Intra-Household Variations in Consumption, Education and Economic Attainments in Uttar Pradesh

REPORT

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Submitted by

B.K. Bajpai

GIRI INSTITUTE OF DEVELOPMENT STUDIES

(An Autonomous Institute Funded by ICSSR and Govt. Of UttarPradesh)
Sector - O, Aliganj Housing Scheme
LUCKNOW - 226024, U.P.
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Preface

Inequalities in the distribution of resources have adverse impact on the economic well-being of individuals. The micro as well as macro level impact of such inequalities have been a subject matter of social science research over the time and again. Such studies have been conducted in developed as well as in developing countries. But the fact of the matter is that greater attention was focused on the assessment of inter household variations in consumption, education and other development parameters. The question of intra household measurement of inequalities could not get due attention. Since family plays an important role in the allocation of resources for its individuals that leads to generation of intra household variations in different economic parameters.

The state of Uttar Pradesh is the largest in terms of population and a very large number of poor resides in the state compared to certain developed states in the country. It is the fact that there is a considerable level of disparity in economic and social development across various social, religious and agro-climatic zones of the state. In order to manage the development of state, there is need to pay equal attention in order to minimize the intra household inequalities in different economic indicators.

The main objective of this study is to measure the intra household variations in consumption expenditure, education and, employment and unemployment on the basis of NSSO Unit Level Data and Primary Data collected in Western, Central, Eastern and Bundelkhand regions of Uttar Pradesh. The analysis is based on descriptive statistics, Deaton approach and Theil Index decomposition analysis.

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Last but not the least, I feel thankful to Shri R.S. Bisht for extending administrative support.

April, 2020   **B.K. Bajpai**
                                                               Project Director

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Chapter-I

Intra-Household Variations in Consumption, Education and Economic Attainment in Uttar Pradesh

I.1 Study on Intra Household Variations:

The Directorate of Economics and Statistics (DES), Department of Planning, Government of Uttar Pradesh has been making its best efforts towards strengthening the statistical system in the state. One such endeavor relates to improving Gross State Domestic Product (GSDP) estimates periodically. It has identified several sectors of the state economy of Uttar Pradesh which are not being captured adequately in the estimation of GSDP. Accordingly, the DES aims at initiating a series of studies for understanding and strengthening its GSDP estimates. One of such sectors which assumes importance in the measurement and distribution of income relates to intra-household inequalities in various indicators of development that are likely to affect the overall magnitude of state income. We intend to study this important issue which is scantly explored in the Indian context due to paucity of data at intra household level for its individual members.

Inequality in distribution of income or resources and its impact on economic well-being of individual at micro level as well as at the macroeconomic level has been a matter of intense inquiry over time and again. In the last two decades or so there has been ample empirical evidence regarding rising inequalities both in income and consumption expenditure. It has been found true for both developed as well as developing countries. In all these evidence the unit of inequality analysis has been the household. However, such studies could hardly focus on intra-household dynamics of consumption, income and resource allocation, which have far reaching impact on the overall household's well-being.

Although theoretically in the field of utility demand analysis an individual has been the core unit, but due to asymmetries of information within household, empirical evidences on intra-household inequalities are very less. There has been large body of theoretical literature developed since 1960s (starting with Becker) but the assumption are validated and rejected again and again. There has been evidence of intra-household discrimination and pro male bias in economic decision making like nutrients allocation, expenditure particularly

schooling, health, migration and command over resources (Sen and Sengupta, 1989; Behrman, 1992 etc). Despite this, the household remained as allocation unit with some advancement of eliminating such discrimination in the form of conditional transfers[1].

Theoretically there are different approaches to analyze the intra-household variation in terms of allocation of the resources. Most popular is the debate between unitary versus collective approach of intra-household resource allocation which is reflected and measured through income and expenditure information of the household and its members. Time and again theoretical approaches provide justification about the discrimination and discrepancies in intra-household consumption variations. The other major needs of intra household analysis is the advancement in the l evel of education of (both male and female), increasing female participation in formal employment and their contribution in earnings. With the economic empowerment of women the decision making within household may change which has definite impact on resource allocation. Improving education level and participation in society may break what Sen (1999, 62) calls as endogenous or adaptive preference of female to adjust with the situation. The change in source of income is strong variable to effect within household allocation. As Lise and Seitz (2011) has noted:

> …. "if consumption allocation depends on the source of income and the sources of income within household have changed over time, then adult equivalence scales will produce an inaccurate picture of the trends in consumption inequality.."

I.2   Indian Case:

Developing country like India has still large proportion of population living in absolute poverty. Among different strategies, state transfers through various schemes to improve individual standard of living has a crucial role in the economic development. In this strategy individual welfare is assumed to be the average of the household based on adult equivalence. However, between the welfare policies of the state and the individual well-being, family plays an intermediary role. The household decision making has an important implication on the resource allocation for the individual and thus generates intra-household variations in different indicators including consumption, educational attainment, employment, income, etc. Uttar Pradesh being the largest state in terms of population size has

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[1] In India cash transfer in JSY for delivery in government hospital and 33 percent of female participation in MNREGA has been an attempt to improve delivery of gain at required individual level.

also relatively higher number of poor as compared to other states. At the same time there is considerable level of disparity in economic and social development across its different agro-climatic regions as well as across various social groups. To achieve the development of the state improving the standard of living of the individual will have synergic effect. However, the effort directed at the household ignores the crucial discrepancies that exist within household which have larger impact on achieving overall desired outcome(s).

I.3   Objectives:

The major objective of the study is to measure intra-household variations in consumption expenditure, education and other economic indicators such as employment and income. Effort has been made to calculate certain indicators that can be used for prospective intra-household variations. To monitor certain indicators at individual level will be helpful in designing and tracking policy in a better manner. Thus, this is not a kind of work to do impact analysis of any discrimination or intra-household inequality on certain outcome variables (like impact of nutrient allocation on anthropometric measures of health).

I.4   Approach of the Study: Data and Methodology:

As mentioned above, despite the cruciality of the issue one of the major hurdles in intra household empirical research is the paucity of data at the individual household level. National Sample Survey Organization (NSSO) under Ministry of Statistics and Program Implementation (MoSPI) collects detailed information on consumption expenditure and other indicators like education, employment etc in thick rounds of Consumption Expenditure Survey (CES) and Employment Unemployment Survey (EUS). There are certain limitations of the data which inhibits the analysis of intra household allocation. Listing the few includes:

➢ First, questions in CES are framed at the household level and not at the individual level. Per capita expenditure is calculated on the basis of adult equivalence scale.

➢ Second, questions regarding individual activity status have not been asked in the CES for every members of the household.

➢ Third, although expenditure on education and health is asked in CES but it contains no clue of type of institutions and also for each individual within a household.

➢ Fourth, although in EUS information on activity status of every household member is collected but the expenditure data is not a detailed expenditure across each individual, which restricts the even tentative intra household analysis.

➢ Fifth, the question regarding educational attainment of each household member is probed in CECs, but hardly reflects other information such as quality of institution, expenditure on each individual information. Such details on education are collected in special rounds on education and thus can be used for calculating intra-household inequalities. But these variations can be measured not for all household members but only for those currently attending educational institutions.

➢ Sixth, certain questions like decision making in resources allocation is not available which is very crucial for examining the possible indicator(s) of variations in intra household consumption and other indicators.

NSSO's unit record data on CES and EUS of various thick rounds has been utilized to study the different household indicators for examining the intra household variations. Given the objectives of the study and the limitations of the available secondary information, it becomes essential to collect data through an in depth primary survey for measuring intra-household variations in consumption, education and economic empowerment among others from a same set of sample households.

I.5   Secondary Data Analysis:

The entire analysis has been carried out in relation to four broad dimensions. Each dimension encompasses many indicators which have been analyzed in the preceding chapters. The first dimension is Household Consumer Expenditure. The secondary data related to this aspect has been obtained from NSSO 68th Round Type 1 and Type 2 (July 2011-June2012) Unit-Level Data. The other dimension of intra-household variation is income for which household consumption expenditure data will be used as proxy of income. The data related to this aspect will also be utilized from the same NSSO survey. The third dimension of intra-household variation is the Education. The data on this aspect has been used from the NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017-June 2018). The last dimension is employment and unemployment. The data on this dimension will be utilized from NSSO survey on Periodic Labour Force Survey Data, 2017.

The measurement of Intra-Household variations is carried through many mathematical formulas. In the analysis of each indicator, mathematical analysis has varied from one to other chapter. Therefore, different formulas have been applied in different chapters depending upon the suitability of available data. However, it has been tried best to make entire analysis in each chapter simple and well understandable. Keeping this idea prime

in our mind, we have mostly used L-Theil Index to measure the intra household inequalities in case of our identifies indicators in most of the chapters.

I.6 Primary Survey: Sampling Design and Sample Size:

For achieving precision in the measurement of intra-household variation in consumption, education, employment and income, primary data has been collected by using multi-staged stratified random sampling. The sample is representative of the state level population and due care has been taken to ensure its representativeness of different social groups that includes SCs, OBCs and Others. Since Uttar Pradesh has very less ST populations that too concentrated in few places but they have taken in our sample too.

There are four economic regions in Uttar Pradesh, namely, Western, Central, Eastern and Bundelkhand. Region-wise equal sample villages and urban blocks have been selected. From each region, one representative district was selected and from the selected district 8 villages were selected on random basis. 3 districts have been selected from urban areas as sample on random basis. An interval (N/n) factor has been calculated by dividing the number of total villages/urban ward (N) in the district by the number of village/ward (n) to be selected. After selecting the first village/urban ward randomly, every $(N/n)^{th}$ village/urban is selected until we get the required number of village/urban.

Figure 1: Sample Design Framework
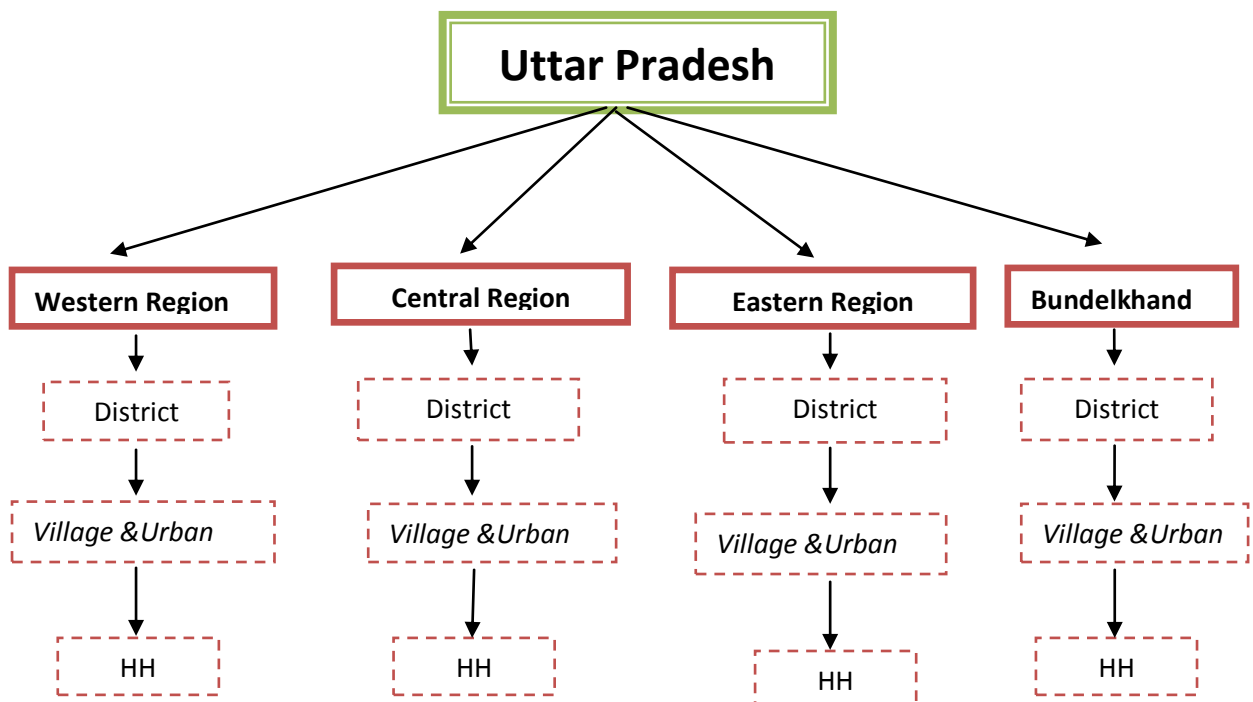
To say with 95% level of confidence that our estimates fall within the 95% of confidence interval, we have used a scientific method to calculate the minimum sample size for our lowest unit of analyses that is *region*.

$$n = \{z^2 * \sigma^2 * [N / (N - 1)]\} / \{ME^2 + [z^2 * \sigma^2 / (N - 1)]\}$$

Where z=1.96, N= Population Size of the Regional, ME=0.05, σ =0.5 (heterogeneity of the sample).

On the PPS sampling basis, 2 districts have been selected from each region. Each district consists of 8 villages that included 128 households as sample. In this way, a total number of 8 districts with a sample of 1024 households were selected as sample in rural areas. Besides this, 584 sample households in three urban districts (Lucknow, Ghaziabad and Gorakhpur) were also selected on random basis.

I.7   Questionnaire Design:

Since one of important task of the study was to collect detailed individual level information from sample households, questionnaire designing was crucial task. As the study is an attempt to identify certain indicators that are predominant in intra-household variations, questionnaire gathered following information for each individual of household wherever possible:

Tentative variables on which information will be collected:

- Household level information that will include: social groups, principal livelihood source, household size, assets etc.
- Demographic characteristics of household members. It will include demographic characteristics like sex, age, activity status, education etc.
- Detailed expenditure of household on food and non-food items which will be decided on the basis of different NSS schedules.
- Detailed expenditure of individual member of the household on education depending on the type of institution..
- Households source(s) of Income: As consumption allocation depends on the source of income, changes in the sources of income will affect consumption inequality. So multiple source of income in the household will be probed at individual and household level specifically apart from principal source of income.

I.8   Literature Review Intra-Household Variations:

The extent of inequality in any economic dimension is an important public policy issue. An appreciation of the problem calls for the specification of the dimension, variable and unit of analysis and finally estimation of its magnitude. The economic public policy literature is replete with various measures of inequality which address this issue from different perspectives. Of course, all of them define and measure the extent of relative inequality across individual economic units, which could be an individual, household, village, district, state or nation. However, when it comes to empirical measurement, all these measures are bound by the restriction imposed by nature and form of data availability. For instance, consumption/income inequality is a major question of public concern. However, when it comes to measurement of extent of inequality in consumption distribution, for reasons like reducing reporting error and hence, measurement error, information on consumption is collected at the household level. One seldom comes across consumption distribution within the household. Hence, estimation of inequality in consumption distribution has to perforce proceed with the assumption that consumption is equally distributed across members of the household. This runs counter to intuition as well as reality where every household would attempt to distribute resources across members equitably and not equally. In other words, estimates of extent of inequality based on household as the unit of data collection would generate distorted estimates despite most equitable/inequitable intra-household distribution (Sen, 1984; Haddad et al., 1997). Thus, there are two critical challenges to face for any public policy study on inequality: (i) Conceptualization of a measure of inequality subject to the data constraint that household is the unit of information collection; (ii) Collection of information at the individual level so as to facilitate application of the contemporary measures of inequality.

Studying intra-household inequality not only gives a more holistic approach towards measuring overall inequality but is also extremely crucial from policy perspective. Lopsided distribution of household resources like income, consumption goods etc. would imply that some members of the household are at a disadvantage as compared to others even though the household average could imply otherwise (Rodriguez, 2016). Thus, empirical methodologies that estimate inequality without considering intra-household variations in resource allocation give incomplete results and hence provide poor guidelines for policy formulation.

This literature review is divided in to three sections as narrated below:

I.8.1   Theoretical Framework:

The unitary view of household (Samuelson, 1956) is based on the premise that the consumption and production within a household is optimal considering the preferences and endowments of all the members within the family. This allows a household to be treated as an individual and this 'adult equivalence' can be used to take household mean as a measure of individual well-being. This unitary approach provides a clear analytical structure but is not supported by data. Sen (1990) gives the example of high mortality of girls in India to counter the unitary approach. Several other empirical studies (Lise & Seitz, 2011; Takeuchi, 2015; D'Souza & Tandon, 2016) also provide ample evidence against the unitary approach.

On the other hand, the collective view treat household as an arena of bargaining game between its adult members. The collective approach rejects the adult equivalence hypothesis and assumes a less restrictive pareto efficient allocation (Chiappori & Meghir, 1998). It is the pooled income that matters in unitary model whereas collective approach has its focus on who has control over the income resources. McElroy & Horney (1981) explained household behavior by a Nash bargaining game where bargain power of the players is decided by the options available to them outside the household. These options are treated as threat points and depend on social and cultural norms, property rights, labor participation rate and wage rates. Lise & Seitz (2011) present a collective model which postulates that the sharing rule within household is affected by the potential earnings of the members. This model can explain the decrease in household inequality in UK as the labor force participation of women increased.

I.8.2   Empirical Framework:

This section presents a review of the research studies that attempt to quantify the extent of inequality within the household. They clearly highlight the fact that disregarding intra-household dynamics while measuring poverty and inequality using the conventional measures could lead to significant underestimation. The empirical studies focus on two main areas in their estimation process. The first area of focus is to decompose total inequality into inter-household and intra-household inequality. The second area of interest is to measure intra-household inequality in certain specific aspects like consumption, education, nutrition and health. Since the study of inter-household variation in nutrition and consumption has direct implication for directed poverty reduction programs, most of the empirical studies

focus on this area. For example, if a targeted policy is framed to improve nutritional status of pre-schooling based on household data, then it may be very inefficient in the scenario where individual food adequacy is better for adults than for pre-schoolers. Such a policy may miss a large proportion of potential beneficiaries due to misclassification (Haddad, 1994).

The analysis by Haddad and Kanbur (1990) was the first major attempt to quantify the degree of errors that are made by neglecting the presence of intra-household inequality while measuring overall inequality. The authors use the data set on nutritional status for Philippines to test the same and focus on the 'calorie intake' at the individual level. They calculate traditional measures of inequality[2] at household as well as individual level and then compare the results. They find that inequality estimated at the household level underestimate total inequality by around 30-40%. They also show that the calorie adequacy rankings of various socio-economic and geographic household groups can change when unit of analysis is shifted from individual to household level. The study by Lise and Seitz (2004) also provide empirical evidence on the similar lines as Haddad and Kanbur (2004). They point out that consumption inequality is significantly understated when within-household inequality is not accounted for. Additionally, they also point out that over a period of 1968-2001, the earnings inequality between UK households has increased while that within household has gone down due to an increase in participation of females in the labor force.

D'Souza and Tandon (2016) too claim that due to the presence of inter-household inequality, the nutritional status of the household members can be misclassified. They categorized the individual as 'misclassify' if he/she belongs to a household where MDER (Minimum Daily Energy Requirement) is met and yet he/she is undernourished or if the household member is not undernourished despite belonging to a household where MDER is not within limit. They do find around 27% of the individuals to be misclassified. The paper also explores the role of indicators like women's disempowerment and economic stressors in explaining the intra-household nutritional inequities. The detailed empirical approach and key findings are discussed in Table 1.

Literature on inequality also pertinently points out that measuring the extent of gender inequality within a household is imperative in estimating the overall inequality in child well-

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[2] The traditional measures of inequality used are: The coefficient of variation, The log variance, The Gini Coefficient, The Theil Index T, Theil's second measure L and The Atkinson Index.

being (Kingdon, 2005; Takeuchi, 2015). The common belief that girls and women carry more weight of poverty as compared to their male counterparts, especially in the poor households, is thus highlighted. Kingdon (2005) base her analysis on the assertion that there are two distinct processes involved in the decision making of a household while deliberating on the education expenditure. The first process deals with the decision of whether to spend on girl's education. Given that the household decides to send the girl child to school, the second process deals with the amount to be spent on her education after enrolment is chosen. In her paper, she attributes the failure of traditional Engel method in detecting the gender bias to the fact that it models these two distinct processes in a single equation. The Engel curve tries to find out the difference in the treatment within the household indirectly by examining the change in the household expenditure in response to change in the gender composition of the household. So, she chooses a two-state hurdle model to explain this process. The first stage is estimated using a Probit model and the second one by OLS estimation. She finds that in low sex-ratio states of India, gender bias exists while making the decision to enrol the girl child or not. Such states also witness a gender bias in expenditure on education.

In another research paper on gender inequality, analysing the differences in the outcomes for four indicators among boys and girls i.e. nutrition, school attendance, birth registration and working hours, Takeuchi (2015) studies the level of gender intra-household inequality in child well-being and its contribution to overall inequality. She uses the data from Multiple Indicator Cluster Surveys for 20 developing countries. By comparing the Gini Coefficient for the four indicators, she finds the average Gini Coefficient to be less than 0.5 for school attendance and birth registration and more than 0.5 for working hours and stunting. The estimates of Theil index indicate high presence of inequalities between households especially in the indicators like malnutrition, working hours and birth registration. Intra-household inequalities although smaller in number but demands attention as there have been empirical evidence for presence of high intra-household inequality in few indicators for countries with low overall inequality. Also, as oppose to the general belief, the paper points out that there is not enough empirical evidence for a clear gender bias or the direction of bias across the indicators considered.

Thus, there is enough evidence in the literature to show the importance of considering intra-household variations in the allocation of resources. However, as discussed above, researchers while estimating intra-household inequality face certain analytical challenges. One of the problems is related to the consumption of public goods like housing and utilities.

Since public goods are consumed jointly by all the members of the household, it becomes difficult to account for them while estimating intra-household inequality. Similar problem exists for domestic production (Chiappori and Meghir, 2014). Another issue which is more empirical and serious in nature is lack of availability of data at individual level, a discussed earlier. Even large household surveys fail to provide information which is essential to compute within household inequality. But despite these obstacles, there are ingenious analytical frameworks developed by the researchers to account for within household inequities as studied above. The following table gives a summary of some of the selected papers from the vast literature on the topic.

Table-1.1: A Summary of Selected Empirical Papers on Measuring intra-household Inequalities

S.No.	Author	Scope	Empirical Methodology	Findings
1	Lise & Seitz (2004)	**Focus:** Measuring consumption inequality among UK households from 1968 to 2001 by accounting for intra-household inequality.	A collective model of intra-household inequality to gauge the relationship between the source of income and individual level consumption allocations.	**i.** Not considering intra-household inequality understate the estimate of overall consumption inequality by around 50%. **ii.** Although consumption inequality between households has increased but at the same time, households have witnessed a decrease in within household inequality.
2	Kingdon (2005)	**Focus:** Using the data for India, detecting gender bias in the intra-household allocation on educational expenditure.	Present ingenious hurdle model for measuring gender inequality in her paper.	For the states where gender bias in sex ratio exists, educational outcomes for girls are worse than the boys. Further, the skewed educational outcomes are accompanied by skewed educational expenditure in favour of boys.
3	Sahn & Younger (2009)	**Focus:** Estimating inter-country and intra-	**i. Theil's mean log deviation** to estimate	**i.** Around 50% of the total health inequality

		household health inequality using the individuals' Body Mass Index (BMI) and exploring the relationship between the average BMI of the household and inequality thereby commenting on the presence of Kuznets curve.	inequality by taking BMI as the measure of well-being. ii. Estimate the **Kuznets curve** **iii.** Decompose the total inequality into inter and intra household.	estimated at the country level is attributed to within household inequality. **ii.** A positive relationship between intra-household inequality and the well-being as measured by the BMI (Evidence for inverted Kuznets curve is not found)**iii.** Health shocks that affect children as oppose to adults needs attention while studying intra-household health inequality.
4	Takeuchi (2015)	**Focus:** Studying the level of gender intra-household inequality in child well-being and its contribution to overall inequality by analysing the differences in the outcomes for four indicators among boys and girls i.e. nutrition, school attendance, birth registration and working hours	**L-Theil index**and **Gini Coefficient** to estimate the between household and within household inequality.	**i.** Overall inequality is higher in nutrition and working hours as compare to school attendance. **ii.** Intra-household inequality contributes significantly towards overall inequality. **iii. A**s oppose to the general belief, there is not enough empirical evidence for a clear gender bias or the direction of bias across the four indicators considered
5	D'Souza & Tandon (2016)	**Focus:** **i.** Assess intra-household nutritional inequalities in rural Bangladesh by using the data from the **Bangladesh integrated Household Survey (BIHS)**. **ii.** Examining the	**i.** In order to observe the nutritional intake-based misclassification among the household members, the calorie intake at the individual and household level is examined. **ii.** Using CDF and PDF[3], the distributions of calorie deficit for heads	**i.** Empirical evidence on the presence of intra-household inequality with the head of the household consuming more than rest of the members. **ii.** The members of the household with

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[3] Cumulative Density Functions and Probability Density Functions.

| | | possible misclassification of the nutritional status of the household members due to the presence of inequities. **iii.** Studying the role of indicators like women's disempowerment and economic stressors in explaining the intra-household nutritional inequalities. | and non-heads is analysed. **iii.** The 'depth of undernourishment' at the individual level is calculated. **iv.** Sensitivity analysis to check the robustness of their results. **v.** The relationship between calorie inequalities and women's empowerment is investigated by estimating an 'empowerment score' and treating it as an independent variable in the regression model (to check if the issue of calorie inequality is more serious in the households where women are less empowered) **vi.** Lastly, re-estimating the regression equations by replacing the 'empowerment score' with household income to understand that whether households under economic stress shows more prominent signs of calorie inequities. | empowered spouses are less likely to suffer from the lack of nourishment as compare to the households with less empowered spouses. |
| 6 | Malghan & Swaminathan (2016) | **Focus:** Estimating the contribution of intra-household inequality to overall inequality thereby highlighting the importance of considering intra-household variations in income and wealth inequality. | **i. Atkinson Intra-household Welfare Loss Metric** to assess the welfare effects of intra-household inequality. **ii. Entropy Index (Theil-T)** to estimate the contribution of intra-household income inequality to overall income inequality. | After analysing the data from 37 countries and for a time period of 1973-2013 the study concludes that intra-household inequality contributes around 30% of total inequality in the sample data. |

I.9   Challenges and the Road Ahead:

The core objective of any public policy is to improve the aggregate welfare of the individuals. This can be done by either focusing on improving the mean welfare or welfare of a distribution especially distribution at the individual level. Measuring and analyzing intra-household inequality is an important element which should be considered while estimating overall inequality. But analytically it's a difficult task for researchers as they face an exogenous constraint of absence of required data at the individual level. The challenge, thus, is to develop theoretical and empirical framework to account for intra-household inequality even when the data at the person level is not available. Also, the surveys should be modified in such a way that the questions are targeted at the individual level rather than just focusing on the household level. This challenge can be accepted by conducting a primary survey to specifically focusing on collecting data at the unit level. It would be a path-breaking activity and an optimal solution to the problem of unavailability of data. And that is why this study on assessing intra-household variations in consumption, educational and economic attainments of households in Uttar Pradesh is important.

