents the average consumption expenditure of both rural and urban households before and after Covid-19, to show the region-wise household consumption pattern before and after the pandemic. There is no significant change in the sum of average monthly spending of rural households before & after the pandemic, but that of urban households has raised stupendously. That implies in rural areas the income of the households has not raised as much as the households belonging to urban areas, after the pandemic. However, both the households, spend more and save less after the pandemic. The consumption expenditure on food, groceries & cooking instruments, education, medicine & health care, sanitizer, mask & PPE kit, travelling, entertainment, house rent and phone, water & electricity bills are found to

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9

be increased in both the households and that of dress & shoes, cosmetics & toiletries and furniture are decreased. The expenditure on ornaments is slightly decreased.

Table – 2.3: Households' Average Consumption Expenditure before & after Covid- 19 based on Income Level:

Spending Area	Less Than 15,000rs		15,000 – 30,000rs		More Than 30,000rs	
	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19
Food, Groceries And Cooking Instruments	3278.26	3865.12	4682.24	4927.55	5043.89	5936.73
Dress & shoes	953.81	763.28	1625.63	1467.23	2484.32	2033.12
Cosmetics & Toiletries	188.92	126.78	1267.54	1078.38	2838.71	2634.37
Education	761.23	845.67	1365.67	1554.65	1455.34	1937.86
Furniture	528.56	459.81	1876.45	1676.53	2354.21	2203.63
Ornaments	653.46	675.27	1967.56	1932.38	4832.54	4143.25
Medicine & Health Care	372.37	472.83	986.34	1187.65	935.64	1164.33
Sanitizer, Mask & PPE Kit	57.84	105.35	108.23	260.66	90.32	343.14
Travelling	276.58	342.24	1154.54	1264.32	1854.76	2134.53
Entertainment	197.46	334.54	576.42	927.18	789.47	943.18
Saving & Insurance	333.76	154.37	3602.59	4024.91`	9675.96	11753.46
House Rent	288.65	367.82	752.62	1023.56	1833.24	1937.32
Phone, Water & Electricity Bill	367.52	452.54	1176.53	1389.54	2039.62	2348.29
Others	356.87	365.78	476.26	353.28	1422.21	1329.24
Sum of Average Spending	**8615.29rs**	**9331.40rs**	**21618.62rs**	**21042.91rs**	**37650.23rs**	**40842.45rs**

Source: Author's Compilation

The cross-tabulation named table – 2.3, represents the average consumption expenditure of households based on income level before and after Covid-19, to show the income level-wise consumption pattern of households before & after the pandemic. The consumption expenditure on education, food, groceries & cooking instruments, medicine & health care, sanitizer, mask & PPE kit, travelling, entertainment, house rent and phone, water & electricity bills are found to be increased in both the households and that of dress & shoes, cosmetics & toiletries, ornaments and furniture are decreased. But the sum of average monthly spending of the households having income level, less than 15000rs and more than 30000rs have increased after the pandemic and that of income level 15000rs to 30000rs has declined. However, the expenditure on saving and insurance has increased after Covid-19, for the households belonging to the income group of 15000rs to 30000rs & more than 30000rs.

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10

Table – 2.4: Households' Average Consumption Expenditure before & after Covid- 19 based on Family Size:

Spending Area	01 – 04 Members		05 – 08 Members		09 – 12 Members	
	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19	Households' Average Spending Before Covid-19	Households' Average Spending After Covid-19
Food, Groceries And Cooking Instruments	3065.41	3767.04	4632.25	5374.53	5765.36	6076.43
Dress & shoes	1654.39	1565.54	1739.72	1528.37	1067.15	852.68
Cosmetics & Toiletries	1276.63	1154.46	1154.43	967.54	378.87	306.52
Education	1264.96	1434.25	1334.79	1544.43	926.38	1139.45
Furniture	1143.74	1016.29	1975.36	1754.85	835.84	678.23
Ornaments	3054.38	2825.16	1673.83	1578.23	1406.73	1275.54
Medicine & Health Care	967.69	1156.23	937.32	1178.34	367.48	563.57
Sanitizer, Mask & PPE Kit	74.36	196.52	81.14	138.72	89.37	206.83
Travelling	976.42	1095.13	1243.47	1496.44	576.12	971.22
Entertainment	524.33	743.24	748.93	947.15	306.19	341.31
Saving & Insurance	3956.37	4743.51	4131.26	3803.36	977.46	867.98
House Rent	754.26	965.47	493.62	643.21	297.33	357.62
Phone, Water & Electricity Bill	967.65	1076.34	628.91	874.83	602.28	963.73
Others	416.06	454.56	487.49	496.72	278.59	372.27
Sum of Average Spending	**20096.65rs**	**21404.61rs**	**21262.52rs**	**22326.72rs**	**13875.15rs**	**14973.38rs**