Further research on intra-household inequality will help the policy makers substantially in making and targeting sound policies to reduce overall inequality. Thus, it's imperative for the academicians and policy makers to take the existing stock of literature forward so that effective policies can be made that could focus on improving the situation 'inside the household' as well as 'outside the household.'

Chapter-II

Inequalities in Consumption Expenditure in Uttar Pradesh

II.1   Introduction:

In the recent times, studying intra-household decision making on consumption expenditure has become an important research topic for academicians and policy makers. While estimating and analyzing measures of inequality; it is often assumed that resources are equally distributed among household members on various consumption items which give misleading results. However, this assumption has been questioned and many researchers have collectively agreed upon on the presence of intra-household differences in consumption expenditure [Sen (1984), Haddad et al. (1997)]. Thus, in order to get an unbiased picture of inequality, it has become imperative to account for such intra-household variations in consumption. In this context, this chapter aims at assessing intra-household inequality in consumption in Uttar Pradesh.

Majority of the literature on consumption inequality makes use of adult equivalence scale for estimation purpose. This method, however, makes an implicit assumption of absence of within household inequality. Also, lack of availability of data at individual level makes it an arduous task for researchers to consider intra-household variations. But, in the recent past, researchers have attempted to develop theoretical and empirical framework to account for intra-household behavior. Measuring individual welfare is as important as measuring aggregate welfare to achieve policy objectives such as poverty and inequality reduction. Overlooking intra-household dynamics acts as a hindrance to comprehend the seriousness of such issues. (Fuwa at al., 2005). For example, Haddad and Kanbur (1990) empirically expounds that ignoring intra-household variations leads to underestimation of poverty. They strongly propose that since poverty is an individual level phenomenon, its unit of analysis, too, should be individual. These studies have been succinctly discussed in detail in the chapter on literature review.

There is a huge body of literature that points out towards the existence of consumption differences between male and female in India. Lopsided distribution of household resources would imply that some members of the household are at a disadvantage

as compared to others even though the household average could imply otherwise [Rodriguez, 2016]. Following this, there is a rich literature that indicates the variations in the allocation of resources based on gender with female often being at a disadvantage. If discrimination is present among males and females, it will be reflected in the consumption patterns of the household [Deaton, 1991]. This chapter attempts to study the gender effects in Indian consumption patterns.

One such paper which focuses on intra-household consumption inequality in the Indian context from the perspective of gender bias is by Subramanian and Deaton. The paper which was written in 1991 discusses two approaches to investigate the extent of gender bias in intra-household resource allocations. In the first approach the authors use Engel curves methodology to analyze the role of gender in intra-household consumption patterns. The model also incorporates a number of demographic variables like religion, caste, occupation of the head etc. The second approach emphasized on conducting a test for discrimination. The authors propose to identify goods that are specifically consumed by adults. After identifying such 'adult goods' the authors examine the impact of having additional children on consumption of these goods. The fundamental idea is that the adults would have to reduce their expenditure on consuming adult goods to provide for their children's needs. As a result, the expenditure on such goods will reduce. If such a negative effect is more in case of a male child as compare to the female child, it will substantiate the presence of gender discrimination. The authors attempt to empirically test this idea in the second approach. This chapter, thus, attempts to study the relationship between consumption inequality and household dynamics for the state of Uttar Pradesh specifically focusing on gender bias.

Understanding the gender bias in intra-household allocation of consumption is also extremely important from policy perspective. Policies which aim at improving the household consumption will give ambiguous results if intra-household variations are not accounted for. More specifically, if there is evidence of gender discrimination i.e. boys are preferred over girls, then it becomes essential to target the right beneficiaries.

This chapter is divided into details about data and methodology, elaborates on the Deaton's methodology for understanding the relationship between consumption patterns and gender. It further focuses on the test of discrimination and the results thus obtained.

II.2   Methodology and Data

Quoting Deaton, "Our approach is to estimate a fairly flexible model of Engel curves including detailed demographic variables and to test for the effects of gender on the pattern of demand."

Thus, following methodology proposed by Deaton (1989) examines the presence of gender bias in household consumption patterns for different food and non-food items. An Engel Curve is estimated as mentioned below:

$$w_i = \alpha_j + \beta_j\, lnx + \eta_j\, lnn + \sum_{j=}^{J-1} \theta_{ij}(n_j/n) + \gamma i'z + u_i$$

Where,

w_i: Share of the budget devoted to commodity i

x: Total expenditure/Budget

n: Household Size

n_j: Number of people in the household in the jth of J age/gender classes

z: Vector of other socio-demographic characteristics of the household

u_i: Difference beween w_i and its conditional expectation

The ratios n_j/n comes in the model to capture the effect of household size, ages and gender on consumption. Our framework which is adopted from Deaton uses ten age and sex categories. Five age categories are considered i.e. 0-4, 5-9, 10-14, 15-54 and 55 and above and the number of males and females in each of the category is calculated. Employing these numbers, nine ratios are estimated using the ratio n_j/n where n_j is the number of people in the household in the jth of J age/gender class and n is the household size. Further, the coefficient θ_{ij} captures the impact on the budget share of the commodity for a change in the ratio n_j/n keeping all other factors constant. The total expenditure elasticity ε_i is measured by the coefficient β_i where $\varepsilon_i = (1 + \beta_i/w_i)$.

The z variable specified in the regression equation comprises of the following household characteristics: occupation of the head of the household, religion and caste. The occupation of the head of the household has the following categories –

(i)   Self-employed in agriculture

(ii)   Self-employed in non-agriculture

(iii)   Regular wage/salary earning

(iv)   Casual labor in agriculture

(v)   Casual labor in non-agriculture

(vi)   Others

First five categories are taken as dummy variables with the last one being the base category. Religion and caste are the other two important socio-demographic features of the household included in our empirical framework. We have two dummies for religion viz a viz Hindu and Muslim and 'Other' is the omitted category. The last variable is caste which has one dummy i.e. whether the head of the household belongs to scheduled caste or scheduled tribe.

One of the key elements to study intra-household consumption inequality is data. To estimate and evaluate the consumption inequality within a household, it is important to consider the data at individual level. But the 'unit' of data collection for most of the consumption expenditure surveys is household and not individual. This lack of availability of data at individual level poses a great hindrance in the objective of estimating intra-household resource allocation. However, despite of this data constraint, researchers have tried to make the best use of available data to study intra-household consumption dynamics by conceptualizing appropriate theoretical and empirical framework. A suitable example of the same is the empirical methodology framed by Deaton which has been employed in this chapter. The National Sample Survey Organization conducts large scale surveys in India to collect information on consumption expenditure of households on various food and non-food items.

For this study, we consider the data from 68th round of NSSO. 68th round of household consumer expenditure was conducted for the period July 2011- June 2012. The

survey collects information on household expenditure on various goods and services. One of the main obstacles in estimating intra-household inequality is lack of availability of relevant data at the individual level. Given this limitation, researchers have tried to develop a framework to indirectly account for intra-household dynamics. With this regard, we tried to use the information provided by the NSS round to study intra-household resource allocation.

II.3   Results:

Table 2 (a) and (b) gives a summary statistic for the budget shares for various food and non-food items for rural Uttar Pradesh and the mean of the explanatory variables respectively. As it is clear from table 2 (a), in rural UP around 29% of the total budget is spent on cereals and other cereals with expenditure on rice and wheat being 6.1% and 7.9% respectively. On an average people spend around 4.5% of their total expenditure on meat, eggs and fish and around 7.5% on fruits and vegetables with expenditure on vegetables being higher than that on fruits. Education and medical expenses constitute around 11% of the total budget and the rest of the expenditure is incurred on Pan and tobacco, intoxicants and clothing. A similar kind of story is displayed for urban UP and rural and urban UP combined. One key exception is expenditure on education which is noticeably higher in the urban sector. Also, the expenditure on medical expenses is evidently higher for rural UP as compare to urban UP. Education and medical expenses are the two areas where households are expected to discriminate between boys and girls. Thus, it is imperative to particularly observe them along with other items. Table 2 (b) gives the means for various explanatory variables used in the empirical framework as mentioned in equation 1.

The regression equation specified in (2) is estimated for twelve food and non-food items i.e. cereals, pulses, wheat, rice, milk, meat, fruits, vegetables, sugar & salt, beverages, processed food, education and medical expenses. The results are presented in tables 2.1, 2.2 and 2.3. The total expenditure elasticity for all the four products in table 2.1 is less than 1 thereby making them necessities. Keeping the total expenditure constant, the estimated equations show a positive relationship between household size and the budget share. Bigger the household higher the consumption of cereals, pulses, wheat and rice. Also, for all these four commodities, scheduled castes and scheduled tribes consume less of these items as compare to other castes. Further, analysing demographic coefficients is also extremely important. The coefficients of age and gender ratios confirms the presence of gender differences in the consumption patterns. For example, for adults (i.e. the age category of 15-

54) the consumption of cereals and rice is greater for females as compare to males while for pulses and wheat males consume more as compare to the females in the data studied.

Tables 2.1, 2.2 and 2.3 presents the results that we get after the estimating the regression equation 1. These regression equations are estimated for twelve commodities. Table 2.1 presents the results for rice, wheat, cereals and pulses. For all the four commodities, scheduled castes and scheduled tribes consume less of these items i.e. rice, wheat, cereals and pulses as compare to other castes. The results for milk, meat, fruits, vegetables, sugar and salt are presented in table 2.2. Keeping the total budget constant, as the household size increases, the consumption of milk falls while that of vegetables and sugar and salt increases. One key observation coming from this table is the gender difference between the milk consumption for children in the age category 0-4. As it is evident from the table, the coefficient for milk consumption is positive for boys while it is negative for girls. Focusing on other age-gender categories, it can be understood that there are considerable gender differences in consumption of the food items in question with males consuming more than females. Households belonging to Muslim category and SC/ST consume more meat as compare to other categories. Households who belong to the category of being self-employed in non-agriculture are consuming more of meat, fruits and vegetables as compare to the rest of the occupations. For processed food, it is evident that workers employed in 'other' category are consuming way less than the workers in rest of the categories.

Education and medical expenses are two of the most important areas where gender discrimination can be expected. But the results do not show strong evidence for the same. However, for medical expenses there is evidence for gender discrimination with the coefficient being higher for male kids as compare to female kids especially in the age category of 0-4.We do not find any gender bias against girls for expenditure on education. Rather, for the 10-14 year old age group, the coefficient for education expenses is higher for girls as compared to boys. Both medical expenses and education can be considered as 'luxury' goods with expenditure elasticity slightly higher than 1.

The empirical exercise conducted in section 2.1 enables us to make crucial observations about resource allocation within a household. Summing up, empirical investigation using household level expenditure data has enabled us to make following key inferences.

The analysis presented here allows inferences about intra-household allocation to be made from household level expenditure data. Role of gender in understanding the within household consumption patterns cannot be undermined. For some food items like milk, meat, sugar and salt, pulses, rice, and meat, we find male consumption to be higher than female consumption, on an average. Some foodstuffs like fruits and vegetables are gender neutral. Further, the results do not suggest gender discrimination for medical and education, the two areas where gender bias is notably witnessed. Given the difference in preferences for male and female, gender difference in the consumption behavior is a discernible finding. Therefore, Deaton stresses on the importance of testing for gender discrimination which is discussed in section 2.3 in detail.

II.4   Testing for Discrimination:

The methodology discussed in the above section sheds light on the gender differences in the patterns of consumption for various food and non-food items, but it does not elaborate on gender discrimination. Deaton (1989) developed a framework to test for gender discrimination in consumption within a household. The basic premise of Deaton's method is that the distribution pattern of adult good consumption in households can help us to estimate intra-household gender discrimination. Deaton asserts that if we keep the level of income constant then households with kids would have to divert their income towards non-adult goods (or children's goods) from adult goods thereby reducing the consumption of adult goods. Thus, everything else being equal, an addition of a child either a girl or a boy, should lead to reduction in the share of adult goods in total household expenditure since the total amount allocated to adult goods gets reduced. If households favour boys over girls on an average, then the reduction in expenditure when a boy is added to the household would be much higher as compared to the reduction when a girl is added. Such a result would provide a strong evidence for the hypothesis that boys are favored over girls thereby proving the existence of gender discrimination. Let us consider an example of three married couples. The first couple does not have any child. The second couple has one female child and the third couple has one male child. Let us assume that the three families have same characteristics i.e. income level, occupation, age of their kids etc. Let us divide the goods consumed by these couples into adult and child goods. If we evaluate the expenditure of these three families on adult goods, we should find the first couple to spend more on adult goods as they do not have any child. On the other hand, second and third couple would have to accommodate for their children's needs and would spend relatively less on adult goods. The reduction in the money

spent on adult goods is a significant variable. The key question then raised is whether that reduction in the expenditure is more for the couple who has a male child or for the couple with a female child. The answer to this question is imperative in examining the presence of gender bias among households (Deaton, 1989).

Deaton provides a detailed procedure to test the above mentioned hypothesis. Regression coefficients given by equation 1 are important but not sufficient for studying gender bias in intra-household allocation of resources. Thus, in addition, Deaton (1989) introduces the concept of "outlay equivalent ratios" or π-ratios denoted by π_{ir} to identify adult goods as well as to capture gender discrimination. These ratios are defined as follows:

$$\pi_{ir} = \frac{\partial(p_i q_i)/\partial n_r}{\partial(p_i q_i)/\partial x} + \frac{x}{n}$$

Where i refers to a particular commodity

r refers to a particular demographic category

$p_i q_i$ is expenditure on good i

x is total household expenditure, and

n_r denotes the age-sex dependent category and represent r^{th} category of n which is a vector to categorize composition of the household.

So, π_{ir} is defined as per capita change in expenditure on good $'i'$ on addition of member in group $'r'$ as a proportion of outlay changes for good $'i'$ in case of total expenditure reduction. For example, let $'i'$ be alcohol and n_r be the number of male child's in age-group 0-4, then π_{ir} equals to -0.2 would imply that the addition of a male of less than four years in the household has the same impact on alcohol expenditure as a 20% reduction in per capita total expenditure.

Once we have the estimates from regression equation 1, we can calculate the π-ratios by using the following formula:

$$\pi_{ir} = \frac{\eta_i - \beta_i + \theta_{ir} - \sum_{i=1}^{9} \theta_{ij} n_j/n}{\beta_i + \omega_i}$$

Table-2.1: Mean of the budget shares for food and non-food items (%) for Rural, Urban and Total UP

Total UP		Rural UP		Urban UP	
Budget Shares	Mean (%)	Budget Shares	Mean (%)	Budget Shares	Mean (%)
Rice	5.70%	Rice	6.10%	Rice	4.30%
Wheat	7.60%	Wheat	7.90%	Wheat	6.50%
Other Cereals	13.90%	Other Cereals	14.50%	Other Cereals	11.60%
Pulses	4.30%	Pulses	4.50%	Pulses	3.70%
Milk	12.00%	Milk	12.00%	Milk	11.30%
Meat, Eggs and Fish	4.50%	Meat, Eggs and Fish	4.40%	Meat, Eggs and Fish	4.90%
Fruits	1.40%	Fruits	1.40%	Fruits	1.50%
Vegetables	6.00%	Vegetables	6.10%	Vegetables	5.40%
Sugar and Salt	2.70%	Sugar and Salt	2.80%	Sugar and Salt	2.30%
Beverages	1.42%	Beverages	1.34%	Beverages	1.72%
Processed Food	4.40%	Processed Food	4.64%	Processed Food	3.90%
Education	5.50%	Education	4.90%	Education	7.40%
Medical Expenses	6.40%	Medical Expenses	6.70%	Medical Expenses	5.40%
Pan and Tobacco	2.50%	Pan and Tobacco	2.40%	Pan and Tobacco	2.70%
Intoxicants	4.60%	Intoxicants	4.50%	Intoxicants	4.80%
Male Clothing	8.10%	Male Clothing	8.40%	Male Clothing	7.20%
Female Clothing	7.80%	Female Clothing	7.70%	Female Clothing	7.70%
Leather Footwear	2.70%	Leather Footwear	2.70%	Leather Footwear	2.60%
Amusements	-	Amusements	-	Amusements	-
Personal Care	-	Personal Care	-	Personal Care	-

Table-2.2: Means of the Explanatory Variables for Rural, Urban and Total UP					
Explanatory Variable Means		Explanatory Variable Means		Explanatory Variable Means	
Total UP		Rural UP		Urban UP	
ln (x/n)	11.52	ln (x/n)	11.43	ln (x/n)	11.85
ln n	1.79	ln n	1.81	ln n	1.72
Ratio of Males		Ratio of Males		Ratio of Males	
0-4	0.055	0-4	0.058	0-4	0.047
5-9	0.069	5-9	0.072	5-9	0.057
10-14	0.069	10-14	0.073	10-14	0.057
15-54	0.273	15-54	0.259	15-54	0.323
55-	0.049	55-	0.051	55-	0.047
Ratio of Females		Ratio of Females		Ratio of Females	
0-4	0.049	0-4	0.05	0-4	0.043
5-9	0.059	5-9	0.062	5-9	0.049
10-14	0.061	10-14	0.064	10-14	0.052
15-54	0.263	15-54	0.259	15-54	0.278
55-	0.049	55-	0.051	55-	0.044
Occupations		Occupations		Occupations	
1		1		1	
2		2		2	
3		3		3	
4		4		4	
Hindu		Hindu		Hindu	
Muslim		Muslim		Muslim	
SC/ST		SC/ST		SC/ST	

Table-2.3: REGRESSIONS FOR CEREALS AND PULSES								
(All coefficients X 100)								
	Cereals		Pulses		Wheat		Rice	
	Coefficient	T	Coefficient	T	Coefficient	T	Coefficient	t
ln_MPCE_URP	-8.56	(-61.69)	-2.33	(-38.50)	-3.97	(-38.24)	-4.26	(-35.78)
ln_HH_Size	0.89	(6.35)	-0.864	(-14.21)	0.679	(6.45)	0.22	(1.82)
Males								
0-4	-1.77	(-2.00)	-0.955	(-2.48)	-0.711	(-1.06)	-1.86	(-2.42)
5-9	2.43	(2.90)	-0.312	(-0.86)	2.21	(3.50)	0.037	(-0.05)
10-14	1.52	(1.79)	-0.358	(-0.97)	1.14	(1.79)	0.241	(0.33)
15-54	0.21	(0.28)	0.539	(1.65)	2.42	(4.29)	-2.01	(-3.11)
55-	0.40	(0.35)	0.77	(1.57)	1.08	(1.26)	-1.03	(-1.05)
Females								
0-4	-4.24	(-4.70)	-1.64	(-4.17)	-0.292	(-0.43)	-3.64	(-4.67)
5-9	1.04	(1.18)	-0.51	(-1.33)	1.8	(2.72)	-0.517	(-0.68)
10-14	2.23	(2.54)	-0.584	(-1.53)	4.01	(6.05)	-1.72	(-2.27)
15-54	2.02	(2.85)	-0.368	(-1.20)	0.907	(1.70)	1.14	(1.85)
Occupation								
Household type=1	-1.03	(-3.13)	0.16	(1.11)	-0.636	(-2.58)	-0.171	(-0.61)
Household type=2	-0.84	(-2.42)	0.061	(0.40)	-0.651	(-2.51)	-0.00687	(-0.02)
Household type=3	-1.77	(-4.37)	0.00957	(0.05)	-0.922	(-3.02)	-0.88	(-2.52)
Household type=4	-0.91	(-2.48)	0.378	(2.36)	-0.409	(-1.48)	-0.148	(-0.47)
Household type=5	-0.87	(-2.51)	-0.233	(-1.53)	0.251	(0.96)	-0.737	(-2.46)
Religion								
Hindu	1.21	(1.12)	0.389	(0.83)	0.442	(0.54)	0.603	(0.64)
Muslim	1.47	(1.36)	0.615	(1.31)	0.558	(0.68)	0.752	(0.80)
SC/ST	-0.45	(-3.19)	-0.497	(-8.19)	-0.0429	(-0.41)	-0.345	(-2.86)
Constant	1.098***	(52.90)	0.325***	(36.01)	0.506***	(32.40)	0.548***	(30.63)
Observations	5901		5881		5916		5916	
R-squared	0.4589		0.2278		0.2797		0.2153	

t statistics in parentheses

         **   ***

="* $p<0.05$ $p<0.01$ $p<0.001$"

Table-2.4: REGRESSIONS FOR MILK, MEAT, FRUITS, VEGETABLES AND SUGAR AND SALT										
(All coefficients X 100)										
	Milk		Meat		Fruits		Vegetables		Sugar and Salt	
	Coefficient	T	Coefficient	T	Coefficient	t	Coefficient	t	Coefficient	T
ln_MPCE_URP	2.28	(8.03)	-0.49	(-2.68)	0.0947	(1.78)	-3.24	(-38.88)	-0.675	(-16.72)
ln_HH_Size	0.419	(1.50)	-0.818	(-4.69)	-0.257	(-4.83)	-1.7	(-20.19)	-0.323	(-7.95)
Males										
0-4	1.09	(0.60)	1.47	(1.25)	-1.31	(-3.62)	-0.838	(-1.58)	0.16	(0.62)
5-9	-2.98	(-1.73)	0.376	(0.33)	-1.53	(-4.48)	-1.23	(-2.44)	0.353	(1.45)
10-14	-0.769	(-0.44)	1.2	(1.02)	-1.5	(-4.30)	-0.847	(-1.67)	0.185	(0.75)
15-54	0.908	(0.59)	0.588	(0.55)	-1.52	(-4.95)	-1.39	(-3.10)	0.25	(1.15)
55-	0.688	(0.29)	2.81	(1.68)	-1.05	(-2.25)	0.106	(0.16)	0.456	(1.39)
Females										
0-4	-2.98	(-1.61)	0.871	(0.73)	-0.916	(-2.52)	-1.97	(-3.64)	0.0185	(0.07)
5-9	-3.52	(-1.97)	1.4	(1.17)	-1.44	(-4.05)	-1.13	(-2.15)	-0.171	(-0.67)
10-14	-4.41	(-2.46)	0.26	(0.22)	-1.92	(-5.41)	-1.68	(-3.20)	-0.0468	(-0.18)
15-54	-1.28	(-0.87)	1.82	(1.84)	-1.2	(-4.12)	0.075	(0.18)	0.211	(1.03)
Occupation										
Household type=1	0.839	(1.22)	0.0998	(0.23)	-0.00606	(-0.05)	-0.0174	(-0.09)	-0.265	(-2.78)
Household type=2	-1.68	(-2.31)	0.632	(1.41)	0.0312	(0.23)	0.373	(1.80)	-0.284	(-2.83)
Household type=3	0.41	(0.50)	-0.0818	(-0.16)	0.0152	(0.10)	0.323	(1.33)	-0.0317	(-0.27)
Household type=4	-1.16	(-1.51)	-0.13	(-0.27)	-0.149	(-0.99)	0.238	(1.08)	0.0209	(0.20)
Household type=5	-0.147	(-0.20)	-0.328	(-0.73)	-0.0446	(-0.32)	0.157	(0.75)	-0.372	(-3.68)
Religion										
Hindu	1.04	(0.52)	1.3	(1.16)	-1.06	(-2.91)	0.644	(1.00)	-0.317	(-1.01)
Muslim	-1.41	(-0.70)	2.83	(2.52)	-0.976	(-2.66)	0.0388	(0.06)	0.00552	(0.02)
SC/ST	-1.46	(-5.14)	0.0988	(0.56)	-0.21	(-3.89)	-0.0983	(-1.18)	-0.108	(-2.67)
Constant	-0.141***	(-3.35)	0.0854**	(3.18)	0.0322***	(4.07)	0.465***	(37.27)	0.114***	(18.93)
Observations	5180		2446		4528		5899		5901	
R-squared	0.0696		0.0606		0.0325		0.2559		0.0697	
t statistics in parentheses										
="* p<0.05										