Source: Author's Compilation

The cross-tabulation named table – 2.3, represents the average consumption expenditure of households based on family size before and after Covid-19, to demonstrate the family size-wise consumption pattern of households before & after the pandemic. The difference between the consumption pattern before and after the pandemic in all three categories of family size is found to be the same as the previous three tables i.e., The consumption expenditure on food, groceries & cooking instruments, education, medicine & health care, sanitizer, mask & PPE kit, travelling, entertainment, house rent and phone, water & electricity bills are found to be increased in both the households and that of dress & shoes, cosmetics & toiletries, ornaments and furniture are decreased. The sum of average monthly spending of all categories of households has raised after the pandemic, but the expenditure on saving & insurance has increased only for the households belonging to the family size of one to four members, since they have the least no. of dependent members in the family.

3) Factors Responsible for the Change in Consumption Pattern of the Households after Covid-19:

This portion mainly tries to explain the reasons for the change in consumption patterns of households after Covid-19, by considering their family size, residence area and average monthly household income.

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11

Table – 3.1: Factors Responsible for the Change in Consumption Pattern of Households based on Home Area:

Sl. No	Factors/Reasons	Residence Area		Total Frequency	Percentage
		Rural	Urban		
1	Job Loss / Declined from Job / Change in Profession after Covid	0	1	01	0.83
2	Getting High / Low Income after the Covid-19	2	2	04	3.33
3	Delay in Receiving Payment or Increment	2	1	03	2.5
4	Gain / Loss in Agriculture after Covid	4	1	05	4.17
5	Gain / Loss in Business or Shop after the Pandemic	2	3	05	4.17
6	Increase in the Price of Essential Commodities after the Covid	23	6	29	24.17
7	Increase in Travelling Costs after the Pandemic	10	11	21	17.5
8	Increase in Housing Rent & Other Bills after the Pandemic	3	21	24	20.0
9	More Diversion Towards Medical & Health Care Products	6	8	14	11.67
10	More Diversion Towards Entertainment	1	2	03	2.5
11	More Diversion Towards Education	5	3	08	6.66
12	Others	2	1	03	2.5
	Total	**60**	**60**	**120**	**100**

Source: Author's Compilation

The cross-tabulation, table – 3.1 shows that Increase in the price of essential commodities (24.17%), increase in housing rent & other bills (20%) and Increase in travelling costs after the pandemic (17.5%), are the three major factors responsible for the change in consumption pattern of the households after the covid-19. However, the major three factors forrural households are, increase in the price of essential commodities (23), travelling costs(10) and more diversion towards medicine and health-care products after the pandemic(06) and that of urban households are increase in travelling costs (11), housing rent & other bills(21) and more diversion towards medicine & health care products(8).

Table – 3.2: Factors Responsible for the Change in Consumption Pattern of Households based on Income Level:

Factors/Reasons	Income Level (in %)			Total Frequency	Percentage
	Less Than 15,000rs	15,000 – 30,000rs	More Than 30,000rs		
Job Loss / Declined from Job / Change in Profession after Covid	0	1	0	01	0.83
Getting High / Low Income after the Covid-19	3	1	0	04	3.33
Delay in Receiving Payment / Increment	0	3	0	03	2.5
Gain / Loss in Agriculture after Covid	4	1	0	05	4.17
Gain / Loss in Business or Shop after the Pandemic	1	2	2	05	4.17
Increase in the Price of Essential Commodities after the Pandemic	18	10	1	29	24.17
Increase in Travelling Costs after the Pandemic	2	13	6	21	17.5
Increase in Housing Rent & Other Bills after the	2	16	6	24	20.0

Pandemic					
More Diversion Towards Medical & Health Care Products	**4**	7	3	14	11.67
More Diversion Towards Entertainment	0	0	3	03	2.5
More Diversion Towards Education	1	2	**5**	08	6.66
Others	1	2	0	03	2.5
Total	**36**	**58**	**26**	**120**	**100**

Source: Author's Compilation

The cross-tabulation, table – 3.2 demonstrate the factors responsible for the change in consumption pattern of households based on income level. The prime factors causing the change in consumption pattern for the households belonging to the income group less than 15000rs are, Increase in the price of essential commodities (18), more diversion towards medicine and health care products (04) and gain or loss in agriculture (04) after the pandemic and that of income group 15000rs to 30000rs are, increase in housing rent & other bills (16), travelling cost (13) and the price of essential commodities (10) after the pandemic. Similarly, the three mainreasons for the change in consumption pattern of households of an income level of more than 30000rs are increase in housing rent & other bills (06), travelling costs(06) and more diversion towards education (05).