	Beverages		Processed Food		Education		Medical Expenses	

Table-2.5: REGRESSIONS FOR BEVERAGES, PROCESSED FOOD, EDUCATION AND MEDICAL EXPENSES

(All coefficients X 100)

	Beverages		Processed Food		Education		Medical Expenses	
	Coefficient	T	Coefficient	t	Coefficient	t	Coefficient	T
ln_MPCE_URP	-0.197	(-5.23)	-1.31	(-9.57)	2.98	(12.03)	1.99	(7.55)
ln_HH_Size	-0.332	(-8.84)	-1.33	(-9.46)	2.49	(8.57)	-1.03	(-3.85)
Males								
0-4	0.24	(0.99)	1.71	(1.77)	-7.48	(-3.68)	0.798	(0.47)
5-9	0.317	(1.39)	7.32	(8.04)	-3.29	(-1.77)	-6.33	(-3.91)
10-14	0.0534	(0.23)	6.27	(6.79)	0.353	(0.19)	-6.85	(-4.19)
15-54	0.977	(4.80)	2.98	(3.47)	-0.541	(-0.31)	-7.94	(-5.47)
55-	1.01	(3.30)	3.31	(2.58)	-8.82	(-3.30)	-1.43	(-0.65)
Females								
0-4	0.533	(2.17)	2.73	(2.77)	-5.57	(-2.72)	-2.04	(-1.18)
5-9	0.356	(1.49)	6.65	(7.05)	-1.68	(-0.88)	-5.72	(-3.40)
10-14	0.14	(0.59)	7.14	(7.61)	1.71	(0.91)	-7.58	(-4.43)
15-54	0.0251	(0.13)	-0.594	(-0.73)	-1.26	(-0.73)	-4.25	(-3.08)
Occupation								
Household type=1	-0.0607	(-0.68)	-1.61	(-4.88)	-0.483	(-0.78)	0.869	(1.39)
Household type=2	0.189	(2.02)	-0.979	(-2.85)	-0.756	(-1.17)	1.56	(2.38)
Household type=3	0.296	(2.71)	-0.802	(-2.01)	-0.807	(-1.10)	-0.34	(-0.44)
Household type=4	-0.0744	(-0.75)	-1.34	(-3.64)	-0.531	(-0.75)	1.34	(1.92)
Household type=5	0.0125	(0.13)	-1.48	(-4.26)	-1.19	(-1.78)	1.42	(2.15)
Religion								
Hindu	0.207	(0.73)	-0.797	(-0.66)	3.66	(2.15)	0.304	(0.14)
Muslim	0.27	(0.94)	-1.47	(-1.20)	2.04	(1.18)	0.143	(0.07)
SC/ST	-0.0171	(-0.45)	0.493	(3.65)	-0.801	(-3.11)	0.694	(2.60)
Constant	0.0357***	(6.33)	0.212***	(9.65)	-0.348***	(-9.06)	-0.106*	(-2.68)
Observations	5681		4487		3755		5277	
R-squared	0.0386		0.1391		0.0917		0.0431	
t statistics in parentheses ="* p<0.05								

Note: Categories for Occupation for Table 2, 3 and 4.
Household Type-Rural
1. *Self Employed in Agriculture*
2. *Self Employed in Non-Agriculture*
3. *Regular Wage/Salary Earning*
4. *Casual Labor in Agriculture*
5. *Casual Labor in Non-Agriculture*
6. *Others*

II. 5 Inequality in Consumption Expenditure-NSSO 68th Round

There is no doubt to the fact that there has been tremendous changes in the per capita consumption expenditure in India after the country embarked upon the programme of economic liberalization since 1991. The per capita expenditure on food items has declined to 52. 76 per cent from 72.83 per cent in 2011-12 from 1972-73 in rural areas. The expenditure on non-food items also increased to 47.24 per cent from 27.15 per cent in 2011-12 from 1972.73 in rural areas. In urban areas, expenditure on food items has declined to 42.46 per cent from 64.45 per cent during this period in urban areas while the non-food expenditure increased to 57.54 per cent from 35.55 per cent in urban areas during 2011-12 and 1972-73. Certainly these changes are good enough to recognize the progress of the nation but in view of the sharp inequalities in the socio economic conditions of different segments in our society, it is pertinent to analyze the level of such disparities for the policy planning. For example, average MPCE in Uttar Pradesh was Rs. 1156 in rural areas while it was Rs. 2051 in urban areas. Thus the rural urban gap in MPCE was by 77.4 per cent. In the preceding section, level of different inequalities on the basis of various parameters have been analyzed. The analysis is based on the data of the NSSO, 68th Round of Uttar Pradesh which covered 9015 households in rural areas and 9014 households in urban areas of the state.

II.6 MPCE Inequalities among Gender and Sectors:

In Table-2.6, inequalities in MPCE between rural and urban areas and between males and females of these areas have been shown. The disparities between males of rural and urban areas is by 78 per cent while the same between the females of rural and urban areas is to the tune of 84 per cent. At the aggregate level, MPCE difference is by 81 per cent.

The male female inequalities in MPCE in rural as well as in urban areas are relatively far lower than the sectoral variations across gender.

Table-2.6: Average MPCE (Mix Response Period) Across Gender, and Sector (Rs)

Sex	Rural	Urban	Total
Male	1083.78	1932.84	1270.00
Female	1061.47	1952.94	1245.93
Total	1072.93	1942.25	1258.39

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.7 MPCE Inequalities among Social Groups:

The average MPCE across social groups indicate that males and females of Other Castes who are generally the   Upper Caste males have highest MPCE followed by the males of OBCs, STs and SCs. The similar pattern is found in respect of females. The MPCE of male SCs is 94 per cent of Other Castes MPC while the same is 68 per cent and 41 per cent in case of OBC and ST males. The level of inequalities is higher in case of females of SCs, OBCs and STs compared with the females of Other Castes.

Within social groups, male female disparities are relatively far lower compared with across social groups as Table-2.7 shows.

Table-2.7: Average MPCE (Mix Response Period) Across Social Groups (Rs)

Sex	ST	SC	OBC	Others	Total
Male	1327.32	963.90	1116.86	1871.09	1241.47
Female	1379.63	938.11	1084.95	1860.05	1210.79
Total	1350.74	951.52	1101.30	1865.86	1226.66

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.8 MPCE Inequalities among Religions:

The MPCE is found highest among males, females and total of the Other Religious Minorities followed by Hindus and lastly the Muslims. In case of males of Hindus, MPCE less by around 20 per cent and in case of Muslim males it is less than hundred per cent. In case of females of Hindus their MPCE is less by around 2 per cent compared with the MPCE of females of ORMs. At the aggregate level, MPCE is less by 12 per cent among Hindus while the same is lesser by around 110 per cent in case of Muslims. The males and females within each religious group, MPCE gap is nominal but   it is highest to tune of more than 2 per cent which MPCE is in favor of females among ORMs as evident from the Table-2.8.

Table-2.8: Average MPCE (Mix Response Period) Across Religion (Rs)

Sex	Hindu	Muslim	ORM	Total
Male	1261.14	1130.89	2264.49	1241.47
Female	1229.78	1104.05	2434.28	1210.79
Total	1246.11	1117.58	2347.78	1226.66

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.9 MPCE Inequalities among Gender and Occupations in Rural Areas:

The NSSO has classified all occupations of the rural areas into five categories as shown in Table-2.9. The table shows that highest MPCE is found in self employed agriculture followed by in regular wages/salaries, self employed in non-agriculture, casual labour in non-agriculture and casual labour in agriculture in case of males who are engaged in these occupations. More or less similar pattern in found in case of females employed in these occupations. However, male female MPCE gap is found in every occupation and it maximum in occupation for those who are engaged in regular wages and salaries.

Table-2.9: Average MPCE (Mix Response Period) Across Gender and Occupations in Rural Areas (Rs.)

Occupation	Male	Female	Total
Self-employed in Agriculture	1117.97	1099.43	1109.07
Self-employed in Non-Agriculture	1074.96	1048.57	1062.13
Regular Wage/Salary	1368.19	1308.41	1339.76
Casual Labour in Agriculture	836.17	817.60	827.12
Casual Labour in Non-Agriculture	858.90	857.99	858.45
Total	1054.32	1038.89	1046.81

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.10 MPCE Inequalities among Religions in Urban Areas:

In urban areas of the state, NSSO has classified all occupations into three types as listed in Table-2.10. It is evident from the table that highest MPCE is of those who are engaged in regular wages and salaries followed by self employed and casual labour in urban areas in case of males. The same patter of MPCE is found in case of females who are engaged in each of the three types of occupations. But the MPCE variation in different occupations of males is relatively not so much wide as it is evident among females who are employed in each of three occupations.

Table-2.10: Average MPCE (Mix Response Period) across Gender and Occupational groups in Urban Areas (Rs.)

Occupation	Male	Female	Total
Self-Employed	1621.22	1567.40	1595.36
Regular Wage/Salary e	2752.87	2773.23	2762.05
Casual Labour	1036.95	1029.81	1033.71
Total	1907.65	1869.61	1889.85

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.11 MPCE Inequalities among Regions:

The MPCE is highest (Rs.1740) in Northern Upper Ganga Plains followed by Southern Upper Ganga Plains, Central region, Southern region and Eastern region in case of males of these regions. The same pattern is found in case of females of these regions. The Southern region has highest gap in MPCE between its males and females followed by the Southern Upper Ganga Plains and Northern Upper Ganga Plains (Table-2.11).

Table-2.11: Average MPCE (Mix Response Period) across Regions (Rs.)

Region	Male	Female	Total
Northern Upper Ganga Plains	1758.97	1717.73	1739.56
Central Region	1183.08	1170.47	1177.25
Eastern Region	1078.50	1077.21	1077.85
Southern Region	1159.00	1056.73	1110.27
Southern Upper Ganga Plains	1202.12	1163.15	1183.64
Total	1241.47	1210.79	1226.66

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.12 MPCE Disparities in Female and Female Headed Households in Rural and Urban Areas:

The MPCE between those households where females are there and those households which are headed by the females in rural and urban areas are evident as the following Table-2.12 shows. The average MPCE is always higher in female headed households compared with those households where females are there in both places.

Table-2.12: Average MPCE of Female versus Female Headed Households in Rural and Urban Areas

Sex	Rural	Urban	Total
Female	1061.47	1952.94	1245.93
Female Head	1159.73	2293.29	1379.34

Source: 68th Round NSS data on Consumption Expenditure, 2011.

II.13 MPCE Disparities in Female and Female Headed Households among Social Groups:

The Table-2.13 shows that in female headed households, MPCE is higher compared with those households where females are there across each social groups. But in case of Other Castes groups, inequalities are highest between the two followed by the OBC households, SC households and ST households.

Table-2.13: Average MPCE of Female versus Female Headed Households among Social Groups

Sex	ST	SC	OBC	Others	Total
Female	1379.63	938.11	1084.95	1860.05	1210.79
Female Head	1311.02	1026.48	1202.34	2304.43	1379.34

Source: 68th Round NSS Data on Consumption Expenditure, 2011

II.14 MPCE Disparities in Female and Female Headed Households among Religious Groups:

The Table-2.14 shows that in every religion, inequalities in MPCE are found between female households and female headed households. While among Hindus, Muslims and at the aggregate level, MPCE is higher among those households which are headed by females but in ORMs, situation is opposite.

Table-2.14: Average MPCE of Female versus Female Headed Households among Religions

Sex	Hindu	Muslim	ORM	Total
Female	1229.78	1104.05	2434.28	1210.79
Female Head	1423.61	1195.68	1754.01	1379.34

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.15 MPCE Disparities in Female and Female Headed Households among occupations in Rural Areas:

The average MPCE in female headed households is higher compared with those households where females are there in each occupation except in that occupation in the occupation of wage and salary where average MPCE is higher in those households where females are there compared with female headed households in rural areas of the state (Table-2.15).

Table-2.15: Average MPCE of Female versus Female Headed Households among
Occupations in Rural Areas

Occupation	Female	Female head
Self-employed in Agriculture	1099.43	1207.21
Self-employed in Non Agriculture	1048.57	1172.84
Regular Wage/Salary	1308.41	1187.25
Casual Labour in Agriculture	817.60	877.75
Casual Labour in Non- Agriculture	857.99	1031.68
Total	1038.89	1159.73

Source: 68th Round NSS Data on Consumption Expenditure, 2011

II.16 MPCE Disparities in Female and Female Headed Households among occupations in Urban Areas:

In Table-2.16, average MPCE across occupations in households where females are there and those households that are headed by the females. The table shows that there is no significant difference between the two types of households namely the self employed and casual labour households in terms of average MPCE but the households that are engaged in regular wages and salaries, female headed households have lower average MPCE compared with that households where females are there.

Table-2.16: Average MPCE of Female versus Female Headed Households among
Occupations in Urban Areas

Occupation	Female	Female head
Self-employed	156740	1560.64
Regular Wage/Salary	2773.23	2138.65
Casual Labour	1029.81	1037.41
Total	1869.61	2293.29

Source: 68th Round NSS Data on Consumption Expenditure, 2011

II.17 MPCE Disparities in Female and Female Headed Households among Regions:

In all regions of the state, average MPCE has been found to higher in female headed households except in the Central region where average MPCE is higher in those households where females are there compared with those households that are headed by the females as Table-2.17 shows.

Table-2.17: Average MPCE of Female versus Female Headed Households among Regions

Region	Female	Female head
Northern Upper Ganga Plains Region	1717.73	1858.45
Central Region	1170.47	1062.49
Eastern Region	1077.21	1377.77
Southern Region	1056.73	1252.41
Southern Upper Ganga Plains Region	1163.15	1444.64
Total	1210.79	1379.34

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.18 Theil Decomposition Analysis of MPCE in Rural and Urban Areas:

The Theil decomposition analysis has been shown in Table-2.18 which has revealed that intra household inequalities in MPCE is more sharp than the overall inequalities in rural as well as in urban areas and at the aggregate level.

Table-2.18: Intra Household and Overall Inequalities in MPCE in Rural and Urban Areas

Household	Total	Rural	Urban
Intra Household	0.26	0.17	0.30
Overall	0.23	0.15	0.29

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.19 Theil Decomposition Analysis of MPCE in Social Groups:

Among different social groups, disparities in MPCE are found in every social group but it is slightly higher among SC households compared with other social groups as the following Table-2.19 shows.

Table-2.19: Intra Household and Overall Inequalities in MPCE among Social Groups

Household	SC	OBC	Others	Total
Intra Household	0.17	**0.19**	0.31	0.26
Overall	0.15	**0.16**	0.28	0.23

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.20 Theil Decomposition Analysis of MPCE in Religious Groups:

The result of the Theil Index has revealed that at the level of all households, intra-households inequalities in MPCE is higher compared with inequalities at the level of all households. Among Hindus and Muslims households, inequalities show the similar pattern but the gap of

inequalities is little low in case of Muslim Households. In case of households of Other Religious Minorities it is found that intra household inequalities are lower by 3 points compared with overall inequalities as Table-2.20 shows.

Table-2.20: Intra Household and Overall Inequalities in MPCE among Religious Groups

Household	Hindu	Muslim	ORM	Total
Intra Household	0.26	0.18	0.73	0.26
Overall	0.23	0.16	0.76	0.23

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.21   Theil Decomposition Analysis of MPCE among Occupation in Rural Areas:

The Table-2.21 shows that across different occupations in rural areas, inequalities at the level of intra household and over all households are negligible. In some occupations like Self-employed in non-Agriculture and Casual Labour in non-Agriculture, there are no inequalities between both types of households at all.

Table-2.21: Intra Household and Overall Inequalities in MPCE among Occupations in Rural Areas

Household	Self-employed in Agriculture	Self-employed in non-Agriculture	Regular Wage/Salary	Casual Labour in Agriculture	Casual Labour in non-Agriculture	Total
Intra Household	0.17	0.15	0.16	0.07	0.08	0.17
Overall	0.16	0.15	0.15	0.06	0.08	0.15

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.22   Theil Decomposition Analysis of MPCE among Occupation in Urban Areas:

In urban part of the state, NSSO has given MPCE data of three occupations and inequalities at the level of intra household and over all households have been calculated using Theil Index. It has been shown in the following Table-2.22. It has been found that inequalities are slightly higher at the level of intra household compared with over all inequalities in self employed occupations. In regular wages, there are no inequalities but in casual labour, there are inequalities to the tune of 0.02 points. At the aggregate of all occupations, inequalities are found only to the level of 0.01 points higher at the intra household level.

Table-2.22: Intra Household and Overall Inequalities in MPCE among Occupations in Urban Areas

Household	Self employed	Regular wage	Casual labour	Total
Intra Household	0.31	0.27	0.13	0.30
Overall	0.28	0.27	0.11	0.29

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

II.23 Theil Decomposition Analysis of MPCE among Regions:

At the regional level, inequalities in MPCE at the level of intra household are higher compared with over all Inequalities in each region of the state. Such Inequalities are highest in Northern Upper Ganga Plains followed by in Eastern region, Central and Southern regions at the same level and lastly the Southern Upper Ganga Plains region as evident from the following Table-2.23

Table-2.23: Intra Household and Overall Inequalities in MPCE among Regions

Household	Northern Upper Ganga Plains	Central Region	Eastern Region	Southern Region	Southern Upper Ganga Plains	Total
Intra Household	0.35	0.28	0.25	0.17	0.17	0.26
Overall	0.30	0.25	0.21	0.14	0.15	0.23

Source: 68th Round NSS Data on Consumption Expenditure, 2011.

The above analysis has indicated that wide MPCE inequalities between rural and urban areas among males and females are found. The same trend is found in case of social groups where males and females of SC households have lowest MPCE. Among ORM households, average MPCE is largest followed by Hindu and then Muslim males and females. Across different occupations in rural areas, average MPCE is higher among males compared with females. This is also true in case of urban areas. However, average MPCE variations are evident across region but males are always better off compared with females in each region. Both in rural and urban areas, MPCE of female headed households are higher compared with the household that have female members. Across different social groups, average MPCE of female headed household is higher except in the case of ST households where average MPCE is higher in the household that have females compared with their female headed households. In different religion groups, female headed household have higher average MPCE except in the case of ORM where reverse situation is found. In rural areas of the state, female headed households

that are engaged in different occupation, have higher MPCE except in regular wage/salary occupations. Those households that have female members, their average MPCE is higher. This is also true in case of urban areas. At regional level, except Central region average MPCE in female headed household is higher. On the basis of Theil index analysis, it is found that intra-household variations are evident in MPCE in rural and urban areas compared with overall inequality. The same pattern is evident across different social groups and among SC households, intra-household variations in MPCE are more sharp. Among all the religious groups, intra-household inequalities in MPCE are higher. This is true also in case of rural and urban areas and also at regional level.

Chapter-III

Educational Inequalities in Uttar Pradesh

III.1   Introduction:

Educational development is one of the core areas of reducing inequalities. But education development in India even after decades of planning suffered from several pitfalls, despite the fact that the role of education in socio-economic and political development of the country was repeatedly and clearly recognized since the inception of planning itself. One of the important features of Indian education is its inherent unequal accessibility to all which denies large section of population to the gains of modern education while few among the population achieve its full benefits. Educational opportunities are unequally available to different socio-economic groups, sex, castes, religion, regions and occupational groups of the population. Education is a learning experience where an individual learns about various aspects of life, understands the different perspectives and tries to apply it in daily life. Education is important to the children, to adults and to the society at large. Education gives to people the knowledge of world around them and changes it into something better. It develops a perspective among people of looking at life, helps them build opinions and develop points of view on things in life. To an individual, education increases the level of confidence as it makes a person aware about his/her surroundings. It also helps an individual to communicate better and express his/her opinions. The mind gets matured by proper education and training. A person can judge what is right and what is not. Education makes a person independent and helps him abide by the rules of the land. Education improves the standard of living of the people. It helps people understand their needs and gives them the way to acquire them. Education provides a platform for a decent livelihood. One can take up a job in industry or another professional service if he/she has attained good education.

III.2   Educational Inequalities:

Educational inequalities are deeply correlated with other inequalities, as those who come from poor income quintiles tend to constrained to get equal access to various types of

education and their perform is also becomes worse compared with those fortunate who have good amount of resources to access modern education whatsoever may be its cost.

Over the last few decades the subjects of rising social and economic inequalities have been studied extensively in India and abroad. The discussions on the status of absolute poverty have been often explained by different deterministic criteria (i.e. in terms of income, nutritional availability, access to basic amenities like etc.), the assessment of relative dimension of inequity in terms of health (nutrition and child mortality) education (year of schooling and schools attendance) and standard of living (electricity, sanitation, drinking water, housing, cooking fuel and assets) remained a subject of much wider deliberations till recently when development of conceptual framework for identifying the focal points of poverty reached to somewhat conclusion as Multi Dimensional Poverty Index (MPI) 2018 and 2019 was agreed upon by scholars to find out the areas of inequalities and focus and find out the pathways for the removal of poverty.

India is regarded as a humongous laboratory for sociological experiments by many researchers. This is fundamentally because of the large social stratification, contrasting societies and complicated blends within a society itself which are enough to provide new insights to social enigmas frequently. Educational inequality is the situation or the system in which there exist large disparities in the society on the opportunity and access to education. This is a result of a complicated social structure, which is shaped up by long standing social norms, believe and most importantly by contrasting economic divisions.

Educational inequality forms up gradually as an ongoing process. Education is affected by social, political and economic status of people. Individuals who are from wealthy section of the society always have the privilege to reach out for better schools and institutions. While those from the deprived section are prone to lower quality, in the process, the system contributes to a deepening chasm. On the other hand, the educationally enlightened group gains more access to political and economic system turning them to be favourable to suit their interest of their own kinds. Such a structure has an adverse effect on the deprived section affecting them from multifarious direction. It is evident from the observation that if educational inequalities can be decimated, a huge change will follow in the social structure. However, to obtain the changed educational disparity, impetus from political and economic sector is inevitable. India has transformed, in a short span, to be one of the most progressive nations. Series of economic reforms, industrialization, privatization and

other steps by government has wiped out the impasses of Indian society to large extents. This has substantial onus on the unorganized education system of the nation integrating it to be more effective as well as holistic. However, the gap is still serious and it seems there is still much to be done. The gradual change in the economy of the country has influenced education in diverse way. Government has taken extensive initiatives to develop the system to be holistic and equally delivering. The gap is being created by the private players that have turned education to a lucrative business. The equation of investment to create profit has rendered private education a competitive edge. This competition to provide quality in education has taken some of the institutions to heights with global standard. At the same time, this also has an adverse effect creating more spaces dividing privileged and under privileged education. While government budget for education has become increasingly incompetent to compete with private funding, educational inequality has become more conspicuous among the less privileged section of society comprising of lower middle class and the deprived, especially in primary schooling.

As disparities in India are rooted in diverse fronts apart from economic conditionings, the attempts to unify the populace through education are directed to address various issues. The provision of reservation based on caste is a reflection of these very attempts. Such mechanisms are proved helpful to great extents, but some serious drawbacks are implicated time to time. Educational disparities are gradually changing towards the brighter side. Comparing the India before a couple of decades to that of the nation in 21st century, contrasting progress is observed. Educational development of the country is a joint effort of government, private players and the Non-governmental entities. Earlier it is pointed out that private entities are fuelling inequality in education while contributing to the progress. In contrast to this, Non-governmental organizations are playing a pivotal role. In current times, the contribution of this particular sector is substantial in eradicating educational disparities. A number of social enterprises have come up with excellent innovative measures to provide quality education to the deprived section. The greatest advantage in the methodology is that these organizations tend to provide quality education comparable to private entities but they are devoid of any requirement of huge money as required in private sectors. These organizations target the deprived section of the society and most of the times, sections that are deprived of minimum privilege of schooling. India has grown to be one of top economies of the world. Rapid urbanization as well as migration of rural folks to urban centres has become a pertinent trend in the nation. In current times, educational disparity is gradually

being denuded as a result of various factors in the development mechanism. This is certainly a good tiding, but still there is more to be done. A good public education system means greater public spending.

III.3 Some Silver lining:

India has made significant progress in increasing enrolment and school completion over the past decades (Kingdon, 2007). Enrolment in primary schools has increased from 19.2 million in 1950-51 to 113.6 million in 2001. Gross primary school enrolment is nearing 100%. Overall enrolment of children in all stages of education in India has improved over the years. Such increase in school participation has been also associated with a significant jump in the literacy rate which rose from 18% in 1951 to 65% in 2001 (Dougherty and Herd, 2008). On the one hand, growth in enrolment has taken place in the backdrop of introduction of various centrally sponsored educational interventions. Examples of such schemes include Sarva Shiksha Abhiyan (SSA), the Non-formal Education Program (1979-90), Operation Blackboard for small rural schools (1986), Total Literacy Campaigns (1988), District Primary School Education Program (1994-2002) and the mid-day meal scheme. Between 1950 and 1990, the number of schools increased more than three-fold, outpacing the growth of the school age population. School participation may have responded to these supply-side changes. On the other hand, the growth in school participation has coincided with the era of economic reform and liberalization which also saw high rates of economic growth by historical standards. Between 1983 and 2004, rural poverty declined from 46.9% to 28.4%, at a rate of one percentage point a year (Lanjouw and Murgai, 2009). Economic growth may have enabled previously poorer families to enrol children in school thereby reducing inequalities in educational opportunities. Indeed the post-reform era of the nineties has been a period of fairly rapid increase in literacy and school participation (Dougherty and Herd, 2008). Nonetheless, substantial gaps remain in educational outcomes across gender, caste, religion and between urban and rural inhabitants (Wu, Goldschmidt, Azam and Boscardin, 2006). Altogether these explain a large part of educational inequality in India which is not only one of the highest in the world, but it has not declined much in the last three decades (Thomas et al., 2000). Recent research using multiple rounds of nationally representative data documents the persistence of gender, caste and religion gaps in school participation and attainment. A comparison of data from 1980s with that from 2000s reveals that even the later years of (1991's) liberalization have not been accompanied by a complete closure of social gaps in schooling, an important premarket factor (Desai and Kulkarni, 2008; Asadullah,

Kambhampati and Lopez-Boo, 2009). Overall, these trends in inequality of educational outcomes are not conclusive of a reduction in inequalities of educational opportunities. For instance, there is evidence of continued importance of other "circumstance factors" such as parental wealth and education, which is suggestive of persistent inequality in educational opportunities. Indeed, India hosts a large part of the world's out-of -school children, mostly belonging to poor households (Filmer and Pritchett, 1999).

III.4 Scenario of Uttar Pradesh:

Literacy rate of 69.72 percent in Uttar Pradesh is India's eighth lowest in the country, according to Census 2011. With 199 million people, Uttar Pradesh is the most populous state in India and is home to about 16 per cent of the total population of the country. The sex ratio at birth (878 girls to 1,000 boys) in the state has increased just by one percentage point in the past years and it continues to be far lower than the national average of 909 (2011-13). The overall literacy rate for those ages seven and above has improved over the past decade in Uttar Pradesh but continues to be far below the national average of 74 per cent (2011). The difference between the 77 per cent literacy rate of men and the 57 per cent rate of women in the state is high, when compared to the national average which is for men is 82 per cent and for women 65 per cent. Besides being a very populous state, Uttar Pradesh also has some of the poorest development indicators, especially with regard to the status of women and girls. The percentage of ever married women who have experienced spousal physical or sexual violence is higher in Uttar Pradesh (42 per cent) than in the entire country (37 per cent). In the state, more than three-fifths of women (64 per cent) who have only daughters have a desire for more children, compared to one-fourth of the women who already have two sons. A high proportion of girls continue to get married before the legal age of 18. According to the National Family Health Survey-3 (NFHS-3), 59 per cent of 20 to 24-year-old women were married before their 18th birthday. Early marriage is more prevalent in rural areas where 68 per cent of women ages 20-24 had married before 18 and a third had married before 15 years of age. Only one-third of girls' ages 15-17 are in schools and almost 72 per cent of girls discontinue their schooling in rural areas as per NFHS-3. According to Census 2011, women's rate of participation in the Uttar Pradesh workforce is very low (17 per cent) and varies widely across the districts. These development indicators reflect the low status of women and girls in the state of Uttar Pradesh.

III.5   Issues in Educational Inequalities:

Intra household inequalities in education are crucial in developing countries like India though there has been tremendous progress in terms of reducing overall disparities in educational development. The non measurement of intra household disparities affects the assessment of overall educational backwardness because the analysis assumes an equal distribution of resources among household members. This chapter attempts to measure the extent of educational inequalities within households in terms of some important indicators of educational development which have been analyzed below.

III.6   Methodology:

The survey on social consumption relating to education conducted by the National Sample Survey Organization (NSSO) is the primary source of data for generating various indicators to assess educational development. The NSSO conducted a nation-wide survey on Household Social Consumption which included education. It also included the state of Uttar Pradesh as part of its 75th Round Survey (July 2017-June 2018). The NSSO sample contains 10,924 households which comprised of 6311 households in rural and 4613 households in Urban Uttar Pradesh. However, estimated numbers of households were 286028 in (methodology described in NSSO Report) Uttar Pradesh. The focus of this study is on the persons in the age-group 3-29 years for NSO households. To make this study more visualized, we also have to make comparison with the primary data among the persons in the age group 3-29 years. The primary data has been collected from Rural and Urban areas as mentioned in the Chapter-I.

Different approaches have been tried to measure the unequal distribution of resources or outcomes within households:

1. A first approach is to compare the gender distribution of resources to track differences between boys and girls (Deaton, 1989).
2. A second approach is to measure differences in average outcome between boys and girls (Deaton and Singh, 2013).
3. Another approach is to measure overall inequality using an aggregate inequality index and break it down into two components: within household and between household inequality (Sahn and Younger, 2009).

For this study, the L-Theil Index is used to provide evidence of within-household and between household inequalities by using NSSO 75th round data. This is an innovative approach to the measurement of inequality using the decomposability property of the General Entropy (GE) indices.

In the decomposition of the L-Theil Index, within-group component reveals how much of the inequality would be attributed to inequalities inside the household. When there is no such inequality across household members, the contribution of the within-group components is null. Household with no inequality within can still contributed to the between group component.

The following equation shows the decomposition of the L-Theil index which is estimated to detect the intra-household inequalities. The first term corresponds to the within group component and the last term to the between group component:

$$GE(0) = \frac{1}{N} \sum_{i-1}^{N} \ln \frac{\bar{y}}{Y_i}$$

$$= \sum_{j} \frac{N_j}{N} L_j + \sum_{j} \frac{N_j}{N} \ln \left(\frac{\bar{y}}{y_j} \right),$$

Where N= the entire sample size,

N_j is the sample size in the household,

$\bar{y}$ = Y/N is the average score of the variable for the entire sample,

y_j is the average for household j,

and L_j is the inequality (mean log deviation) of each household j.

III. 7 Descriptive Statistics

III.7.1 Household and Population Characteristics in Uttar Pradesh:

The Household and Population Characteristics in Uttar Pradesh have been shown on the basis of 75th round (July 2017-June 2018) survey. The table have been placed in Annexure-I. The data showed that around 3/4th the total households are from rural areas while slightly less than 1/4th of all sample households are from urban areas. The percentage distribution of population in male, female and total is around 80 percent in rural areas

respectively. The classification of population in the age group of 3-35 years indicated that around 64 percent of the population is in the age group of 3-35 years in rural areas while in urban areas and combining rural and urban areas around 63 percent of the population is in the same age group. This is in respect of male population. In case of females who are in the age group of 3-35 years, 61 percent of their population is in rural areas and at the combined level of rural and urban areas, females in this age group is around 60 percent. Combining both male and female population, it is found that 60 percent of the total population is in the younger age group in rural areas and while at the combined level, 61 percent of the population is found in this age group. On the whole, sample is largely rural and male centric. In case of males and females, majority of the population is in the younger age group.

III.7.2 Literacy Rate:

The variations in literacy rates between males and females within rural and urban areas, and combining both are found as evident from Annexure-II. The literacy rate in case of males are much areas compared with females. The overall literacy level in urban areas is around 80 percent compared with 71 percent in rural areas and 73 percent in combining both rural and urban areas.

III.7.3 Distribution of Persons in age 15 years and above by Highest Level of Education:

In Annexure-III, percentage distribution of population in the age 15 years and above by highest level of Education has been shown in respect of males and females and rural and urban areas. The data shows that percentage of non-literate population is 35 percent in rural areas while the same is 21 percent in urban areas. Combining rural and urban population, non-literate population is 32 percent. The males who completed highest level of Education in rural, urban and combined level is noticeably higher corresponding to females in these places. In this way, the data indicates that level of illiteracy is higher in rural areas and among females. The females have also lag behind in achieving different ladders of education compared with their male counterparts.

III.7.4 Vocational/Technical Training:

In Annexure-IV, percentage distribution of persons in the age group 15 years and above who obtained vocational/technical training has been shown. The Annexure shows that a very nominal percentage of males and females of rural and urban areas reported to have received vocational/technical training.

III.7.5 Enrolment Status:

The enrolment status among the persons in the age group 3-35 years has been presented in Annexure-V which indicates that both in case of males and females, percentage is higher in rural areas compared to urban areas. This gap is particularly noticeable in case of females in rural areas compared with their counterparts in urban areas. But, the situation is reversed in case of those enrolled in the past academic years and currently not attending schools. In this case, the percentage of males and females in urban areas is relatively higher compared with males and females in rural areas. It is found that around 47 percent of the persons in this age group are currently attending the schools in case of males of rural and urban areas and at the combined level. In case of females, such proportion is 41 percent in rural areas, 43 percent in urban areas and 42 percent at the combined level of all the females.

III.7.6 Current Attendance by Level of Education:

The students in the age of 3-35 years who are attending various types of education have been presented in Annexure-VI. The data placed in this Annexure revealed that around 48 percent male students in rural areas are found attending primary education while 32 percent are found attending primary education in urban areas. More or less same proportion in rural-urban areas is found to be attending primary schools. As level of education increases, greater proportion of males as well as females in urban areas and at aggregate level are found to be attending different level of higher education.

III.7.7 Inequalities in Gross Attendance Ratio (GAR) across Education Levels:

For each level of education, GAR is the ratio of the number of persons attending in the level of education to the number persons in the corresponding official age-group. For example, for level of education 'I-V', GAR is defined as

$$\frac{\text{Number of persons attending Classes I - V}}{\text{Estimated population in the age - group 6 - 10 years}} \times 100$$

For the remaining levels of education the official age-groups are taken as follows:

- upper primary/middle (VI-VIII): 11-13 years
- secondary (IX-X): 14-15 years
- higher secondary (XI-XII): 16-17 years
- post higher secondary: 18-23 years

In GAR for a particular level of education, the denominator consists of all persons in the official age-group for that level, while the numerator consists of the persons who are attending in that particular level (including persons outside the official age-group for that level of education). Therefore, GAR may exceed 100 for some levels of education.

It has been noticed from the Annexure-VII that the inequalities in GAR are evident within the population as the standard of education increases. The GAR was found near hundred per cent at primary level but it declined to 90 per cent at upper primary level. But it increased to 96 per cent in combined level of primary and upper primary standard. The GAR showed declining trend till post higher secondary level. This is general pattern which shows that inequality in GAR in population increases with the increase in educational levels. In rural areas compared with urban areas and males as against females, GAR shows the similar pattern. The combining of rural and urban areas, GAR showed the same trend. But inequalities in GAR between rural areas versus urban areas in case of males are quite visible. Among the males of urban areas, GARs are higher compared with males of rural areas as the standard of education increases. The opposite trend is noticed in case of females of rural areas versus females of urban areas. In this way, inequalities in GAR are found between males of rural areas versus males of urban areas. The inequalities are also noticed between females of rural areas and females of urban areas. The data also showed that GAR at different levels of education would be lower in case of females of rural as well as urban areas compared with their male counterparts of both places.

III.7.8 Inequalities in Net Attendance Ratio (NAR) across Education Levels:

For each level of education, NAR is the ratio of the number of persons in the official age-group attending a particular level of education to the total number persons in that age-group. For example, for level of education 'I-V' NAR is

$$\frac{\text{Number of persons of age 6-10 years currently attending Classes I-V}}{\text{Estimated population in the age-group 6-10 years}} \times 100$$

For the remaining levels of education the official age-groups are taken as follows:

- upper primary/middle (VI-VIII): 11-13 years
- secondary (IX-X): 14-15 years
- higher secondary (XI-XII): 16-17 years
- post higher secondary: 18-23 years

Inequalities are evident in NAR across the educational standard and between males versus females of rural and urban areas which has been shown in Annexure-VIII. NAR is found highest in primary level in case of males and females of rural and urban areas but declines as the standard of education increases. But no substantial difference is found between males and females at the combined level of rural and urban areas with the increase in educational standard. In rural areas, females are behind the males at primary level but higher in upper primary, higher secondary and post higher secondary levels than males. In urban areas more or less same situation prevails. Among males of rural areas compared with males of urban areas, some disparities are evident. The NAR of males in urban areas is higher compared with mails of urban areas in all levels of education except in secondary level and post secondary level where urban males are better than rural males. The NAR of females in urban areas is somewhat better than their fellows of rural areas. Thus rural urban and male and female disparities are evident as the standard of education enhances.

III.7.9 Students Pursuing General and Technical/Professional Courses:

The percentage of students pursuing general and technical course has been classified in Annexure-X. The Annexure-X reveals that most of the students are found pursuing general courses in rural-urban areas and at the combined level of both of the places. The more or less equal percentage of males and females in rural and urban areas are found to be studying general courses. It is also noticeable that a much higher percentage of males in urban areas (6.8 percent) are pursuing technical/professional courses compared with rural areas where males are pursuing technical courses (1.7 percent). The same situation prevails in case of females of urban areas where (3.6 percent) of them are found pursuing technical/financial courses in rural areas. The same situation is found at the aggregate level of males and females in rural-urban areas.

III.7.10 Type of Courses pursued by Students:

In Annexure-XI, percentage of students pursuing general courses by the type of courses has been shown in case of rural – urban areas and males – females. The Annexure-XI shows that percentage of males up to class Xth in rural areas is higher (82.55 percent) as against male students of urban areas (77.92 percent). In case of other courses up to class Xth, percentage of males in rural areas is lower (17.45 percent) compared with urban areas (22.08 percent). However, males students pursuing science and commerce courses are much higher in urban areas compared with rural areas. The same pattern is found in case of females of

rural areas compared with females of urban areas. No major difference is found in percentage of females pursuing up to class Xth as against males in rural – urban areas. In the pursuance of science and commerce, percentage of females in rural areas compared with males of rural areas and females of urban areas is lower. On the whole, both male and female of urban areas are found to be pursuing science and commerce course with greater percentage and both are better in urban areas compared to rural areas.

III.7.11 Disparities in Pursuance of Technical/Professional Courses:

The percentage distribution of students pursuing technical/professional courses by area/gender has been presented in Annexure-XIII. The nine technical/professional courses have been listed in the Annexure-XIII which shows that at the combined level of rural/urban areas, the percentage of females pursuing medical, management, education and other courses are higher compared with males pursuing the same courses. The percentage of males in urban areas pursuing medicine, engineering, law, management, CA and similar services, IT and computer courses and courses from IT recognized institutions compared to the percentage of males pursuing these courses in rural areas. There are only two courses Agriculture and Education, in which males are higher in rural areas compared to percentage of males in urban areas pursuing these two areas. Within females, percentage of them pursuing all technical courses except CA and professional courses and IT courses, there percentage are higher in urban areas compared with females of rural areas. Wide variations are noticed between females versus males in pursuance of different technical courses in rural-urban areas where females are found to be lagging behind males.

III.7.12 Expenditure on Education per Student:

Wide variations are evident in case of expenditure per student between rural-urban areas on pursuance of general course, technical/professional course and any course be it general course- technical/professional. This is found true in case of males and females of rural and urban areas and at the combined level of both places. The data relating to it has been shown in Annexure- XV.

III.8 Intra-Household Variations in Mean Year of Schooling:

The Intra-Household educational attainment is measured by 'mean year of schooling of an individual'. Mean year of schooling is computed separately for male and female in the

household. The gender mean difference in different categories of the household is computed to find the mean gender difference as follows,

Difference = (mean years of Schooling) ^{male} – (mean years of Schooling) ^{female}

Based on the classification of National Commission for Enterprises in the Unorganized sector, the years of schooling based on the level of education are classified as follows,

Illiterate-0, literate below primary-1, primary-4, middle-8, secondary-10, higher secondary-12, diploma/certificate-14, graduate-15, pg & above- 17

Table-3.1 shows Intra-Household Gender Gap in mean years of schooling in rural and urban areas during the year 2017. The table shows that at the Intra-Household level, mean years of schooling is slightly higher in case of males compared with females in rural areas while in urban areas, the situation is reversed. On the whole, mean years of schooling is higher in case of males compared with females at the aggregate level of rural-urban areas.

Table-3.1: Intra Household Gender Gap in Mean Year of Schooling, Sector-wise, 2017

Sector	Male	Female	Difference
Rural	4.9	4.7	0.14
Urban	6.1	6.2	-0.06
Total	5.1	5.0	0.11

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

The Intra-Household Gender Gap in mean years of schooling for the year 2017 in respect of different social groups by combining rural-urban areas has been shown in Table-3.2. The table shows that mean years of schooling is found to be highest among other social groups which is generally comprised of upper castes in respect of males. While the same is found lower among caste groups and it increases as caste hierarchy increases. More or less similar pattern is found in case of females.

Table-3.2: Intra Household Gender Gap in Mean Years of Schooling across Social Groups, 2017 (Rural+Urban)

Social Group	Male	Female	Difference
ST	5.4	4.8	0.58
SC	4.7	4.5	0.24
OBC	4.9	4.7	0.18
Others	6.2	6.7	-0.41
Total	5.1	5.0	0.11

Source: Computed from NSSO Survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In respect of different social groups belonging to rural areas, it is found again that the mean years of schooling is highest among other social groups while it is lowest among STs followed by SCs and OBCs in respect of males which has been shown in Table-3.3. The same pattern is visible in case of females. The male-female comparison shows that mean years of schooling is higher among the males of rural areas compared with the females of rural areas. Across social groups, mean years of schooling among females compared with males is higher among STs and other castes while among the males of SCs and OBCs, mean years of schooling is higher.

Table-3.3: Intra Household Gender Gap in Mean Year of Schooling across Social Groups - Rural, 2017

Social Group	Male	Female	Gap
ST	4.0	4.6	-0.58
SC	4.7	4.4	0.25
OBC	4.8	4.5	0.27
Others	5.7	6.1	-0.45
Total	4.9	4.7	0.14

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In urban areas of Uttar Pradesh, mean years of schooling is highest among STs followed by other castes as shown in Table-3.4. The mean years of schooling is lowest among SC and OBC males. The same pattern is evident in case of females of urban areas of the state during 2017. The comparison of mean years of schooling between males and females of urban areas during 2017 indicated that in case of males of SCs and STs, mean years of schooling is higher among males compared with their females while the mean years of schooling is higher among females of OBCs and others compared with males of these social groups. On the whole, mean years of schooling in urban areas of the state is found to be higher among females and males of other social groups.

Table-3.4: Intra Household Gender Gap in Mean Years of Schooling across Social Groups- Urban, 2017

Social Group	Male	Female	Gap
ST	9.2	5.8	3.4
SC	5.2	5.0	0.20
OBC	5.5	5.7	-0.15
Others	7.2	7.7	-0.51
Total	6.1	6.2	-0.06

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The NSSO 75th round has shown the gender gap in mean years of schooling during 2017 by classifying the state of Uttar Pradesh into five-economic regions as shown in Table-3.5. The data shows that in Southern region of the state, mean years of schooling is highest among males followed by Central region and Eastern region. In Northern Upper Ganga Plains and Southern Upper Ganga Plains, the mean years of schooling is exactly the same. In case of females of these regions, Southern region is on the top while Central and Eastern regions are at the same level. The Northern Upper Ganga Plains is on the third rank while Southern Upper Ganga Plains occupies fourth position in mean years of schooling in case of females during 2017. The comparison of mean years of schooling of males with females shows that in southern region, males and females has the same level of mean years of schooling while in Northern Upper Ganga Plain, mean years of schooling is slightly higher among females compared with their counterpart males. The same situation is found among females of Eastern region compared with males of this region. In case of males of Central region and Southern Upper Ganga Plains region, mean years of schooling among males is higher compared with females of these two regions.

Table-3.5: Intra Household Gender Gap in Mean Years of Schooling across Region-wise, 2017

Region	Male	Female	Gap
Northern Upper Ganga Plains	4.8	4.9	-0.10
Central Region	5.4	5.3	0.08
Eastern Region	5.2	5.3	-0.05
Southern Region	5.8	5.8	-0.01
Southern Upper Ganga Plains	4.8	4.3	0.50
Total	5.1	5.0	0.11

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The NSSO 75th round has classified different religious groups into Hindu, Muslim and other Religious Minorities (ORMs). The mean years of schooling across this religious group has been calculated in Table-3.6. The table shows that mean years of schooling is highest among Hindus followed by ORMs. It is lowest among Muslims. This same situation is related to males among these social groups. The same situation is also found in case of females of different social groups. It is further evident that mean years of schooling is higher among males of Hindus and Muslims compared with their females while the situation is opposite in case of females versus males of Other Religious Minorities.

Table-3.6: Intra Household Gender Gap in Mean Years of Schooling across Religion-2017

Religion	Male	Female	Gap
Hindu	5.5	5.4	0.12
Muslim	3.7	3.6	0.02
ORM	4.2	5.1	-0.88
Total	5.1	5.0	0.11

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The NSSO has classified employment of rural people in different seven types of activities and mean years of schooling of males and females in these seven types of activities has been worked which is presented in Table-3.7. The mean years of schooling in case of males who are self employed in agriculture is highest followed by among males who seek regular wage in agriculture. The next are the males who get regular wages in non-agricultural activities, their mean years of schooling is at the next level. Those who are employed as Casual Laborers in agricultural and non-agricultural activities, among their males mean years of schooling is at the same rate. In respect of females more or less similar pattern is evident. The comparison of males with females for mean years of schooling across different type of activities in rural areas of the state shows that the males who are engaged in each activities, their mean years of schooling is higher in comparison with females. In two sectors, i.e. those engaged on regular wages in non-agricultural activities and other activities, mean years of schooling of their females is found higher compared with males at the state level.

Table-3.7: Intra Household Gender Gap in Mean Years of Schooling across Household Types- Rural, 2017

Household	Male	Female	Bias
Self employed in agriculture	5.5	5.3	0.21
Self employed in non agriculture	4.6	4.5	0.08
Regular wage in agriculture	5.2	4.6	0.59
Regular wage in non agriculture	5.1	5.7	-0.61
Casual labour in agriculture	3.9	3.4	0.49
Casual labour in non agriculture	3.9	3.8	0.09
Others	3.5	4.5	-0.96
Total	4.9	4.7	0.14

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The Intra-Household Gender Gap in mean years of schooling among different type of households in urban areas of the state, during 2017 has been shown in Table-3.8. The

classification of males and females of urban areas who are engaged in different urban activities has been classified by NSSO in four categories as evident in Table-3.8. The table shows that the mean years of schooling among males who are engaged in other type of activities is highest followed by the males who are engaged in regular wage employment. Subsequently mean years of schooling of males who are self employed and casual laborers follows. The same pattern is evident in case of females of these occupational groups. The comparison of mean years of schooling in respect of males vs females indicates that in case of males of self employed and regular wage categories, their mean years of schooling is higher compared with their females. In remaining two occupational groups, mean years of schooling of females is higher compared with their male counterparts in the same occupational classes.

Table-3.8: Intra Household Gender Gap in Mean Years of Schooling across Household Types - Urban, 2017

Household	Male	Female	Bias
Self employed	6.1	5.6	0.44
Regular wage	7.0	6.6	0.46
Casual labour	3.7	3.9	-0.23
Others	8.1	9.3	-1.3
Total	6.2	6.1	0.06

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

III.9 Intra-Household Variations in Mean Years of Schooling in Household with and without Female Members:

The NSSO 75th round has conducted Periodic Labour Force Survey in the year 2017. In this survey, mean years of schooling among households with and without female members in the age group of 0-29 years has been published. In Table-3.9, mean year of schooling in rural-urban areas has been presented. The table shows that in rural areas, mean year of schooling is relatively lower among households which have no female members compared to those households who have female members. While in urban areas, mean year of schooling is found quite higher in those households who have no female members. At the aggregate level, the same pattern is evident. The comparison of rural-urban areas indicates that mean years of schooling in urban areas is higher among those households who have no female members. In this way, gender biasness among those households who have female members is evident in terms of lower level of mean years of schooling.

Table-3.9: Mean Years of Schooling by Sector, 0-29 years

Household	Rural	Urban	Total
No Female	4.5	9.7	6.1
Female	4.9	7.4	5.4
Total	4.8	8.2	5.6
Gap	-0.4	2.3	0.7

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In Table-3.10, mean years of schooling by Social Groups among households with females and no females have been shown. Within STs Household, mean years of schooling is higher in those households who have no female members. This means Gender-Discrimination is prevalent among ST Households. Among SC Households the situation is positive. Among OBC and other households, the mean year of schooling is higher among those households who have no female members. Thus, Gender-biasness in schooling also prevails in OBC and other households.

Table-3.10: Mean Years of Schooling by Social Groups

Household	ST	SC	OBC	Others	Total
No Female	6.7	4.1	5.1	9.8	6.1
Female	5.1	4.4	5.0	8.2	5.4
Total	5.6	4.4	5.0	8.7	5.6
Gap	1.6	-0.4	0.1	1.6	0.7

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The mean years of schooling by religious groups has been shown in Table-3.11. Among all religious groups, mean years of schooling is higher among households with no female members. This means their gender-biasness in schooling is pervading across all religious groups. It is lesser among Muslim households when compared with the households of other religious minorities and Hindus.