Out of the five households, who choose gain or loss in agriculture after the pandemic as their most affecting factor for the change in their consumption pattern, all of them said that they incur a loss in agriculture after the pandemic, due to the low selling price of paddy i.e., at 1940rs per quintal, while out of the five households who choose gain or loss in business or shop after the pandemic, 80% or 4 of them said that they are enjoying profit in their business and shops after the pandemic. Moreover, out of the four households, who choose that their income after the pandemic has changed, all of them reported a rise income after the pandemic period.

Table – 3.3: Factors Responsible for the Change in Consumption Pattern of Households based on Family Size:

Factors/Reasons	Family Size (in %)			Total Frequency	Percentage
	0 – 04 Members	05 – 08 Members	09 – 12 Members		
Job Loss / Declined from Job / Change in Profession after Covid	0	0	1	01	0.83
Getting High / Low Income after the Covid-19	0	4	0	04	3.33
Delay in Receiving Payment / Increment	1	2	0	03	2.5
Gain / Loss in Agriculture after Covid	0	4	1	05	4.17
Gain / Loss in Business or Shop after the Pandemic	2	3	0	05	4.17
Increase in the Price of Essential Commodities after the Pandemic	8	**16**	5	**29**	**24.17**
Increase in Travelling Costs after the Pandemic	**19**	2	0	**21**	**17.5**
Increase in Housing Rent & Other Bills after the Pandemic	**18**	**6**	0	**24**	**20.0**
More Diversion Towards Medical & Health Care Products	**9**	4	1	14	11.67

More Diversion Towards Entertainment	3	0	0	03	2.5
More Diversion Towards Education	7	2	0	08	6.66
Others	1	1	0	03	2.5
Total	**68**	**44**	**08**	**120**	**100**

Source: Author's Compilation

The cross-tabulation, table – 3.3 presents the factors responsible for the change in consumption patterns of households based on family size. For a family size of one to four members, the major factors are the increase in travelling costs(19), increase in housing rent & other bills (18) and more diversion towards medicine and health care products (09) after the pandemic and that of the family size of five to eight members are, Increase in the price of essential commodities (16), increase in housing rent & other bills (06), more diversion towards medicine and health care products (04) and getting high or low income after covid-19 (04). The most important factor responsible for the change in consumption pattern of the family size having nine to twelve members is the increase in the price of essential commodities (05).

However, in order to know whether the factors are statistically significant or not, we have to run a multiple regression, by taking all of these variables as independent variables and the monthly income of the households as the dependent variable. Here, the monthly household income, is used as a proxy for the household consumption pattern or household consumption expenditure.

Table – 3.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.895[a]	.681	.613	.749

a.   Predictors: (Constants), Independent Variables

Table – 3.5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.250	13	3.942	24.991	.000[b]
	Residual	126.731	106	1.195		
	Total	177.981	119			

a. Dependent Variable: Monthly Household Income

b.   Predictors: (Constant), Independent Variables

From table – 3.4, it is found that a total of 68.1% of the variation in the dependent variable is explained by the independent variables in the model. Table – 3.5 shows whether the proportion of variance explained by table – 3.4, is significant or not i.e., whether the overall effect of the independent variables on the dependent variable is significant or not. Here, all the independent variables have a significant combined effect on the dependent variable, since $F(13, 106) = 24.991$ and the overall significance level is 0.00(< 0.05), thus the model is statistically significant at a 95% confidence interval.

In table – 3.6, all the variables except, job loss or decline from job or change in profession after covid, delay in receiving payment orincrement and more diversion towards entertainment are found to be statistically

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14

insignificant at a 95% confidence interval, as their p-value or significance level is more than 0.05 and their t-value is less than 1.96. However, all variables except, receiving high income after covid and profit in business or shop after the pandemic, are positively affecting the consumption pattern of the households. Moreover, it is also found from the standardized betasthat increase in the price of essential commodities (-0.327), increase in housing rent & other bills (-0.311) and increase in travelling cost after the pandemic (-0.276) are the most influential factors affecting the consumption pattern of the households in the study area. Since the VIF or variance inflation factor for the factors are very low and that of the tolerance is high, there is a very low degree of multi-collinearity found among the independent variables i.e., there is no significant multicollinearity in the model that needs to be corrected.

After the pandemic, there is a sharp increase in the prices of petrol, diesel, cooking oil, gas, food grains, vegetables, house rent and electricity bills in India. According to world bank data, India's annual CPI in 2021 was 5.13%. All these imply that after the covid-19, the price of necessary commodities, travelling costs, house rent and electricity bills are highly increased. It is too seen that after the pandemic household spending on children's education and entertainment has increased for the shift towards online education & OTT platforms. Covid made households more health conscious than before that led to an increase in the expenditure on medicine and health care products. Hence, these are the prime factors responsible for the change in consumption patterns of households.