Table-3.11: Mean Years of Schooling across Religious Groups

Household	Hindu	Muslim	ORM	Total
No Female	6.4	3.5	11.5	6.1
Female	5.9	3.3	6.1	5.4
Total	6.1	3.4	8.5	5.6
Gap	0.5	0.1	5.4	0.7

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.12 shows about the mean years of schooling by household types in rural sector. The mean years of schooling among different type of households who have been classified according to the type of occupation, shows that mean years of schooling is higher among the households who have females compared with those households who have no females. Within different employment categories, mean years of schooling among the households who are self employed in agriculture is higher compared with those households who have female members, The situation is opposite among the households who are self-employed in non-agricultural activities. Among the households who have regular wages in agriculture, mean years of schooling is much higher in those households who have female members. The same situation is among the households who are involved as a casual labour in agriculture and non-agriculture and other activities.

Table-3.12: Mean Years of Schooling by Household Types-Rural

Household	No Female	Female	Total	Gap
Self employed in agriculture	4.9	5.4	5.3	-0.5
Self employed in non agriculture	5.6	5.3	5.3	0.3
Regular wage in agriculture	2.4	6.0	4.9	-3.6
Regular wage in non agriculture	9.3	8.0	8.4	1.4
Casual labour in agriculture	2.5	3.4	3.2	-1.0
Casual labour in non agriculture	3.1	4.0	3.9	-0.9
Others	2.8	2.8	2.8	0.0
Total	4.5	4.9	4.8	-0.4

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.13 shows mean years of schooling by household types in the urban sector. In Urban areas, households engaged in four different types of activities and classified as without females and females with mean years of schooling have been presented in table below. As noticed above, gender biasness in imparting education prevails more in urban areas of the state compared with its rural areas. The mean years of schooling in urban areas among those households who have no female members is around ten. While among households with female members is only seven. This discrimination is found in self employed, regular wage and households engaged in other activities. Among the households who are casual labourers, mean years of schooling is slightly higher who have female members among their households.

Table-3.13: Mean Years of Schooling by Household Types- Urban

Household	No Female	Female	Total
Self employed	7.9	6.6	7.0
Regular wage	11.2	9.9	10.3
Casual labour	4.0	4.1	4.1
Others	12.0	8.1	10.6
Total	9.7	7.4	8.2

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In regional context, mean years of schooling in urban areas of the state as per region-wise has been shown in Table-3.14. The table shows that in each region of the state, mean years of schooling is higher among the households who have no female members with them compared with among the households who have female members. Thus, gender discrimination in schooling prevails in all regions of the state.

Table-3.14: Mean Years of Schooling by Region, Urban

Region	No Female	Female	Total
Northern Upper Ganga Plains	5.2	4.5	4.6
Central Region	7.5	5.9	6.4
Eastern Region	5.3	5.1	5.1
Southern Region	6.4	6.5	6.5
Southern Upper Ganga Plains	5.8	5.7	5.8
Total	6.1	5.4	5.6

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

III.10 Theil Decomposition Analysis:

In the above section, Intra-Household variations in the mean years of schooling were worked out in relation to rural-urban, social group, religion, household type, region, and household with and without female. In this section, all these variables have been clubbed together to calculate the Intra-Household inequalities through Theil Index within households and overall household. In this analysis also, the bifurcation of households on the basis of above criteria has been made.

In Table-3.15, Sector-wise inequalities within and overall in rural, urban and aggregate household level have been presented. In rural areas, inequalities within and overall are found equal. While in urban areas, inequalities at overall level are slightly higher compared with the inequalities within the households. The same situation is found at the aggregate level.

<div align="center">Table-3.15: Intra Household Inequalities across Sectors (Theil Index- 2017)</div>

Household	Total	Rural	Urban
Within	0.481	0.604	0.321
Overall	0.483	0.604	0.325

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

The Social Group wise inequality at intra household level has been presented in Table-3.16. It is evident from the table that overall inequalities are higher compared with within household inequalities among all social groups except in case of SC households; inequalities within the households and overall level are same.

<div align="center">Table-3.16: Intra Household Inequalities across Social Group (Theil Index- 2017)</div>

Household	ST	SC	OBC	Others	Total
Within	0.517	0.653	0.551	0.231	0.481
Overall	0.533	0.653	0.552	0.233	0.483

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The Religion-wise inequalities within households and overall households have been shown in Table-3.17. The table shows that across all religious groups, overall inequalities are marginally higher compared with within household inequalities.

<div align="center">Table-3.17: Intra Household Inequalities across Religion (Theil Index- 2017)</div>

Household	Hindu	Muslim	ORM	Total
Within	0.422	0.757	0.277	0.481
Overall	0.423	0.76	0.283	0.483

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Intra Household inequalities within and overall among the households engaged in different types of activities in rural areas during 2017 has been shown in Table-3.18. The table shows that both types of inequalities are same in the households who are self employed in non-agricultural activities, in the household whose activity is casual wage in non agriculture and casual labour in agriculture. While in two type of households namely those households who are self employed in agriculture and those getting regular wages in agriculture, overall inequalities are higher than those within household inequalities.

Table-3.18: Intra Household Inequalities across Households (Theil Index- 2017)

Household	Self employed in agriculture	Self employed in non agriculture	Regular wage in agriculture	Regular wage in non agriculture	Casual labour in agriculture	Total
Within	0.545	0.496	0.592	0.29	1	0.604
Overall	0.546	0.496	0.612	0.29	1	0.604

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

In case of urban areas, intra household inequalities within and overall of household engaged in three activities namely self employed, Regular wage and at the aggregate level have been presented in Table-3.19. It is evident that overall inequalities are higher than within household inequalities in all type of employment except in case of regular wages where both are similar.

Table-3.19: Intra Household Inequalities across Households (Theil Index- 2017)

Household	Self employed	Regular wage	Casual labour	Total
Within	0.363	0.176	0.766	0.321
Overall	0.368	0.176	0.769	0.325

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The intra household inequalities at the level of within households and overall in five regions of Uttar Pradesh during 2017 have been presented in Table-3.20. It becomes evident from the table that the overall inequalities are higher than within household inequalities across all regions of the state except in Eastern region where both types of inequalities are found at the same level.

Table-3.20: Intra Household Inequality across Region (Theil Index- 2017)

Household	Northern upper Ganga plains	Central	Eastern	Southern	Southern upper Ganga plains	Total
Within	0.579	0.399	0.546	0.331	0.468	0.481
Overall	0.585	0.401	0.546	0.332	0.469	0.483

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

III.11 Inequalities in Education Expenditure:

The NSSO 75th round has collected data on Social Consumption in Education. In Table-3.21, average expenditure on general education by gender in case of UP state for the year 2017 has been presented. The table shows that at different level of education i.e. from Primary to Postgraduate, average expenditure made by the households on the education for their male members is higher as compared to what expenditure the households has made on the education of their female members. This is the aggregate scenario comprising of rural and urban areas of the state.

Table-3.21: Average expenditure on General Education by level of Education in UP- 2017
(Total)

Education	Male	Female	Total
Primary	4452	3765	4153
Upper Primary	5522	4769	5166
Secondary	7906	7436	7709
Higher Secondary	13280	9935	11797
Diploma upto Secondary	8748	6000	7521
Diploma HS	16132	5683	14854
Diploma Graduate & above	18357	10351	12913
Graduate	11647	10534	11145
Post graduate	16830	12504	14406
Total	6745	5745	6303

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
        Education (July 2017- June 2018).

In Table-3.22, average expenditure on different levels of education made by the households on their male and female members in rural areas of the state has been presented. In this case also, average expenditure on male members is relatively higher as compared to the expenditure made on female members.

Table-3.22: Average Expenditure on General Education by Level of Education in UP-2017
(Rural)

Education	Male	Female	Total
Primary	3112	2782	2967
Upper Primary	3455	3038	3257
Secondary	6353	5303	5927
Higher Secondary	9165	7353	8365
Diploma upto Secondary	8831	4683	7471
Diploma HS	8435	4276	8408
Diploma Graduate & above	19160	9835	12228
Graduate	10355	9955	10175
Post graduate	12777	10100	11217
Total	4828	4191	4546

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

In urban areas of the state as shown in Table-3.23, similar situation prevails but in case of average expenditure on diploma Graduate and above, on an average household spends Rs.48000 on the education of their female members as compared to Rs.16251 spent on their education of their male members.

The above analysis reveals that in case of male and female members, average expenditure on different level of education is much higher in urban areas compared with rural areas.

Table-3.23: Average Expenditure on General Education by Level of Education in UP-2017
(Urban)

Education	Male	Female	Total
Primary	10712	8829	9931
Upper Primary	15108	12708	13981
Secondary	15025	14894	14963
Higher Secondary	27651	18586	23559
Diploma upto Secondary	7910	7614	7673
Diploma HS	35153	5732	25783
Diploma Graduate & above	16251	48000	19245
Graduate	15906	12443	14343
Post Graduate	20749	15316	17836
Total	14538	11945	13384

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

The average expenditure made by the households of different social groups on their male and female members on different level of education in the state during 2017 has been presented in subsequent

tables. The Table-3.24 shows that average expenditure made by SC households on their male members for getting different levels of education is much higher compared to average expenditure made by them on the education of their female members. There are three levels of education namely Diploma (HS), Diploma Graduate and above and Graduate, average expenditure on their female members is higher compared with their male members.

Table-3.24: Average Expenditure on General Education by Level of Education in UP-2017 (SC)

Education	Male	Female	Total
Primary	3086	1945	2561
Upper Primary	3625	2255	2982
Secondary	5260	5128	5192
Higher Secondary	10079	6840	8655
Diploma upto secondary	13300	4700	4784
Diploma HS	6020	8500	6022
Diploma Graduate & above	10000	10400	10125
Graduate	8798	10098	9302
Post Graduate	16621	11254	14604
Total	4759	3620	4239

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In Table-3.25, average expenditure made on different level of education by OBC social group has been presented which again shows that average expenditure made on their male members in getting different level of education is much higher compared with the expenditure households make on the education of their female members.

Table-3.25: Average Expenditure on General Education by Level of Education in UP-2017

OBC	Male	Female	Total
Primary	3663	2792	3293
Upper Primary	4893	4259	4592
Secondary	7408	6707	7134
Higher Secondary	10938	9787	10389
Diploma upto Secondary	9621	6404	7737
Diploma HS	28372	5732	19976
Diploma Graduate & above	25604	12303	15546
Graduate	12025	10390	11311
Post Graduate	12000	11339	11718
Total	5756	4954	5405

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The average expenditure made by other caste groups which included mostly the upper castes households in imparting different levels of education to their male and female members has been shown in Table-3.26. It is evident from the table that average expenditure on primary and secondary level of education on their female members is higher compared to the expenditure made on their male members in getting these two types of education. In case of other levels of education, average expenditure on their male members is higher compared with the expenditure on their female members.

Table-3.26: Average expenditure on general education by level of education in UP, 2017

Education	Male	Female	Total
Primary	9460	9829	9621
Upper Primary	10012	9325	9669
Secondary	12134	14085	12853
Higher Secondary	21066	13944	18416
Diploma upto Secondary	8623	8244	8546
Diploma HS	48561	3660	47040
Diploma Graduate & above	12414	5725	8436
Graduate	13196	11257	12219
Post Graduate	30961	13701	18119
Total	12101	10680	11477

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In Table-3.27, average expenditure by social groups on their male and female members on different level of education has been shown. The pattern of expenditure on different levels of education corresponds to the caste hierarchy which means that the households of other caste, are spending highest followed by OBC and SC households on their male members to get different types of education. However, there are two level of education (Diploma Graduate and above and Post Graduate) where OBC households are spending most followed by SC households on the education of their male members. The similar pattern is found in case of average expenditure by different groups on the education of their female members except in case of Diploma HS and Diploma Graduate and above where SC households and OBC households respectively are spending highest average amount of money on the education of their female members. Similar situation is found in case of aggregate average expenditure on different level of education by all households.

Table-3.27: The average expenditure by social groups and gender on different level of education in Uttar Pradesh

Education	SC Male	OBC Male	Others Male	SC Female	OBC Female	Others Female	Total SC	Total OBC	Total Others
Primary	3086	3663	9460	1945	2792	9829	2561	3293	9621
Upper Primary	3625	4893	10012	2255	4259	9325	2982	4592	9669
Secondary	5260	7408	12134	5128	6707	14085	5192	7134	12853
Higher Secondary	10079	10938	21066	6840	9787	13944	8655	10389	18416
Diploma upto Secondary	13300	9621	8623	4700	6404	8244	4784	7737	8546
Diploma HS	6020	28372	48561	8500	5732	3660	6022	19976	47040
Diploma Graduate & above	10000	25604	12414	10400	12303	5725	10125	15546	8436
Graduate	8798	12025	13196	10098	10390	11257	9302	11311	12219
Post Graduate	16621	12000	30961	11254	11339	13701	14604	11718	18119
Total	4759	5756	12101	3620	4954	10680	4239	5405	11477

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018.

In Tables-3.28 and 3.29, average expenditure on different level of education by Hindus and Muslims during 2017 in UP state on their male and female members has been shown. It reflects from the table that taking all Hindus together, their average expenditure on the different level of education of their male members is quite higher compared to what they are spending on the education of their female members. However, on the education of Diploma HS, Hindu households are spending more on their female members compared with their female members.

Table-3.28: Average expenditure on general education by level of education in UP, Hindu, 2017

Education	Male	Female	Total
Primary	4675	3866	4319
Upper Primary	5753	4526	5193
Secondary	8124	7321	7786
Higher Secondary	13365	9939	11847
Diploma upto Secondary	8748	6000	7521
Diploma HS	14249	18603	14352
Diploma Graduate & above	22385	10351	13622
Graduate	11398	10383	10946
Post Graduate	16274	11816	13763
Total	7021	5826	6494

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018.

The similar situation is found in case of average expenditure made by Muslims on their male and female members for getting different level of education. There are two levels of education i.e. Upper Primary and Secondary where average expenditure on females is higher than the corresponding expenditure on the male members.

It is to be noted that the average expenditure made my Hindu households on their male and female members for obtaining different level of education is found to be much higher corresponding to the Muslim households.

Table-3.29: Average expenditure on general education by level of education in UP, Muslim, 2017

Education	Male	Female	Total
Primary	3293	3209	3258
Upper Primary	4096	5592	4882
Secondary	6642	7793	7100
Higher Secondary	12507	9587	11179
Diploma HS	25209	3500	16317
Diploma Graduate & above	2900		2900
Graduate	14431	11533	12912
Post Graduate	20407	15358	17731
Total	5089	5184	5131

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The average expenditure on different levels of education on male and female members of those households which are engaged in agriculture during 2017 in UP state has been presented in Table-3.30. The table indicated that there is serious discrimination of females in such households in terms of making expenditure on different level of education compared with their male members.

Table – 3.30: Average expenditure on general education by level of Education in UP, Self employed in agriculture, 2017 (Rural)

Education	Male	Female	Total
Primary	3256	2400	2881
Upper Primary	3698	3220	3476
Secondary	6771	5561	6308
Higher Secondary	9629	7701	8829
Diploma upto Secondary	8665	4683	7328

Education	Male	Female	Total
Diploma HS	31835	N/A	31835
Diploma Graduate & above	20791	6524	13537
Graduate	10511	9694	10162
Post Graduate	12981	9757	10983
Total	5332	4230	4859

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

In Table-3.31, average expenditure on different levels of education for male and female members of those households who are engaged in non-agricultural activities during 2017 in the state has been shown in the following table which again shows a high level of discrimination of female members compared with their male members in making expenditure on different level of education except in case of post graduate studies, expenditure on female members is very much higher compared with their male members.

Table – 3.31: Average expenditure on general education by level of education in UP, Self employed in non agriculture, 2017 (Rural)

Education	Male	Female	Total
Primary	3042	2564	2852
Upper Primary	3418	3067	3269
Secondary	6448	4593	5611
Higher Secondary	7772	6658	7324
Diploma upto Secondary	21315	NA	21315
Diploma HS	NA	4276	4276
Diploma Graduate & above	NA	41012	41012
Graduate	12200	10384	11012
Post Graduate	5482	11350	8717
Total	4508	4367	4447

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The average expenditure on male and female members in providing different levels of education by the households whose activity is regular wage in agriculture in rural areas during 2017 in the state has been shown in Table-3.32. In this case status of female members is better off compared with male members while getting education in primary, higher secondary and graduate level. In other levels of education expenditure on male members is quite higher. The same scenario is found at the aggregate level.

Table-3.32: Average expenditure on general education by level of education
in UP, Regular wage in agriculture , Rural, 2017

Education	Male	Female	Total
Primary	2657	4398	3361
Upper Primary	5103	2563	3787
Secondary	5977	2543	4341
Higher Secondary	6095	6700	6152
Graduate	12796	15638	13818
Post Graduate	26700	22545	25041
Total	5326	4243	4849

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

All together different scenario is evident from the Table-3.33 which shows that average expenditure at the aggregate level of different type of education in those households who are earning from regular wages in non-agricultural activities in rural areas during 2017 in the state, their average expenditure on females are much higher compared to the males. This scenario is found at the primary level, secondary, graduate and post graduate level where average expenditure on females is quite compared to males.

Table – 3.33: Average expenditure on general education by level of education in UP,
Regular wage in non agriculture, Rural Household type, 2017

Education	Male	Female	Total
Primary	7651	14942	10399
Upper Primary	7693	7671	7683
Secondary	7679	10301	8600
Higher Secondary	13121	8266	10806
Diploma Graduate & above	10000	6500	6780
Graduate	10359	11979	10991
Post Graduate	6748	11359	8358
Total	7955	10726	9064

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

The average expenditure on different levels of education of those households who are working as casual labour in non-agricultural activities has been shown in Table-3.34. It is evident from the table that in primary, upper primary and graduate levels, average expenditure on female members is comparatively higher than on average expenditure on male members. In getting other levels of education, male members are better off compared with female members.

Table -3.34: Average expenditure on general education by level of education
in UP, Casual labour in non agriculture, Rural Hh type, 2017

Education	Male	Female	Total
Primary	1235	1362	1294
Upper Primary	1790	1798	1794
Secondary	4801	4335	4626
Higher Secondary	7361	6106	6724
Diploma HS	5800		5800
Graduate	8735	10525	9283
Post Graduate	NA	8373	8373
Total	2660	2555	2612

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

Those households who are engaged as casual labour in agriculture in rural areas during 2017, their average expenditure on male members is relatively higher compared with the expenditure on female members except in primary and higher secondary level, average expenditure on female members is higher compared to male members.

Table-3.35: Average Expenditure on General Education by levels of Educatio in UP, in
Occupation of Casual labour in Agriculture (Rural Households, 2017)

Education	Male	Female	Total
Primary	1857	1985	1913
Upper Primary	2462	1885	2152
Secondary	4977	4500	4752
Higher Secondary	6320	6729	6556
Diploma upto Secondary	9750	NA	9750
Graduate	9301	8596	9069
Post Graduate	13395	10307	12724
Total	3121	2946	3039

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

The NSSO 75th round has collected data on average expenditure on different levels of education for males and females in urban areas of the state during 2017. The first activity is self employment which has been shown in Table-3.36. It reflects from the table that there is self employed households in urban areas of the state which spend higher average amount of money in getting different type of education for their male members compared with female members except in case of upper primary schooling where average expenditure on female members is higher as compared to male members.

Table-3.36: Average expenditure on General Education by levels of Education in UP, in Self Employed Occupation (Urban Households, 2017)

Education	Male	Female	Total
Primary	9289	9097	9206
Upper Primary	10983	14476	12484
Secondary	14732	13692	14165
Higher Secondary	25697	18333	21844
Diploma upto Secondary	NA	8434	8434
Diploma HS	NA	3500	3500
Diploma Graduate & above	7844	48000	12213
Graduate	14919	13721	14348
Post Graduate	16267	16254	16262
Total	12728	12389	12574

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The next prominent activity is regular wage in the urban households and their average expenditure on different levels of education in terms of males and females has been shown in Table-3.37. It is evident from the table that average expenditure on male members has been higher in comparison to the female members of the households at different levels of education except secondary education where more expenditure has been spent on females.

Table-3.37: Average expenditure on General Education by levels of education in Urban Areas of U.P. during 2017: (Regular Wage Employment)

Education	Male	Female	Total
Primary	17383	11769	15351
Upper Primary	27137	11204	18251
Secondary	21696	24702	22868
Higher Secondary	40027	19368	31303
Diploma upto Secondary	7298	6100	6754
Diploma HS	26536	NA	26536
Diploma Graduate & above	65000	NA	65000
Graduate	17183	13063	15706
Post Graduate	37079	13498	20187
Total	21504	13494	18013

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Other is casual laborers and their average expenditure at different levels of education on male and female members has been shown in Table-3.38. The data shows that average expenditure on different levels of education on males is somehow near to females at the aggregate level. The average expenditure on males is higher in primary, secondary, graduate and post

graduate whereas the average expenditure on females is higher in upper primary and higher secondary level of education.

Table-3.38: Average Expenditure on General Education by levels of Education in U.P. of the Casual laborers in Urban Areas, 2017.

Education	Male	Female	Total
Primary	3904	3073	3563
Upper Primary	4121	4576	4317
Secondary	5579	5541	5566
Higher Secondary	6681	7764	7090
Graduate	9392	8562	8978
Post Graduate	11780	6997	10305
Total	4536	4419	4488

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

The region-wise average expenditure at different level of education has been shown in Tables below. It is evident from the tables that more expenditure has been made in Central region followed by Northern Upper Ganga Plains, Southern region, Southern Upper Ganga Plains and Eastern region for male members at the aggregate level. In terms of females, average expenditure has been made more in Central region followed by Northern Upper Ganga Plains, Southern region, Southern Upper Ganga Plains and Eastern region at the aggregate level.

Overall, the average expenditure has been made more in Central region at the different levels of education followed by Northern Upper Ganga Plains, Southern region, Southern Upper Ganga Plains and Eastern region. Within the regions, it is evident that more average expenditure has been made on male members of the households in comparison with female members.

Table-3.39: Average Expenditure on General Education by levels of Education in U.P: Northern Upper Ganga Plains, 2017

Education	Male	Female	Total
Primary	5997	3816	5050
Upper Primary	6533	4049	5142
Secondary	8240	6711	7591
Higher Secondary	17265	14113	15947
Diploma upto Secondary	4600	6100	5350
Diploma Graduate & above	19665		19665
Graduate	12252	14214	13162
Post Graduate	18810	8803	11277
Total	7999	6211	7163

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017= June 2018).

Table-3.40: Average Expenditure on General Education by levels of Education in U.P.: Central Region, 2017

Education	Male	Female	Total
Primary	6966	6410	6730
Upper Primary	8494	7780	8155
Secondary	10616	9918	10281
Higher Secondary	21653	15934	18988
Diploma upto Secondary	NA	4700	4700
Diploma HS	65281	6936	58336
Diploma Graduate & above	NA	10400	10400
Graduate	13028	11928	12582
Post Graduate	24620	16688	20875
Total	10051	8644	9427

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.41: Average Expenditure on General Education by levels of Education in U.P.: Eastern Region, 2017

Education	Male	Female	Total
Primary	3389	2761	3119
Upper Primary	4242	3773	4023
Secondary	6584	6654	6611
Higher Secondary	8243	7252	7791
Diploma upto Secondary	9012	8238	8849
Diploma HS	8074	22455	8342
Diploma Graduate & above	33921	12303	16064
Graduate	10132	8939	9560
Post Graduate	14160	13848	14001
Total	5119	4646	4911

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table -3.42: Average Expenditure on General Education by levels of Education in UP, Southern Region, 2017

Education	Male	Female	Total
Primary	2763	3478	3057
Upper Primary	6724	1914	5137
Secondary	8436	5883	7035
Higher Secondary	38974	6794	21679
Graduate	13384	10599	12003
Post Graduate	18285	12334	16172
Total	7652	5380	6661

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.43: Average Expenditure on General Education by levels of Education in UP,
Southern Upper Ganga Plains, 2017

Education	Male	Female	Total
Primary	3876	3361	3640
Upper Primary	4768	4376	4581
Secondary	8253	6852	7723
Higher Secondary	12335	8543	10849
Diploma upto Secondary	16700	6100	7086
Diploma HS	14000	2890	4592
Diploma Graduate & above	9420	5725	7477
Graduate	12311	10935	11735
Post Graduate	9636	10464	10184
Total	6144	4940	5612

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

III.12 Theil Decomposition Analysis of Education Expenditure:

The Theil Decomposition analysis of expenditure on education has been computed to find out the inequalities within household and overall household in case of sector-wise, social groups, religion, and employment type. The analysis has been presented below in the Tables-3.44 below.

The table indicates that there is no major difference in inequalities within and overall households at the aggregate level and in rural-urban areas while a comparison of inequalities within and overall indicates that these are much higher in urban areas as compared with rural areas in the state.

Table-3.44: Intra Household Inequalities in Rural and Urban Areas, 2017

Household	Total	Rural	Urban
Within	0.54	0.42	0.55
Overall	0.55	0.42	0.56

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on
Education (July 2017- June 2018).

Within social groups, OBC households have highest degree of inequalities within their household and overall household followed by STs and others. In all social groups, inequalities are higher at the overall level of households compared with within households as evident from Table-3.45.

Table-3.45: Intra Household Inequalities in Social Groups, 2017

Household	ST	SC	OBC	Others	Total
Within	0.36	0.22	0.57	0.46	
Overall	0.44	0.23	0.57	0.49	

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Educational expenditure inequalities calculated through Theil Index among Hindu, Muslim and ORM households have been shown in Table-3.46. The Table shows that overall inequalities are higher compared with within household inequalities across all religious groups. It is also being noticed here that the level of inequalities within the households and overall are is highest in Muslim households compared with other religious groups.

Table-3.46: Intra Household Inequality in Different Religion, 2017

Theil	Hindu	Muslim	ORM	Total
Within	0.40	0.87	NA	0.54
Overall	0.42	0.90	NA	0.55

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.47: Intra Household Inequalities in Households of Different Activities, Rural, 2017

Household	Self employed in agriculture	Self employed in non-agriculture	Regular wage in agriculture	Regular wage in non-agriculture	Casual labour in agriculture	Casual labour in non-agriculture	Total
Within	0.35	0.03	NA	NA	NA	NA	0.42
Overall	0.38	0.04	NA	NA	NA	NA	0.42

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

Table-3.48: Intra Household Inequalities in Households of Different Activities, Urban, 2017

Household	Self employed	Regular wage	Casual Labour	Total
Within	0.18	0.47	NA	0.55
Overall	0.18	0.50	NA	0.56

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Intra-Household Inequalities within and overall was calculated on the basis of Theil Index has been shown in Table-3.49 in different regions of the state. It is found that both types of inequalities within and overall are highest in Northern Upper Ganga Plains followed by

Eastern region, Central, Southern and Southern Upper Ganga Plains. It is also noticed that overall inequalities are slightly higher in comparison with overall inequalities at household level across all regions of the state.

Table-3.49: Intra Household Inequalities in Household Type-Region-wise, 2017

Household	Northern Upper Ganga Plains Region	Central Region	Eastern Region	Southern Region	Southern Upper Ganga Plains Region	Total
Within	0.54	0.45	0.50	0.40	0.29	0.54
Overall	0.55	0.45	0.51	0.41	0.30	0.55

Source: Computed from NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018).

III.13 Inequalities in Education Expenditure on Primary Data- Theil Index:

As mentioned in the methodology that primary data were collected to find out current level inequalities in different parameters including education. Here Theil Index was applied by classifying the number of members of households excluding head of the household and his wife in terms of expenditure made on the education from 3 to 9 members in households of rural areas as evident in Table-3.50. One pattern is absolutely clear that intra household inequalities in educational expenditure are sharp compared with between households. Such inequalities at the level of intra household are found more when members are households are 3, 7 and 8. At the aggregate level such pattern is also found

Table-3.50: Theil Index for Expenditure on Education in the Age of 5-29 Years: Rural Areas

No. of Members	Within Households	Between Households	Total Households
3	1.21	0.02	1.24
4	0.81	0.05	0.86
5	0.92	0.01	0.93
6	0.95	0.00	0.95
7	1.31	0.05	1.36
8	1.32	0.00	1.33
9	0.60	0.08	0.68

Source: Primary Data Based.

III.14 Inequalities in Education Expenditure on Primary Data- Theil Index:

The Theil Index in the following Table-3.51 revealed that in urban areas, number of members is confined to 6 only starting from 3 members. In urban areas of the state, intra household inequalities are more than within households inequalities in relation to expenditure made on education. But in urban areas, intra household disparities in education expenditure are more when members in households are lesser and it increases with the increase in the number of members. The inequalities in educational expenditure at the aggregate level also shows the similar pattern.

Table-3.51: Theil Index for Expenditure on Education in the Age of 5-29 Years: Urban Areas

No. of Members	Within	between	Total
3	0.76	0.003	0.76
4	0.83	0.001	0.83
5	0.62	0.01	0.63
6	0.36	0.01	0.38

Source: Primary Data Based.

The above analysis has indicated that there is trend in narrowing down of educational inequalities across all types of households at the national level and in the state of Uttar Pradesh. The Theil Decomposition analysis has revealed that inequality gap within and overall household level is nominal in most of the cases namely rural-urban, gender, religion and different types of households. On the basis of primary data, Theil Index has revealed that in rural areas of the state, intra household inequalities are higher as compared with overall inequalities in educational expenditure. In rural areas, intra household inequalities has not much relation with the size of households while in urban areas intra household inequalities in case with the increase in the number of members in the households. In rural and urban areas both, intra household inequalities are higher than the inequalities between the households. In rural and urban areas, inequality pattern is same at the aggregate level.

Chapter-IV

Inequalities in Employment and Unemployment in Uttar Pradesh

IV.1 Introduction:

The National Sample Survey Office (NSSO) has been conducting surveys on Employment and Unemployment since its 27th Round (1972-1973). In view of the importance of data on employment and unemployment, National Statistical Commission (NSC), Ministry of Statistics and Programme Implementation constituted committee on Periodic Labour Force Survey (PLFS). The initial pilot survey was conducted in three states namely Gujarat, Himachal Pradesh and Odisha during July 2011-June 2013. Later on, the coverage of survey was extended to whole of India except Andaman and Nicobar Islands. It covered both the rural and urban areas of Uttar Pradesh as well. However, some of the key result at the All India level for the period July 2011 – June 2012 as obtained from the Employment and Unemployment Survey of NSS 68th Round are presented below in order to highlight the situation of Employment and Unemployment that emerges from earlier NSSO survey:

- ➤ Among those households having at least one member of age 15 years and above, about 5 per cent of the rural households and 10 per cent of the urban households had no usually employed member of age 15 years and above.

- ➤ About 60 per cent of the rural males, 61 per cent of rural females, 66 per cent each of the urban males and urban females belonged to the economically active age group viz. 15-59 years. Persons aged 15-29 years, who were considered as the youth, accounted for 26 per cent each of rural males and rural females, 29 per cent of urban males and 28 per cent of urban females.

- ➤ About 55 per cent of the rural males, 25 per cent of the rural females, 56 per cent of the urban males and 16 per cent of the urban females were in the labour force in usual status (ps+ss).

- ➤ Between NSS 66th round (2009-10) and 68th round (2011-12), labour force participation rate (LFPR) in usual status (ps+ss) for rural males and urban males remained at the same level, decreased by 1 percentage point for rural females and increased by about 1 percentage point for urban females.

➢ Between NSS 50th round (1993-94) and 68th round (2011-12), the LFPR in usual status (ps+ss) decreased by 1 percentage point for rural males and by 8 percentage points for rural females. During this period, LFPR in usual status (ps+ss) increased by 2 percentage points for urban males and decreased by 1 percentage point for urban females.

➢ The worker population ratio (WPR) in usual status (ps+ss) was about 39 per cent at the all-India level. It was about 40 per cent in rural areas and 36 per cent in urban areas. The WPR in usual status (ps+ss) was 54 per cent for rural males, 25 per cent for rural females, 55 per cent for urban males and 15 per cent for urban females.

➢ About 3 per cent of the Indian population was employed only in the subsidiary status. The proportion of females employed in the subsidiary capacity only, was higher than that of males. About 7 per cent of rural females and about 2 per cent of urban females were employed only in the subsidiary status.

➢ The WPR in current weekly status (CWS) was about 36 per cent at the all-India level, 37 per cent in rural areas and 35 per cent in urban areas. The WPR in CWS was 53 per cent for rural males, 21 per cent for rural females, 54 per cent for urban males and 14 per cent for urban females.

➢ The WPR in current daily status (CDS) was about 34 per cent at the all-India level. The WPR in CDS was about 50 per cent for rural males, 17 per cent for rural females, 53 per cent for urban males and 13 per cent for urban females.

➢ Between 2009-10 and 2011-12, WPR in usual status (ps+ss) decreased by about 1 percentage point for rural females, increased by about 1 percentage point for urban females and remained almost at the same level for males of both rural and urban areas.

➢ Between NSS 27th round (1972-73) and 68th round (2011-12), WPR in usual status (ps+ss) remained at the same level for rural males, decreased by about 7 percentage points for rural females, increased by 5 percentage points for urban males and 1 percentage point for urban females.

➢ Among workers in usual status (ps+ss), about 55 per cent of the rural males, 59 per cent of rural females, 42 per cent for urban males and 43 per cent for urban females

were self-employed. Among workers, about 10 per cent of rural males, 6 per cent of rural females and 43 per cent in each of urban males and urban females were regular wage/ salaried employees. The proportion of casual labour among workers in usual status (ps+ss) was about 36 per cent for rural males, 35 per cent for rural females, 15 per cent for urban males and 14 per cent for urban females.

➢ Among workers in usual status (ps+ss) of age 15 years and above, about 28 per cent of rural males, 56 per cent of rural females, 11 per cent of urban males and 28 per cent of urban females were not literate.

➢ Among workers in usual status (ps+ss) of age 15 years and above, about 26 per cent of male workers and 11 per cent of female workers in the rural areas and about 53 per cent for male workers and 40 per cent for female workers in the urban areas were educated (i.e. with educational level secondary and above including diploma/ certificate).

➢ Among workers in the usual status (ps+ss) in rural India, about 59 per cent of the males and 75 per cent of the females were engaged in the agriculture sector. The proportion of workers engaged in the agricultural activities gradually fell from 81 per cent in 1977-78 to 59 per cent in 2011-12 for rural males and from 88 per cent in 1977-78 to 75 per cent in 2011-12 for rural females.

➢ In urban India, among male workers in usual status (ps+ss), the 'trade, hotel and restaurant' sector registered the highest proportion of workers (about 26 per cent) while 'manufacturing' and 'other services' sectors accounted for about 22 per cent and 21 per cent, respectively. Among female workers in the urban areas, 'other services' sector registered the highest proportion of workers (40 per cent), followed by 'manufacturing' (29 per cent), 'trade, hotel and restaurant' (13 per cent) and 'agriculture' (11 per cent).

➢ Over the years, there has been considerable increase in the proportion of workers engaged in 'construction'. Between 1977-78 and 2011-12, the increase in the proportion of workers in 'construction' was about 11 percentage points for rural males, 6 percentage points for rural females, 7 percentage points for urban males and 2 percentage points for urban females. During this period, in the urban areas, proportion of male workers engaged in 'trade, hotel and restaurant' increased by about

4 percentage points and proportion of female workers engaged in 'other services' sector increased by 14 percentage points.

➢ Among the workers in the rural areas, the occupation 'skilled agricultural and fishery workers' registered the highest proportion of workers for both males (39 per cent) and females (48 per cent). In the urban areas, the occupation 'craft and related trades workers' registered the highest proportion of workers for males (19 per cent) and the occupation 'elementary occupations' for females (about 23 per cent).

➢ The daily wage/salary earnings of a regular wage/salaried employee of age 15-59 years were Rs. 298.96 in the rural areas and Rs. 449.65 in the urban areas. This was Rs. 322.28 for rural males, Rs. 201.56 for rural females, Rs. 469.87 for urban males and Rs. 366.15 for urban females.

➢ The daily wage rate of casual labour of age 15-59 years, engaged in public works other than MGNREG public works was Rs. 127.39 for rural males and Rs. 110.62 for rural females. Among the casual labourers of age 15-59 years engaged in MGNREG public works, the daily wage rate was Rs. 112.46 for rural males and Rs. 101.97 for rural females. The daily wage rate of casual labour of age 15-59 years engaged in works other than public works was Rs. 149.32 for rural males, Rs. 103.28 for rural females, Rs. 182.04 for urban males and Rs. 110.62 for urban females. The unemployment rate (UR) in usual status (ps+ss) was about 2 per cent for both males and females in rural areas, 3 per cent for urban males and 5 per cent for urban females.

➢ The unemployment rate in current weekly status (CWS) was about 3 per cent for rural males, 4 per cent for rural females, 4 per cent for urban males and 7 per cent for urban females.

➢ The unemployment rate in current daily status (CDS) was about 6 per cent for both males and females in rural areas, 5 per cent for urban males and 8 per cent for urban females.

➢ Between 2009-10 and 2011-12, the unemployment rate in usual status (ps+ss) remained invariant for rural males, rural females and urban males while it decreased by about 1 percentage point for urban females.

- Among persons of age 15 years and above, other than urban males, the unemployment rate for the educated (level of education: secondary and above) was higher than that among those, whose education level was lower than secondary. The unemployment rates for the educated in usual status (ps+ss) were about 4 per cent, 10 per cent, 4 per cent and 10 per cent for rural males, rural females, urban males and urban females, respectively.

- The unemployment rate among the youth (age: 15-29 years) was much higher as compared to that in the overall population. The unemployment rates among the youth in usual status (ps+ss) were about 5 per cent, 5 per cent, 8 per cent and 13 per cent for rural males, rural females, urban males and urban females, respectively.

- The unemployment rates in usual status (ps+ss) among the educated youth (age:15-29 years and level of education: secondary and above) were 8.1 per cent, 15.5 per cent, 11.7 per cent and 19.8 per cent for rural males, rural females, urban males and urban females, respectively. The underemployment rate defined as the proportion of workers in usual status (ps+ss) who were found to be not employed (i.e. reporting either unemployed or not in labour force) during the week preceding the date of survey, was about 3 per cent for rural males, 17 per cent for rural females, 1 per cent for urban males and 6 per cent for urban females.

- The underemployment rate defined in terms of the proportion of person-days of the workers in usual status (ps+ss) which were not utilised for work was quite high for females as compared to males. This was about 7 per cent for rural males, 32 per cent for rural females, 3 per cent for urban males and 15 per cent for urban females.

- The underemployment rate defined in terms of the proportion of person-days of the workers in current weekly status which were not utilised for work, was about 4 per cent for rural males, 18 per cent for rural females, 2 per cent for urban males and 9 per cent for urban females.

- Among the usually employed persons in the principal status, a higher proportion of females than males, in both rural and urban areas, did not work more or less regularly during last 365 days – 13 per cent for rural females as against 10 per cent for rural males and 7 per cent for urban females as against 5 per cent for urban males.

➢ The proportion of usual principal status workers of age 15 years and above who sought or were available for additional work was about 8 per cent for rural males, 5 per cent for rural females, 4 per cent for urban males and 3 per cent for urban females.

➢ The proportion of usual principal status workers of age 15 years and above who sought or were available for alternative work was higher in rural areas than in urban areas - about 6 per cent in rural areas and 4 per cent in urban areas. The corresponding proportions were about 7 per cent for rural males, 4 per cent each for rural females, urban males and urban females.

The present chapter is based on the analysis of data collected in Periodic Labour Force Survey Data, 2017. The analysis has been presented below:

IV.2 Labour Force Participation Rate by Gender in the Age Group of 15 to 59 Years:

Labour Force Participation Rate (LFPR) is defined as the number of persons/person-days in the labour force (which includes both the employed and unemployed) per 1000 persons/person-days. In Table-4.1, Sector-wise Labour Force Participation Rate across Gender during the year 2017 has been shown. It is evident from the table that among the males of rural-urban areas of the state, LFPR is almost the same across gender. At the aggregate level, including rural-urban areas, it is 77.5 percent. In case of females, LFPR in rural and urban areas both, it is much lower compared with what we have observed in case of males in rural-urban areas at the aggregate level. Combining males and females of rural areas and urban areas separately, it is found that LFPR is around 46 percent. Thus, the table shows that LFPR is much higher among males of rural and urban areas while great inequalities are found in LFPR of females of both rural and urban areas. It is also found that LFPR of females in rural areas is higher (14.9 percent) compared with LFPR of females of urban areas (11.8 percent). On the whole, it can inferred from the analysis that LFPR is much higher in case of males of both places while LFPR of females in urban areas is lower than their counterparts of rural areas and at the aggregate level, it is far lower compared with males.

Table-4.1: Sector-wise Labour Force Participation Rate across Gender, 2017

Sector	Male	Female	Total
Rural	77.7	14.9	46.3
Urban	77.0	11.8	45.6
Total	77.5	14.2	46.1

Source: Computed from Periodic Labour Force Survey Data, 2017

The data as given in Table-4.2, showed that among the males of different social groups, SC and OBC males have highest level of LFPR compared with others and ST males. The similar trend is found in case of females of different social groups but here, females of ST have highest level of LFPR among all other social groups. The same pattern is found across different social groups combining their males and females.

Table-4.2: Social Group-wise Labour Force Participation Rate across Gender, 2017

Social Group	Male	Female	Total
Scheduled Tribe	74.7	23.5	48.9
Scheduled Caste	79.2	14.9	47.5
Other Backward Class	78.2	14.9	46.6
Others	74.7	11.8	43.6
Total	77.5	14.2	46.1

Source: Computed from Periodic Labour Force Survey Data, 2017

It is evident from the Table-4.3 that males of other religious minorities (ORM) and Muslims have highest level of LFPR (around 80 percent compared with males of Hindus (77 percent). The LFPR of females across different religious groups is very low compared with their respective male counterparts. But in case of females of Muslims, LFPR is lowest (11 percent) compared with females of ORM (70 percent) and females of Hindus (15 percent). At the aggregate level, LFPR is highest among ORM (50 percent) followed by Hindus (47 percent) and Muslims (45 percent).

Table-4.3: Religion-wise Labour Force Participation Rate across Gender, 2017

Religion	Male	Female	Total
Hindu	77.2	14.9	46.5
Muslim	79.1	11.3	44.5
ORM	80.9	16.8	49.6
Total	77.5	14.2	46.1

Source: Computed from Periodic Labour Force Survey Data, 2017.

The Households of rural areas have been classified into six categories and LFPR of males and females and at aggregate in each category have been shown in Table-4.4. It reflects from the table that the LFPR among males of different type of households in rural areas is relatively very high compared with females in each type of household. It is evident that LFPR of males in casual labour in non-agricultural activities is highest (82 percent) followed by the males working as casual labour in agriculture. Then comes the males who are self employed in agriculture and males working in regular wages. In case of females, highest LFPR is found in

household of casual labour in agriculture followed by those who are self employed in agriculture and regular wages. More or less, similar pattern is found at the aggregate level.

Table- 4.4: Household Type-wise Labour Force Participation Rate across Gender- Rural Areas, 2017

Rural	Male	Female	Total
Self employed in agriculture	78.6	18.1	48.3
Self employed in non agriculture	77.1	12.6	46.6
Regular wage	76.8	13.1	46.0
Casual labour in agriculture	80.7	21.2	51.0
Casual labour in non agriculture	82.4	9.4	48.3
Others	39.4	3.1	14.2
Total	77.7	14.9	46.3

Source: Computed from Periodic Labour Force Survey Data, 2017.

The urban households have been classified into four types of households according to different type of activities they were found employed across gender in these households. It has been shown in Table-4.5. In respect of males, who are casual labourers, their LFPR is highest (84 percent) followed by LFPR of males who are self employed and in regular wages. In urban areas, LFPR of females compared with males is very low (around 11 percent) compared with 77 percent of males. The females who are in regular wages, their LFPR is highest (15 percent) followed by LFPR of self employed females (11 percent) and casual labour (10 percent) and others (8 percent). The same pattern is evident in combining the males and females in each type of households.

Table-4.5: Household Type-wise Labour Force Participation Rate across Gender-Urban Areas, 2017

Household	Male	Female	Total
Self employed	79.4	10.6	45.9
Regular wage	77.5	15.3	48.3
Casual labour	84.1	9.9	50.5
Others	50.7	8.4	28.0
Total	77.0	11.8	45.6

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.3 Work Participation Rate in the Age Group of 15 to 59 Years:

The Work Participation Rate (WPR), which is defined as the percentage of total workers to the total population, as per the 2001 Census. The Work Participation Rate of males in the age of 15 to 59 years in rural areas is higher (72 percent) compared with males in urban areas (69

percent). At the aggregate level, it is 72 percent. In case of females in rural areas, WPR is 15 percent while of females in urban areas it is 11 percent. At the aggregate level of all females, WPR is 14 percent. It reflects from the data that WPR of males compared with females are much higher in both rural and urban areas. The females of rural areas also have higher WPR. The same trend is evident combining the males and females of rural and urban areas as shown in Table-4.6.

Table-4.6: Sector-wise Work Participation Rate, 2017

Sector	Male	Female	Total
Rural	72.4	14.6	43.53
Urban	69.3	10.5	41.01
Total	71.7	13.7	42.97

Source: Computed from Periodic Labour Force Survey Data, 2017.

In case of males of SCs and OBCs, they have higher WPR compared with the males of other social groups. On the other hand, females of STs have highest WPR followed by females of females of SCs and OBCs. The males and females of other social groups have lowest WPR. Across social groups, WPR of males is much higher compared with the females as shown in Table-4.7.

Table-4.7: Social Group-wise Work Participation Rate, 2017

Social Group	Male	Female	Total
Scheduled Tribe	68.3	23.2	45.6
Scheduled Caste	73.5	14.6	44.5
Other Backward Class	72.6	14.5	43.7
Others	68.3	10.8	39.9
Total	71.7	13.8	43.0

Source: Computed from Periodic Labour Force Survey Data, 2017

Religion-wise Work Participation Rate, 2017 have been shown in Table-4.8. It is evident from the table that ORMs have highest WPR in case of males followed by Muslims and Hindus whereas in case of females, ORMs have also highest WPR followed by the females of Hindus and Muslims. Overall, the males have highest WPR (71.7 percent) in comparison with females (13.8 percent). At the aggregate level, Other Religious Minorities have highest WPR (48.22 percent) followed by Hindus (43.3 percent) and Muslims (41 percent) respectively.

Table-4.8: Religious Group-wise Work Participation Rate, 2017

Religion	Male	Female	Total
Hindu	71.4	14.4	43.3
Muslim	72.7	10.9	41.0
ORM	79.4	15.7	48.3
Total	71.7	13.8	43.0

Source: Computed from Periodic Labour Force Survey Data, 2017

Table-4.9 reveals that WPR in households in rural areas is highest for males who are employed as a casual labour in non-agricultural activities and it is lowest in other types of employment. In case of females, WPR is highest for those who are employed as casual labour in agriculture and lowest in other type of employment. Overall, males have highest WPR in comparison with females in rural sector. At the aggregate level, casual labours in agriculture have highest WPR.

Table-4.9: Work Participation Rate in Different Type of Households, Rural Areas, 2017

Household Type	Male	Female	Total
Self employed in agriculture	73.6	17.8	45.6
Self employed in non agriculture	71.8	12.5	43.8
Regular wage	72.2	12.9	43.6
Casual labour in agriculture	75.6	21.2	48.5
Casual labour in non agriculture	77.6	9.4	45.8
Others	25.6	2.7	9.7
Total	72.4	14.6	43.5

Source: Computed from Periodic Labour Force Survey Data, 2017

Table-4.10 depicts that in urban areas, WPR is highest in case of males who are employed as casual labourers. In respect of females, WPR is maximum for those who are engaged in regular wages. At the aggregate level, Casual labour type of employment have highest WPR followed by regular wage, self employed and others. In urban sector, overall it has been found again that males have highest WPR in comparison with females.

Table-4.10: Work Participation Rate in Different Type of Households, Urban Areas, 2017

Household	Male	Female	Total
Self employed	74.4	9.7	42.9
Regular wage	70.6	14.0	44.0
Casual labour	76.7	9.6	46.3
Others	23.7	3.9	13.1
Total	69.3	10.5	41.0

Source: Computed from Periodic Labour Force Survey Data, 2017

Region-wise, Work Participation Rate for the year 2017 has been shown in Table-4.11 which depicts that Southern region has highest WPR and Eastern region has lowest WPR in case of males. In case of females, Southern region has highest and Northern Upper Ganga Plains has lowest WPR. At the aggregate level, Southern region has highest WPR followed by Southern Upper Ganga Plains, Central, Eastern and Northern Upper Ganga Plains regions.

Table-4.11: Region-wise Work Participation Rate, 2017

Region	Male	Female	Total
Northern Upper Ganga Plains	70.3	6.2	39.6
Central Region	74.5	14.7	44.8
Eastern Region	69.1	12.8	40.0
Southern Region	78.9	30.8	55.3
Southern Upper Ganga Plains	73.3	16.6	46.2
Total	71.7	13.8	43.0

Source: Computed from Periodic Labour Force Survey Data, 2017

Tables-4.12, 4.13 and 4.14 show that the workers employed in different sectors, industrial groups and occupational categories respectively by gender in the age group of 15-59 during 2017. The table-4.12 shows that most of the males (44 percent) and majority of females (64 percent) are engaged in agriculture sector. On the whole, agriculture is accountable for employment of 44 percent of the total workforce. As far as males are concerned, their percentage of employment in industrial and service sector is almost 28 percent while 27 percent females are employed in service sector and 17 percent females are engaged in industrial sector.

Table-4.12: Percentage Share of Workers Engaged in Different Sectors by Gender in Age of - 15-59 Years during 2017

Sector	Male	Female	Total
Agriculture	43.7	63.7	46.9
Industry	28.4	15.6	26.4
Service	27.9	20.7	26.8
Total	100	100	100

Source: Computed from Periodic Labour Force Survey Data, 2017

In Table-4.13, it is evident that for males and females head of households, agriculture is most important activity followed by construction, manufacturing and trade.