In addition to these, it is viewed that after the pandemic all households are highly active in online shopping and they spend around 5% to 8% of their total consumption expenditure on online shopping. The most purchased products from the e-stores by the households in the study area are dresses& shoes (46%) and educational products like books, notebooks, pens, maps etc (27%). The age group of 20 to 35 years, family size of one to four members, income group of more than 30000rs and urban households are found to be more active in online shopping.

Table – 3.6: Coefficients[a]

Model	Unstandardized Coefficients		Standardized coefficients	t	Sig.	Collinearity Diagnostics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	1.416	.109		13.041	.000		
Job Loss / Declined from Job / Change in Profession after Covid	-.417	.062	-.071	1.036	.327	.931	1.032
Receiving High Income after the Covid-19	1.584	.098	.166	3.810	.028	.962	1.264
Delay in Receiving Payment orIncrement	-.392	.076	-.214	1.694	.114	.923	1.068
Loss in Agriculture after Covid	-.548	.093	-.083	4.633	.000	.914	1.069
Profit in Business or Shop after the Pandemic	.562	.049	.089	4.703	.000	.983	1.069
Increase in the Price of Essential Commodities after the Pandemic	-1.942	.133	.327	4.978	.000	.907	1.024
Increase in Travelling Costs after the Pandemic	-1.624	.064	.276	3.052	.000	.992	1.008
Increase in Housing Rent & Other Bills after the Pandemic	-1.918	.057	.311	5.537	.000	.976	1.103
More Diversion Towards Medical & Health Care Products	-1.347	.084	.209	4.671	.000	.958	1.106
More Diversion Towards Entertainment	-.174	.169	.041	1.597	.097	.934	1.027
More Diversion Towards Education	-.429	.102	.078	2.892	.000	.969	1.039
Others	.193	.131	.013	1.602	.216	.791	1.052

a. Dependent Variable: Monthly Household Income

Source: Author's Compilation

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7. CONCLUSION:

The present study indicates that there is a huge change in the consumption pattern of households after Covid-19 in the study area. There is found to be only a little change in the consumption pattern of households of different regions, family sizes and income groups in the study area after the pandemic. The household consumption expenditure on dresses& shoes, cosmetics & toiletries, furniture, and travelling is highly decreased, while the spending on food, groceries & cooking instruments, education, medicine & health care, sanitizer, mask & PPE kit, travelling, entertainment, house rent and phone, water & electricity bills are found to be increased. However, the spending on ornaments has decreased after Covid-19, but not significantly. Similarly, a very negligible difference between the factors responsible for the change in consumption patterns of the households of different resident areas, income levels and family sizes, is found in the study area. Factors such as increases in the prices of essential commodities, travelling costs, housing rent & other bills and more diversion towards medicine & health care products, are the four most influential as well as statistically significant factors responsible for the change in consumption patterns of households in the study area. Also, no multi-collinearity is found among the independent variables.

Though around 91% of the total household accepted that their monthly household income has increased after the pandemic period, yet the majority of the households spend more and save less, as compared to the pre-covid period. It is supported by the data collected by the Ministry of Statistics and Programme Implementation that consumer spending in India increased to 24771.60 INR Billion in the fourth quarter of 2022 from 23091.55 INR Billion in the third quarter of 2022, while the growth rate of GDP in India was 8.7% for the year 2022. So, an increase in both income and consumption expenditure of the households implies a greater scope for development in India.

8. RESEARCH IMPLICATIONS & SUGGESTIONS:

From the consumption pattern of a country, it can easily be depicted, in which way the particular country is moving. As found from the above analysis that the household consumption expenditures on food, groceries, cooking instruments (*like gas& utensils*), travelling, housing rent, electricity & water bills have increased afterCovid-19. That implies the Government have to provide some subsidies to the households in case of purchasing gas, staple foods, petrol and diesel. Because more expenditure on food implies the backward conditions of the people living in it and more expenditure on travelling due to hike in oil prices after the pandemic predicts the case of high inflation in the country. Since more diversion towards entertainment, education, medicine and health care products are found after the pandemic, it implies that there is higher scope for human capital development in the country. It is also found that after the Covid, the majority of businessmen earn more profit than before, which indicates better scope for business after the pandemic. But, the loss in agriculture in the post covid era indicates the need for special attention from the Govt. towards the agricultural sector. Finally, an increase in both income and expenditure of the households after the pandemic in India indicates a bright future for India.

However, there might be some other factors having a significant influence on the change in consumption patterns of the households, which leaves the scope for further research with a greater sample size.

Conflicts of Interest: The author declares no conflict of interest.

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