Table-4.13: Percentage Share of Workers Engaged in Different Sectors by Gender in Age of - 15-59 Years during 2017

Sector	Male	Female	Total
Agriculture	43.0	63.2	46.2
Mining	0.1	0	0.08
Manufacturing	11.8	13.2	12.0
Electricity	0.21	0.03	0.18
Water	0.32	0.07	0.28
Construction	16.3	2.4	14.1
Trade	12.3	5.2	11.2
Transport	4.6	0.36	3.9
Accommodation	2.1	0.95	1.9
Communication	0.55	0	0.46
Finance	0.55	0.35	0.52
Real Estate	0.21	0	0.18
Professional	0.74	0.54	0.7
Administrative	0.87	0.14	0.75
Public Administration	1.3	0.53	1.2
Education	2.3	9.1	3.4
Health	0.7	1.88	0.88
Entertainment	0.31	0.17	0.29
Others	1.8	1.8	1.8
Total	100	100	100

Source: Computed from Periodic Labour Force Survey Data, 2017

The workers engagements in different occupations are shown in Table – 4.14 that reveals again the dominant role of agriculture sector.

Table-4.14: Percentage Share of Workers Engaged in Different Occupations by Gender in Age of -15-59 Years during 2017

Occupation	Male	Female	Total
Legislators Official	7.4	2.7	6.7
Professional	2.4	3.1	2.5
Technician Associate	2.5	7.7	3.3
Clerk	1.3	0.49	1.1
Service Workers Shop_	8.9	6.5	8.5
Skilled Agricultural_	37.3	54.8	40.1
Craft Related Trade Worker	10.7	10.5	10.6
Plant Machines Operation	4.7	0.83	4.1
Elementary Occupation	25.0	13.3	23.1
Total	100	100	100

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4 LFPR of Head of the Households by Gender:

Decision to participate in labour force is defined as Labour Force Participation Rate (LFPR) for the age of 15 to 59 years. Here the LFPR has been shown at the aggregate level for both genders and for those being head of the households. Both the variable show improvement if the women are the head of the household. However, disparity between males and females exists in those households were their heads are males or females.

The NSSO 75th Round has collected data relating to LFPR by Gender in case of Head of the Households i.e. males and females. The following tables show that if the head of the household is male, LFPR is 97 percent but when the head of household is females, LFPR is 37 percent. In this way, male and female disparity exists between the households who are headed by males compared with females.

Table-4.15: Labour Force Participation Rate by Gender in case of Head of the Households - 2017

Sex	Head	Total
Male	96.9	77.5
Female	36.7	14.2
Total	88.9	46.1

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.4.1 Labour Force Participation Rate by Gender in case of Head of the Households in Rural areas:

Among the households, who are headed by males, there LFPR is very high (98 percent) compared with the households who are headed by the females (39 percent). In this way, male and female inequalities are sharply evident between the households headed by males compared with those households which are headed by the females as shown in Table-4.16.

Table-4.16: Labour Force Participation Rate by Gender in case of Head of the Households in Rural Areas, 2017

Sex	Head	Total
Male	98.2	77.7
Female	38.7	14.9
Total	90.2	46.3

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.2 Labour Force Participation Rate by Gender in Case of Head of the Households in Urban areas:

In urban areas of the state, LFPR inequalities are sharply evident between the households headed by the males as against that of females as shown in Table-4.17.

Table-4.17: Labour Force Participation Rate by Gender in case of Head of the Households in Urban areas, 2017

Sex	Head	Total
Male	92.4	77.0
Female	29.1	11.8
Total	84.2	45.6

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.3 Labour Force Participation Rate by Gender in case of Head of the Hindu Households:

In case of Hindu Households whose head is males, LFPR is much higher compared with those Hindu Households where females are Head of the Households as table-4.18 shows.

Table-4.18: Labour Force Participation Rate by Gender in case of Head of the Hindu Households, 2017

Sex	Head	Total
Male	97.3	77.2
Female	40.7	14.9
Total	90.3	46.5

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.4 Labour Force Participation Rate by Gender in Case of Head of the Muslim Households:

In case of Muslim Households, where there households are headed by males and in some cases by females, LFPR disparities are evident (Table-4.19).

However, when a comparison is made between Hindu Households headed by the males with the LFPR in the households headed by male Muslims is lower among Muslim households corresponding to male Hindus. The same pattern is evident in case of Muslim households headed by females when compared with the Hindu households headed by females.

Table-4.19: Labour Force Participation Rate by Gender in case of Head of the Muslim Households, 2017

Sex	Head	Total
Male	95.4	79.1
Female	24.0	11.3
Total	82.0	44.5

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.5 Labour Force Participation Rate by Gender in Case of Head of SC Households:

The LFPR of the SC households which are headed by their males and females separately has been shown in Table-4.20. The table reflects that LFPR inequalities are more than double between the male headed SC households and female headed SC households.

Table-4.20: Labour Force Participation Rate by Gender in case of Head of SC Households – 2017

Sex	Head	Total
Male	98.3	97.5
Female	35.7	38.3
Total	90.1	89.0

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.6 Labour Force Participation Rate by Gender in Case of Head of OBC Households:

The same situation prevails in case of OBC households which are headed by their males and other by their females.

Table-4.21: Labour Force Participation Rate by Gender in case of Head of OBC Households – 2017

Sex	Head	Total
Male	97.5	78.2
Female	38.3	14.9
Total	89.0	46.6

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.7 Labour Force Participation Rate by Gender in case of Head of Others Households:

In Table-4.22, the households of Others Castes group who are mostly the Upper Castes households, LFPR inequalities between the male and female households are not the same but the gap is not as wide as among the SC and OBC households headed by their males and females separately.

Table-4.22: Labour Force Participation Rate by Gender in case of Head of Others Households – 2017

Sex	Head	Total
Male	94.9	74.7
Female	34.4	11.8
Total	87.7	43.6

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.8 Labour Force Participation Rate by Gender in Different Occupational Groups in Rural Areas:

In rural areas of the state, those households which are headed by male members and are self employed in agriculture, there LFPR is almost 100 percent. In such type of households, who are engaged in other occupations, the LFPR is almost near to 100 percent. In female headed households, LFPR is highest of those engaged in agriculture as casual labour. A comparison of LFPR of females with that of male headed households reveals sharp inequalities between male and female headed households in all five listed occupations. The LFPR of females is relatively quite lower than of the male headed household engaged in five listed occupations in rural areas of the state.

Table-4.23: Labour Force Participation Rate by Gender in different Occupational Groups in Rural areas, 2017

Occupation	Head			Total		
	Male	Female	Total	Male	Femlae	Total
Self-employed in Agriculture	99.9	75.9	97.8	78.6	18.1	48.3
Self-employed in Non- Agriculture	97.7	54.6	95.4	77.1	12.6	46.6
Regular Wage/Salary	96.3	66.8	94.3	76.8	13.1	46.0
Casual Labour in Agriculture	98.7	90.0	97.7	80.7	21.2	51.0
Casual Labour in Non- Agriculture	98.6	43.2	95.9	82.4	9.4	48.3

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.9 Labour Force Participation Rate by Gender in Different Occupational Groups in Urban Areas:

The NSSO has provided data of male and female headed households who are engaged in four occupations in urban areas. It has been presented in Table-4.24. In Self employed and Casual Labour Households, inequalities between male and female headed households is quite wide while male and female headed households in the occupation of Regular wage and Salary, inequalities are there but not so pronounced.

Table-4.24: Labour Force Participation Rate by Gender in Different Occupational Groups in Urban Areas, 2017

Occupation	Head			Total		
	Male	Female	Total	Male	Female	Total
Self-employed	98.5	35.7	94.6	79.4	10.6	45.9
Regular Wage/Salary	97.2	67.5	94.2	77.5	15.3	48.3
Casual Labour	97.8	37.8	92.8	84.1	9.9	50.5

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.4.10 Labour Force Participation Rate by Gender in Different Regions:

In each of the five regions of the state, LFPR of male headed households is found to be almost same as shown in Table-4.25. In case of female headed households, variations are evident across regions. In Southern region of the state, LFPR of female headed household is highest while the same is lowest in Northern Upper Ganga Plains.

Table-4.25: Labour Force Participation Rate by Gender in different Regions, 2017

Region	Head			Total		
	Male	Female	Total	Male	Female	Total
Northern Upper Ganga Plains	95.0	22.2	88.9	78.2	6.7	44.0
Central Region	97.6	38.7	90.1	80.2	15.3	48.0
Eastern Region	96.9	39.0	85.8	75.0	13.3	43.1
Southern Region	97.6	54.8	95.6	82.4	31.0	57.2
Southern Upper Ganga Plains	97.7	34.7	91.2	78.0	17.0	48.8
Total	96.9	36.7	88.9	77.5	14.2	46.1

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.5 Work Participation Rate by Gender in Case of Head of the Households:

In following table, WPR of male and female headed households has been shown. The table shows that WPR of male headed households is more than double to that of female headed households.

Table-4.26: Work Participation Rate by Gender in Case of Head of the Households in the Age Group of 15-59, 2017

Sex	Head	Total
Male	96.1	71.7
Female	36.3	13.8
Total	88.1	43.0

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.1 Work Participation Rate by Gender in Case of Head of the Households in Rural Areas:

In male headed households, WPR is found 98 percent in rural areas while in female headed households, WPR is 39 percent. So, wide inequalities in WPR between the households headed by the males and females found in rural areas of the state.

Table-4.27: Work Participation Rate by Gender in case of Head of the Households in the Age Group of 15-59 in Rural Areas, 2017

Sex	Head	Total
Male	97.6	72.4
Female	38.7	14.6
Total	89.6	43.5

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.2 Work Participation Rate by Gender in Case of Head of the Households in Urban Areas:

In Table-4.28, WPR of male and female headed in urban areas of the state has been presented. Here again, WPR of male headed households is substantially higher compared with female headed households in urban areas of the state.

Table-4.28: Work Participation Rate by Gender in case of Head of the Households in the Age Group of 15-59 in Urban Areas, 2017

Sex	Head	Total
Male	90.6	69.3
Female	27.4	10.5
Total	82.4	41.0

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.3 Work Participation Rate by Gender among Hindu Households:

The WPR of male headed Hindu households is quite higher (96 percent) compared with female headed households (40 percent). At the combined level of males and females, WPR is 89 percent.

Table-4.29: Work Participation Rate by Gender in the Age Group of 15-59 among Hindu Households – 2017

Sex	Head	Total
Male	96.3	95.0
Female	40.2	24.0
Total	89.4	81.7

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.5.4 Work Participation Rate by Gender among Muslim Households:

The same pattern is found in case of WPR of male and female headed households of Muslims as observed above in respect of Hindu Households.

Table-4.30: Work Participation Rate by Gender in the Age Group of 15-59 among Muslim Households, 2017

Sex	Head	Total
Male	96.3	95.0
Female	40.2	24.0
Total	89.4	81.7

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.5.5 Work Participation Rate by Gender among SC Households:

The sharp inequality in WPR between those households whose head is male and female in case of SC Household is found as evident in Table- 4.31.

Table-4.31: Work Participation Rate by Gender in the Age Group of 15-59 among SC Households, 2017

Sex	Head	Total
Male	97.5	73.5
Female	35.7	14.6
Total	89.4	44.5

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.5.6 Work Participation Rate by Gender among OBC Households:

The Table-4.32 reveals that there is a major inequality between male and female headed households. It is evident from the table that male is superior to female as a head of the household in terms of WPR.

Table-4.32: Work Participation Rate by Gender in the Age Group of 15-59 among OBC Households, 2017

Sex	Head	Total
Male	96.4	72.6
Female	38.0	14.5
Total	88.0	43.7

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.7 Work Participation Rate by Gender among Others Households:

In case of Other Groups of Households, there is a wide inequalities between the male and female as a head of the households as shown in Table-4.33.

Table-4.33: Work Participation Rate by Gender in the Age Group of 15-59 among Others Households, 2017

Sex	Head	Total
Male	94.4	68.3
Female	33.4	10.8
Total	87.1	39.9

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.8 Work Participation Rate by Gender among Different Occupational Groups in Rural Areas:

Table-4.34 shows that in rural areas, in case of male as a head of the household the WPR of those who are Self-employed in Agriculture is higher followed by Casual Labour in Agriculture, Casual Labour in Non- Agriculture, Self-employed in Non- Agriculture and Regular Wage/Salary. In case of female as a head of the household, Casual Labour in Agriculture has highest WPR and Casual Labour in Non-Agriculture has lowest WPR. At the aggregate level, male as the head of the household has highest WPR in the Casual Labour in Non-Agriculture where as in female as the head of the household, Casual Labour in Agriculture has highest WPR.

Overall, Casual Labour in Agriculture is the occupation which has showed highest WPR as having both male and female as the head of the households.

Table-4.34: Work Participation Rate by Gender in the Age Group of 15-59 among different Occupational Groups in Rural Areas, 2017

Occupation	Head			Total		
	Male	Female	Total	Male	Female	Total
Self-employed in Agriculture	99.9	75.9	97.8	73.6	17.8	45.6
Self-employed in Non- Agriculture	95.8	54.6	93.6	71.8	12.5	43.8
Regular Wage/Salary	95.3	66.8	93.4	72.2	12.9	43.6
Casual Labour in Agriculture	98.6	90.0	97.5	75.6	21.2	48.5
Casual Labour in Non- Agriculture	98.0	43.2	95.3	77.6	9.4	45.8

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.9 Work Participation Rate by Gender among Different Occupational Groups in Urban Areas:

It is evident from the Table-4.35 that in urban areas, Self-employed type of occupation where head of the household is male has the highest WPR and Regular Wage/Salary occupation as well as Casual labour have same WPR (96.2 percent). In case of female headed households in urban areas, Regular Wage/Salary type of occupation has the highest WPR.

Table-4.35: Work Participation Rate by Gender in the Age Group of 15-59 among Different Occupational Groups in Urban Areas, 2017

Occupation	Head			Total		
	Male	Female	Total	Male	Female	Total
Self-employed	97.6	34.2	93.7	74.4	9.7	42.9
Regular Wage/Salary	96.2	67.5	93.4	70.6	14.0	44.0
Casual Labour	96.2	37.8	91.3	76.7	9.6	46.3

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.5.10 Work Participation Rate by Gender in Different Regions:

It is evident from the Table-4.36 that WPR is found highest in Central region as in case of male as headed households while the Southern region has highest WPR in case of female as head of the household. At the aggregate level, Southern region has highest WPR in case of both males and females as the head of the households.

Table-4.36: Work Participation Rate by Gender in Different Regions, 2017

Region	Head			Total		
	Male	Female	Total	Male	Female	Total
Northern Upper Ganga Plains	92.4	21.6	86.4	70.3	6.2	39.6
Central Region	97.1	38.7	89.7	74.5	14.7	44.8
Eastern Region	96.7	38.5	85.5	69.1	12.8	40.0
Southern Region	97.5	53.2	95.4	78.9	30.8	55.3
Southern Upper Ganga Plains	96.8	34.7	90.4	73.3	16.6	46.2
Total	96.1	36.3	88.1	71.7	13.8	43.0

Source: Computed from Periodic Labour Force Survey Data, 2017

It is evident from the Table-4.37 that those who are engaged in agriculture has highest WPR in case of male and female as the head of the household in comparison to other occupations.

Table – 4.37: Workers by Industry, 2017

Sector	Head			Total		
	Male	Female	Total	Male	Female	Total
Agriculture	45.4	69.8	46.8	43.0	63.2	46.2
Mining	0.14	0	0.13	0.1	0	0.08
Manufacturing	10.3	7.6	10.1	11.8	13.2	12.0
Electricity	0.18	0.14	0.18	0.21	0.03	0.18
Water	0.39	0	0.37	0.32	0.07	0.28
Construction	16.7	2.6	15.9	16.3	2.4	14.1
Trade	10.5	5.9	10.3	12.3	5.2	11.2
Transport	4.9	0.44	4.64	4.57	0.36	3.9
Accommodation	2.0	0.19	1.9	2.1	0.95	1.9
Communication	0.51	0	0.49	0.55	0	0.46
Finance	0.5	0.33	0.49	0.55	0.35	0.52
Real estate	0.22	0	0.21	0.21	0	0.18
Professional	0.55	0.18	0.53	0.74	0.54	0.7
Administrative	0.85	0.43	0.83	0.87	0.14	0.75
Public Administration	1.78	0.84	1.73	1.33	0.53	1.2
Education	2.57	6.56	2.79	2.32	9.1	3.4
Health	0.61	2.07	0.69	0.7	1.88	0.88
Entertainment	0.28	0	0.27	0.31	0.17	0.29
Others	1.6	3.0	1.7	1.8	1.8	1.8
Total	100	100	100	100	100	100

Source: Computed from Periodic Labour Force Survey Data, 2017

Table-4.38 shows the WPR in different occupations during 2017. It is evident from the table that workers in the skilled agricultural type of occupation have the highest WPR both in case of male and female as the head of the household as well as at the aggregate level.

Table-4.38: Workers by Occupation, 2017

Occupation	Head			Total		
	Male	Female	Total	Male	Female	Total
Legislators, Officials etc.	7.9	4.0	7.7	7.4	2.7	6.7
Professionals	2.1	1.5	2.1	2.4	3.1	2.5
Technician, Associate	2.3	5.5	2.4	2.5	7.7	3.3
Clerks	1.1	0.16	1.1	1.3	0.49	1.1
Service, Workers, Shop etc.	7.5	7.5	7.5	8.9	6.5	8.5
Skilled Agricultural etc.	39.0	55.0	39.9	37.3	54.8	40.1
Craft Related Trade Works	9.6	5.4	9.4	10.7	10.5	10.6
Plants, Machines Operators	4.4	0.12	4.2	4.7	0.83	4.1
Elementary Occupation	26.1	21.0	25.8	25.0	13.3	23.1
Total	100	100	100	100	100	100

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.6 Unemployment Rate in Male and Female Headed Households and in Aggregate:

The NSSO during 2017 in Periodic Labour Force Survey has presented the data on unemployment among those households which are headed separately by males and females. The unemployment rate has also been presented at the aggregate level as shown in Table-4.39. The table shows that during 2017, unemployment rate has been 7 percent at the aggregate level. In case of all males in the age group of 15-59 years, rate of unemployment is 8 percent while it is around 3 percent in case of females. When unemployment was analysed in case of those households headed by males and those household who are headed by females, it is found that the rate of unemployment is higher (0.98 percent) in female headed household in comparison with male headed household (0.89 percent). Combining both male and female headed households together, it is found that the rate of unemployment has been less than 1 percent. This indicates that considering the males and females headed households, the rate of unemployment is far lower than general unemployment rate.

Table-4.39: Unemployment Rate in Male and Female Headed Household and in Aggregate-
(2017, 15-59 Years)

Sex	Head	Total
Male	0.89	7.5
Female	0.98	3.3
Total	0.89	6.9

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.1 Unemployment Rate in Male and Female Headed Household and in Aggregate in Rural Areas:

The Table-4.40 shows the unemployment rate in Male and Female Headed Households and in aggregate in rural areas during 2017 in the age group of 15-59 years. It is evident from the table that male headed household has the highest unemployment rate in comparison to female headed household which has not reported unemployment at all in the rural areas of the state. At the aggregate level while male headed households has unemployment rate of 6.8 per cent, female headed households report unemployment rate of 1.6 per cent only.

Table-4.40: Unemployment Rate in Male and Female Headed Household and in Aggregate in Rural Areas (2017, 15-59)

Sex	Head	Total
Male	0.62	6.8
Female	0.00	1.6
Total	0.58	6.0

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.2 Unemployment Rate in Male and Female Headed Household and in Aggregate in Urban Areas:

In urban areas, unemployment rate is highest (5.9 per cent) in female headed households in comparison with male headed household (1.9 per cent). Combining both the male and female headed households, unemployment rate is found at 2.1 per cent. At the aggregate level, there is slightly less difference between the unemployment rates of male and female headed households and the aggregate of both as evident from Table-4.41.

Table-4.41: Unemployment Rate in Male and Female Headed Household and in Aggregate in Urban Areas – 2017 (15-59)

Sex	Head	Total
Male	1.9	9.9
Female	5.9	11.1
Total	2.1	10.1

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.3 Unemployment Rate in Male and Female Headed SC Households in Aggregate:

The SC male headed households of the state has reported unemployment rate of 0.81 per cent in comparison with their female headed households who have reported no unemployment as shown in Table-4.42. At the aggregate level, while male SCs have unemployment of 7.2 per cent their females have unemployment of 1.5 per cent. Hence the rate of unemployment is too little among SC females while unemployment is totally absent among the female headed SC households.

Table-4.42: Unemployment Rate in Male and Female SC Headed Households in Aggregate (2017, 15-59)

Sex	Head	Total
Male	0.81	7.2
Female	0.00	1.5
Total	0.77	6.3

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.6.4 Unemployment Rate in Male and Female Headed   OBC Households and in Aggregate:

The data in the Table-4.43 shows that in case of OBC households, male headed household is again has the highest unemployment rate (1.1 per cent) in comparison to female headed households (0.79 per cent). The same status is fond at the aggregate level when OBC male has very high unemployment rate compared with OBC females.

Table-4.43: Unemployment Rate in Male and Female Headed Household and in aggregate in OBC Households (2017, 15-59)

Sex	Head	Total
Male	1.1	7.1
Female	0.79	2.4
Total	1.1	6.4

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.6.5 Unemployment Rate in Male and Female Headed Other Castes Households and in Aggregate:

In Others Households, there is very minor difference in unemployment rate was observed in between male and female headed households. At the total lev el, male headed households has the unemployment rate as 8.6 percent where as female headed as 8.3 percent resulting into very minor gap.

Table-4.44: Unemployment Rate in Male and Female Headed Household and in aggregate in Others Households (2017 (15-59)

Sex	Head	Total
Male	0.57	8.6
Female	2.9	8.3
Total	0.68	8.5

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.6.6 Unemployment Rate in Male and Female Headed Household and in aggregate in Hindu Households:

The Table-4.45 shows that the Unemployment Rate in Male and Female Headed Households and in aggregate in Hindu Households. It is depicted from the table that at the total level, males have highest level of unemployment compared with females. In male headed Hindu households, unemployment rate is relatively lower compared with female headed households.

Table-4.45: Unemployment Rate in Male and Female Headed Household and in Aggregate in Hindu Households (2017, 15-59)

Sex	Head	Total
Male	1.0	7.4
Female	1.2	3.1
Total	1.0	6.7

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.7 Unemployment Rate in Male and Female Headed Household and in Aggregate In Muslim Households:

Table-4.46 shows the level of difference observed in the unemployment rate of the Muslim Households of Uttar Pradesh in respect of male, female and total. The table also shows unemployment rate in Muslim households when their households are headed by the males, females and the total. If Muslim households are headed by the females, there is no unemployment while in case of male headed households; unemployment is less than one per cent. In all Muslim households, unemployment among males is double (8.2 per cent) to that of unemployment among Muslim females.

Table-4.46: Unemployment Rate in Male and Female Headed Household and in aggregate in Muslim Households (2017, 15-59)

Sex	Head	Total
Male	0.36	8.2
Female	0.00	4.2
Total	0.34	7.7

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.8 Unemployment Rate in Male and Female Headed Household and in Aggregate Across Different Types of Households in Rural Areas:

In rural areas of the state, unemployment rates among males who are engaged in different type of activities have been reported to be the less than one per cent while in case of females, there is no unemployment. But when the comparison of unemployment rates between the households headed by the males is made with those households which are headed by the females, it becomes evident that former has high level of unemployment compared with the later. The females who are engaged in two types of activities namely the casual labour in agriculture and casual labour in non-agricultural activities, they face no unemployment. On the whole, unemployment among female headed households who are doing different activities is nominal (Table-4.47).

Table-4.47: Unemployment Rate in Male and Female Headed Household and in Aggregate Across Different Types Households in Rural Areas- (2017, 15-59 Years)

Household	Head			Total		
	Male	Female	Total	Male	Female	Total
Self-employed in Agriculture	6.4	2.1	5.6	0.03	0	0.0
Self-employed in Non- Agriculture	6.9	0.58	6.1	1.89	0	1.8
Regular Wage/Salary	6.0	1.0	5.3	1.01	0	1.0
Casual Labour in Agriculture	6.3	0.00	5.0	0.13	0	0.12
Casual Labour in Non- Agriculture	5.8	0.00	5.3	0.63	0	0.62
Total	6.8	1.6	6.0	0.62	0	0.6

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.9 Unemployment Rate in Male and Female Headed Household and and in Aggregate Across Different Types of Households in Urban Areas:

The unemployment rate in households headed by males and females and total who are found engaged in three types of activities in urban areas of the state has been shown in Table-4.48. It is evident from the table that in male headed households who are engaged in regular wage/salary and as casual labour, their unemployment rate is around 9 per cent while in male headed self employed households, unemployment is 6 per cent. In female headed households who are in self employed and in casual wage/salary, unemployment rate is around 8 per cent. In total households, unemployment rate among males is less than one per cent while in households who are in casual labour, their unemployment rate is around two per cent. At the aggregate level of female headed households, unemployment rate is higher (11 per cent) compared with male headed households. Thus, in both male and female headed households, rate of unemployment is quite higher in urban areas of the state.

Table-4.48: Unemployment Rate in Male and Female Headed Household and in Aggregate in Across Different Types of Households in Urban Areas- (2017, 15-59 Years)

Household	Head			Total		
	Male	Female	Total	Male	Female	Total
Self-Employed	6.2	8.5	6.5	0.87	4.5	1.0
Regular Wage/Salary	8.9	8.3	8.8	0.97	0	0.9
Casual Labour	8.8	3.5	8.3	1.65	0	1.6
Total	9.9	11.1	10.1	1.92	5.9	2.1

Source: Computed from Periodic Labour Force Survey Data, 2017

IV.6.10 Unemployment Rate in Male and Female Headed Household and in Aggregate in Different Regions of Uttar Pradesh:

It is evident from the Table-4.49 that in Northern Upper Ganga Plains households headed by both male and female have the highest unemployment rate and Southern region has the lowest unemployment rate in case of male headed household and in case of female headed household, Central and Southern Upper Ganga Plains has recorded zero rate of unemployment while Eastern region has lowest unemployment rate in those households who are headed by females.. At the aggregate level, female headed household has the highest unemployment rate in comparison to male headed household. Overall, Northern Upper Ganga Plains has the highest unemployment rate in case of both male and female headed households.

Table-4.49: Unemployment Rate in Male and Female Headed Household and in aggregate in Different Regions of Uttar Pradesh (2017 15-59)

Region	Head			Total		
	Male	Female	Total	Male	Female	Total
Northern Upper Ganga Plains	2.7	2.6	2.7	10.1	6.9	9.9
Central	0.45	0	0.43	7.2	4.3	6.7
Eastern	0.27	1.3	0.36	7.9	3.7	7.2
Southern	0.11	2.8	0.19	4.4	0.78	3.4
Southern Upper Ganga Plains	0.93	0	0.90	6.0	2.1	5.3
Total	0.89	0.98	0.89	7.5	3.3	6.9

Source: Computed from Periodic Labour Force Survey Data, 2017.

IV.7 Theil Decomposition Analysis in Rural Areas on Primary Data:

The Theil Decomposition analysis of employment inequalities on primary data has been calculated in relation to the rural areas of the state in Table-4.50. The following inferences emerge from the table:

1. Intra household inequalities across all items listed in the table are higher compared with the employment inequalities between the households.

2. The table shows that in rural and urban areas of the state, intra household inequalities in employment are higher within the households. In rural areas, intra household inequality in employment is slightly higher compared with employment inequalities in urban areas. The same trend is found at the aggregate level, but the employment

inequalities in rural areas between households are lower in comparison with the inequalities in urban areas.

3. Intra household inequalities are higher in Muslim households compared with Hindu and ORM households. The same pattern is found in case of employment inequalities between households of respective religious groups. However, employment inequalities are highest among Hindu households while Muslim and ORM households have the same level of employment inequalities (0.49) at the aggregate level.

4. Among different social groups, employment inequalities at the intra household level are highest among other households who are mostly the households of Upper Castes. Followed by SC and OBC households. The same pattern is found in case of inequalities between households of different social groups. At the aggregate level, employment inequality is more or less same across different social groups.

5. In different occupations in rural areas of the state, intra household inequalities are in employment are higher compared with between the households inequalities though minor variations across different occupations are evident.

6. In the regional context, Eastern region of the state has highest intra household inequalities followed by Northern Upper Ganga Plains, Central region, Southern Upper Gangs Plains and Southern region. All the regions of the state showed higher intra household employment inequalities compared with the employment inequalities between their households.

Table-4.50: Theil Decomposition Analysis of Employment on Primary Data in Rural Areas

Items	Intra Household	Between Households	Total
Rural	0.80	0.26	0.53
Urban	0.78	0.29	0.49
Hindu	0.78	0.26	0.52
Muslim	0.86	0.36	0.49
ORM	0.69	0.20	0.49
SC	0.76	0.24	0.51
OBC	0.79	0.27	0.52
Others	0.83	0.32	0.51
Self-employed in Agriculture	0.75	0.23	0.53
Self-employed in non- Agriculture	0.79	0.27	0.51
Regular Wage/Salary	0.80	0.31	0.49

Items	Intra Household	Between Households	Total
Casual Labour in Agriculture	0.70	0.19	0.51
Casual Labour in non- Agriculture	0.75	0.32	0.44
Self-employed	0.79	0.31	0.47
Regular Wage/Salary	0.72	0.23	0.48
Casual Labour	0.73	0.36	0.37
Northern Upper Ganga Plains	0.82	0.37	0.46
Central Region	0.76	0.26	0.50
Eastern Region	0.85	0.30	0.55
Southern Region	0.64	0.12	0.52
Southern Upper Ganga Plains	0.75	0.24	0.50
Total	0.79	0.27	0.52

Source: Based on Primary Data.

IV.8: Theil Decomposition Analysis in Urban Areas on Primary Data:

In urban areas of the state, Theil decomposition analysis of employment on primary data has been presented in Table-4.51. The analysis reveals the following factual situation:

1. Intra household inequalities across all items listed in the table are higher compared with the employment inequalities between the households.

2. Employment inequalities at intra household level in urban areas of the state are higher compared with rural areas. The same trend is found in case of employment inequalities between households in rural and urban areas. However, employment inequalities are same in both sectors (0.60).

3. The Muslim households have highest level of intra household employment inequalities compared with Hindu and ORM households in urban areas. The same pattern is found in case of employment inequalities between the households of the respective religious groups. At the aggregate level, employment inequalities are higher among Hindu households followed by Muslim and ORM households.

4. The other households which are mostly the upper caste households show highest level of intra household inequalities in employment followed by OBC and SC households. The same pattern is evident in case of employment inequalities between different households of respective social groups.

5. In case of different occupations, employment in regular wage/salary occupation shows highest level of intra household inequalities. The self employed households also have the same level of intra household employment inequalities.

6. The intra households inequality in the Eastern region of the state are highest followed by Northern Upper Ganga Plain, Central region, Southern Upper Ganga Plain and Southern region.

Table-4.51: Theil Decomposition Analysis of Employment on Primary Data in Urban Areas

Items	Intra Household	Between Households	Total
Rural	0.85	0.25	0.60
Urban	0.89	0.29	0.60
Hindu	0.85	0.25	0.60
Muslim	0.94	0.35	0.58
ORM	0.73	0.20	0.53
SC	0.84	0.23	0.61
OBC	0.86	0.26	0.60
Others	0.92	0.32	0.60
Self-employed in Agriculture	0.81	0.22	0.59
Self-employed in non- Agriculture	0.85	0.26	0.59
Regular Wage/Salary	0.86	0.30	0.56
Casual Labour in Agriculture	0.76	0.17	0.59
Casual Labour in non- Agriculture	0.81	0.30	0.50
Self-employed	0.86	0.32	0.55
Regular Wage/Salary	0.81	0.23	0.59
Casual Labour	0.81	0.35	0.46
Northern Upper Ganga Plains	0.87	0.26	0.60
Central Region	0.84	0.26	0.58
Eastern Region	0.93	0.29	0.64
Southern Region	0.67	0.12	0.56
Southern Upper Ganga Plains	0.80	0.23	0.57
Total	0.87	0.26	0.60

Source: Based on Primary Data

The above analysis has indicated that LFPR is almost same in rural as well as in urban areas in case of male while among the females LFPR is slightly lower as compared to males. In general LFPR is very much higher in males compared with females. The similar pattern is evident across different social groups where no major variations are evident. The Muslims and ORM, their males have higher LFPR compared to Hindu males. The females of Muslims they too have relatively lower LFPR compared to females of Hindu and ORM. In rural and

urban areas, males in different activities have much higher LFPR compare to their females counterparts. The similar pattern is evident in case of WPR. The sharp gender inequalities are evident among male and female headed households in case of LFPR in rural and urban areas across all categories of households. In this way. LFPR, WPR and household headed by males and females, sharp inequalities are evident in respect of males versus females. The primary data analysis has also indicated that intra household inequalities in employment are greater compared with the inequalities between the households relating to different items.

Chapter-V

Conclusions

The core objective of the study has been to measure the intra household inequalities in consumption expenditure, education and employment and unemployment. The income was also one of the parameters but the lack of data has compelled use to take consumption expenditure as a proxy of the income. The entire analysis is based on the data of different Rounds of National Sample Survey Organization (NSSO). Some primary data was also collected in order to find out the current situation of the intra household inequalities in the identified indicators. The following conclusions have emerged from the study:

➢ The NSSO data has indicated that there has been a tremendous change in per capita consumption expenditure in the state of Uttar Pradesh. The average MPCE in the state was Rs.1156/- in rural areas while it was Rs.2051/- in urban areas. The inequalities in MPCE between males of rural and urban areas are 78 percent while the same is 84 percent between the females of rural and urban areas. The wide variation in consumption expenditure inequalities across different social groups is also evident from the study. The same is found in case of religions and regions. The Theil Index which is a measurement of intra household inequalities have also shown that MPCE inequalities at the level of intra household are higher compared with the inequalities in consumption expenditure between the households. The same is found true in rural and urban areas, across social groups, religions and regions.

➢ The second chapter is on the assessment of educational inequalities focusing at intra household level. The NSSO data has indicated that there is a narrowing trend of educational inequalities across all types of households in Uttar Pradesh. The Theil decomposition analysis has revealed silver lining which shows that educational inequality gap within and overall household level have become nominal in rural and urban areas, gender, religion, and households of different social groups. The Theil Index has indicated that in rural areas of the state, intra household inequalities are higher compared with between the household inequalities in educational expenditure. In rural areas of the state, intra household inequalities not have any significant

relationship with the size of households while in urban areas household educational inequalities increase with the increase in the number of members of the households in rural and urban areas of the state. Intra household inequalities in different parameters of education are higher than the educational inequalities between the households.

➢ The next chapter is on the assessment of employment and unemployment inequalities focusing at intra household level. The analysis has revealed that LFPR is almost same in rural and urban areas in case of male members while in case of females, LFPR is slightly lower as compared to that of males. Generally, LFPR is such higher in respect of males compared with females. The same pattern is evident across different social groups. The Muslims and ORMs, their males have higher LFPR compared to males of Hindu. The females of Muslims have lower LFPR compared to females of Hindu and ORMs. The sharp gender inequalities are evident among male and female headed household in case of LFPR in rural and urban areas across all categories of households. In LFPR and WPR, the sharp inequalities are evident in male headed household compared with female headed household. The primary data analysis has also indicated that intra household inequalities in employment and unemployment are greater compared with the inequalities between the households.

As a whole, it can be concluded that entire analysis has indicated the persistence of intra household inequalities in consumption expenditure, in different parameters of educational development and employment and unemployment. More or less same pattern is found across gender, sector, social groups, religious groups and the regions of Uttar Pradesh. Most of the intra household inequalities are closer to 1 which indicate that inequalities are serious in nature and need to be taken care of in future policy prescriptions.

Explanatory Note:

The study seeks to examine the gender inequalities and discrimination in schooling, employment and consumption. From a policy perspective, it is important to know the extent to which the overall inequality is attributable to inequality between population sub-groups, and the extent to which it is attributable to the inequality within them.

In order to understand how much inequality is attributed to the inequality within household and across households we need to decompose inequality into within-group and between-

group components. The between-group component is the inequality that would result if all units of each population sub-group had an income equal to the average income of the subgroup. The within-group component is the inequality that would remain if the average income in all groups were equalised but the inequality within each group remained unchanged. The within-group component is, therefore, the sum of the inequalities within each group, weighted by a coefficient that depends on certain aggregate characteristics.

Let Y be the total income of the population, N is the total population. The overall Theil index (T) can be written as:

$$T = \sum_{k=1}^{n} \frac{y_i}{Y} \left(\text{In} \frac{y_i N}{Y} \right)$$

To decompose it, let Y_j be the income of a subgroup and N_j population of a subgroup. The Theil index may be decomposed into two components

$$T = \sum \left(\text{In} \frac{Y_j}{Y} \right) Tj + \sum \left(\frac{Y_j}{Y} \right) \left(\text{In} \frac{Y_i / Y}{N_j / N} \right)$$

The first term represents the within-group inequality and the second term represents the within-group inequality.

This method is applied in the analysis of schooling, employment and consumption expenditure. The detailed description of the process involved is given below;

Schooling:

The intra-household educational attainment is measured by 'mean year of schooling of individual'. Mean year of schooling is computed separately for male and female in the household. The gender mean difference in different categories of the household is computed to find the mean gender difference as follows,

Difference = (mean years of Schooling) [male] – (mean years of Schooling) [female]

Based on the classification of National Commission for Enterprises in the Unorganised sector, the year of schooling based on the level of education are classified as follows,

Illiterate-0, literate below primary-1, primary-4, middle-8, secondary-10, higher secondary-12, diploma/certificate-14, graduate-15, pg & above- 17

The mean years of schooling among households with and without female members in the age group 0-29. Higher years of schooling in households with no female will indicate the gender

biasness at household level. Theil index of mean year of schooling between household with no female and household with female in the age group 0-29 is also calculated. It is decomposed to examine whether inequality is attributed to the inter household or intra household inequality.

Another way to examine gender bias in schooling is in terms of average expenditure by level of education. It is calculated to analyse the variation by gender. Like mean years of schololing, Theil index between male and female is calculated to analyse the gender inequality. It is further decomposed to capture inter and intra household inequality

Employment:

The gender inequality and intra household discrimination in labour market is analysed as follow;

First, Decision to participate in labour force defined as labour force participation rate (LFPR) for the age 15 to 59. Labour force participation and workforce participation by gender is calculated for the age group 15 to 59 years. It is calculated by rural urban, caste, religion and occupational and region. The rate for male and female are compared to examine the existing inequality.

Second, similarly, work force participation for the age 15 to 59 is calculated and compared between male and female. It is calculated by rural urban, caste, religion and occupational and region. The rate for male and female are compared to examine the existing inequality in work participation.

Third, the share of workers by sector, occupation and industry among male and female are compared to examine the disparity in the concentration of male and female workers.

Fourth, the indicators at overall level for female are compared with that of household head. If the indicators show improvement if the women are the head of the household, then it may indicate that position within the household matters in determining labour market outcome. Likewise, workforce participation are also compared.

Fifth, unemployment rate by gender at aggregate is compared with that among household head. Likewise, better condition of household head will show that position in the household plays an important role.

Sixth, their index for participating labour force and workforce is calculated. It is further decomposed into inter household or intra household inequality.

Consumption:

The Gender inequality in consumption expenditure and intra household discrimination is analysed as follows;

Average consumption expenditure of male and female are compared. Then average consumption expenditure for female and female as a head are compared. If average expenditure for female head is higher than that of overall average, then it is a indication of improving expenditure with the position in the household.

In order to compare gender inequality among children, monthly per capita consumption expenditure for the age group 0-14 years and number of female children are calculated. F average consumption expenditure reduces with increasing number of female children, then it may be concluded that position of children matters in a family. There may be gender disparity even for a given position also.

Third, theil index between male and female among head of the household and overall sample are calculated.

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Household and Population

Uttar Pradesh			
Indicator	**Rural**	**Urban**	**Rural+Urban**
Percentage distribution of households	76.87	23.13	100.00
Percentage distribution of population between rural and urban sectors			
Male	79.17	20.83	100.00
Female	79.67	20.33	100.00
Person	79.41	20.59	100.00
Percentage distribution of population between the age groups 3 to 35 years (considered for collection information on participation and expenditure on education) and remaining ages			
male of age 3 to 35 years	64.34	62.47	63.95
male of age other than 3 to 35 years	35.66	37.53	36.05
All	100.00	100.00	100.00
female of age 3 to 35 years	61.32	59.38	60.93
female of age other than 3 to 35 years	38.68	40.63	39.07
All	100.00	100.00	100.00
person of age 3 to 35 years	62.89	61.01	62.51
person of age other than 3 to 35 years	37.1	38.99	37.49
All	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - II

Literacy rate (in percent) among persons of age 7 years and above

Sector	Literacy rate (in percent)		
	Male	**Female**	**Persons**
Rural	80.47	60.36	70.80
Urban	86.77	74.93	81.17
Rural+Urban	81.81	63.39	72.99

Uttar Pradesh

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - III

Percentage distribution of persons of age 15 years and above by highest level of education successfully completed

Uttar Pradesh

highest level of education completed	Percentage		
	Male	**female**	**Person**
	Rural		
Not literate	23.52	47.89	35.38
Literate upto primary	16.47	14.14	15.34
Middle	21.71	13.26	17.59
Secondary	14.88	10.21	12.60
higher secondary	14.08	9.21	11.66
graduate and above	9.35	5.39	7.42
All	100.00	100.00	100.00
	Urban		
Not literate	14.81	28.54	21.37
Literate upto primary	13.32	13.08	13.20

Middle	14.43	12.08	13.31
Secondary	16.42	13.09	14.82
higher secondary	16.44	12.73	14.66
graduate and above	24.58	20.49	22.62
All	100.00	100.00	100.00
rural+urban			
Not literate	21.59	43.71	32.31
Literate upto primary	15.77	13.91	14.87
Middle	20.09	13.00	16.66
Secondary	15.22	10.83	13.09
higher secondary	14.60	9.90	12.32
graduate and above	12.73	8.65	10.75
All	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - IV

Percentage distribution of persons of age 15 to 59 years by status of vocational/technical training

Uttar Pradesh			
status of vocational/technical training	**Percentage**		
	male	**female**	**person**
Rural			
receiving formal vocational/technical training	0.53	0.14	0.34
received formal vocational/technical training	0.74	0.20	0.48
received vocational/technical training other than formal vocational/technical training	7.43	1.78	4.69

did not receive vocational/technical training	91.29	97.88	94.49
all (incl. n.r.)	100.00	100.00	100.00
Urban			
receiving formal vocational/technical training	1.24	0.51	0.89
received formal vocational/technical training	2.42	1.35	1.91
received vocational/technical training other than formal vocational/technical training	5.64	1.05	3.46
did not receive vocational/technical training	90.71	97.09	93.74
all (incl. n.r.)	100.00	100.00	100.00
rural+urban			
receiving formal vocational/technical training	0.69	0.22	0.46
received formal vocational/technical training	1.12	0.45	0.79
received vocational/technical training other than formal vocational/technical training	7.03	1.63	4.4
did not receive vocational/technical training	91.16	97.71	94.32
all (incl. n.r.)	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Percentage distribution of persons of age 3 to 35 years by enrollment status

Uttar Pradesh			
enrolment status	**Percentage**		
	Male	**female**	**person**
Rural			
never enrolled	15.42	24.22	19.54
enrolled in the past academic year and currently not attending	37.60	34.11	35.97
enrolled in the current academic year and currently not attending	0.49	0.38	0.44
currently attending	46.50	41.29	44.06
Urban			
never enrolled	12.79	17.98	15.18
enrolled in the past academic year and currently not attending	39.67	38.75	39.25
enrolled in the current academic year and currently not attending	0.19	0.27	0.23
currently attending	47.34	43.00	45.35
rural+urban			
never enrolled	14.88	22.99	18.66
enrolled in the past academic year and currently not attending	38.02	35.03	36.63
enrolled in the current academic year and currently not attending	0.43	46.67	0.39
currently attending	46.67	41.63	44.32

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - VI

Percentage distribution of students of age 3 to 35 years by level of current attendance

level of current attendance	Percentage		
	male	**female**	**Person**
Uttar Pradesh			
Rural			
non-formal	0.08	0.19	0.13
pre-primary	4.97	4.98	4.97
Primary	47.54	48.19	47.85
upper primary/middle	18.94	19.90	19.40
Secondary	10.72	9.81	10.29
higher secondary	7.80	8.81	8.28
Diploma/certificate below graduate	1.30	1.01	1.16
graduation and above	8.65	7.12	7.93
Urban			
non-formal	0.61	0.05	0.36
pre-primary	9.06	10.60	9.74
Primary	31.88	31.47	31.70
upper primary/middle	16.69	18.58	17.52
Secondary	11.34	11.80	11.54
higher secondary	11.91	12.27	12.07
Diploma/certificate below graduate	3.80	2.47	3.21
graduation and above	14.70	12.77	44.54
rural+urban			
non-formal	0.19	0.16	0.18
pre-primary	5.81	6.01	5.90

Primary	44.33	45.12	44.70
upper primary/middle	18.48	19.66	19.03
Secondary	10.84	10.18	10.53
higher secondary	8.65	9.44	9.02
Diploma/certificate below graduate	1.81	1.28	1.56
graduation and above	9.90	8.15	9.08

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - VII

Gross Attendance Ratio (GAR) at different levels of education

Uttar Pradesh			
levels of education	Gross Attendance Ratio (GAR)		
	male	female	Person
Rural			
primary level	101.8	95.3	98.8
upper primary/middle level	87.9	93.4	90.4
primary and upper primary/middle level	97.0	94.7	95.9
secondary level	68.6	54.5	62.1
higher secondary level	63.2	53.9	58.7
post higher secondary level	18.5	18.8	18.6
Urban			
primary level	105.3	92.3	99.5
upper primary/middle level	78.3	87.4	82.3
primary and upper primary/middle level	95.0	90.5	93.0
secondary level	73.1	72.6	72.9

higher secondary level	72.6	61.1	66.9
post higher secondary level	28.3	28.8	28.5
Rural+Urban			
primary level	102.4	94.8	98.9
upper primary/middle level	86.0	92.3	88.8
primary and upper primary/middle level	96.7	93.9	95.4
secondary level	69.4	57.7	64.0
higher secondary level	65.1	55.4	60.4
post higher secondary level	20.7	20.9	20.8

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - VIII

Net Attendance ratio (NAR) at different levels of education

Uttar Pradesh			
levels of education	**Net Attendance ratio (NAR)**		
	Male	**female**	**person**
Rural			
primary level	81.0	78.2	79.7
upper primary/middle level	58.3	61.8	59.9
primary and upper primary/middle level	85.9	82.5	84.4
secondary level	41.0	33.9	37.7
higher secondary level	30.9	31.8	31.3
post higher secondary level	12.9	15.9	15.5
Urban			
primary level	79.2	73.9	76.8
upper primary/middle level	55.8	62.9	59.0

primary and upper primary/middle level	83.7	80.0	82.0
secondary level	39.5	47.8	43.4
higher secondary level	39.6	40.9	40.3
post higher secondary level	23.6	22.8	23.3
rural+urban			
primary level	80.7	77.5	79.2
upper primary/middle level	57.8	62.0	59.7
primary and upper primary/middle level	85.5	82.1	84.0
secondary level	40.7	36.4	38.7
higher secondary level	32.6	33.7	33.1
post higher secondary level	17.1	17.4	17.2

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - IX

Age Specific Attendance Ratio (ASAR)

Uttar Pradesh			
age groups	**Age Specific Attendance Ratio (ASAR)**		
	male	**female**	**person**
Rural			
3-5 years	25.3	19.2	22.5
6-10 years	92.1	88.5	90.4
11-13 years	90.5	87.5	89.1
14-17 years	70.5	62.4	66.7
18-23 years	27.0	23.5	25.4
24-29 years	2.9	1.3	2.1
5-29 years	55.4	50.1	52.9
3-35 years	46.5	41.3	44.1

Urban			
3-5 years	49.4	38.8	44.5
6-10 years	92.8	89.5	91.3
11-13 years	90.0	90.5	90.2
14-17 years	73.9	73.4	73.7
18-23 years	39.6	30.4	35.6
24-29 years	4.8	3.6	4.2
5-29 years	56.0	51.7	54.0
3-35 years	47.3	43.0	45.3
rural+urban			
3-5 years	29.7	22.7	26.4
6-10 years	92.2	88.7	90.6
11-13 years	90.4	88.1	89.4
14-17 years	71.1	64.5	68.0
18-23 years	29.8	25.0	27.6
24-29 years	3.3	1.8	2.6
5-29 years	55.5	50.4	53.2
3-35 years	46.7	41.6	44.3

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Percentage distribution of students by type of course pursuing (general course and technical/professional course

type of course pursuing	Percentage		
	Male	**female**	**person**
Uttar Pradesh			
Rural			
general course	98.3	98.9	98.6
technical/professional course	1.7	1.1	1.4
All	100.00	100.00	100.00
Urban			
general course	93.2	96.4	94.6
technical/professional course	6.8	3.6	5.4
All	100.00	100.00	100.00
rural+urban			
general course	97.3	98.4	97.8
technical/professional course	2.7	1.6	2.2
All	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Percentage distribution of students pursuing general course by type of course

description	type of course	Percentage		
		male	**Female**	**person**
Uttar Pradesh				
Rural				
percentage distribution of students pursuing general course	up to class X	82.55	81.78	82.22
	others (other than up to class X)	17.45	18.22	17.78
	All	100.00	100.00	100.00
percentage distribution of students pursuing general course above class X by type of course	Humanities	50.30	65.18	57.01
	Science	43.87	30.06	37.65
	Commerce	5.83	4.76	5.35
	All	100.00	100.00	100.00
Urban				
percentage distribution of students pursuing general course	up to class X	77.92	76.24	77.17
	others (other than up to class X)	22.08	23.76	22.83
	All	100.00	100.00	100.00
percentage distribution of students pursuing general course above class X by type of course	Humanities	28.71	54.67	40.73
	Science	54.54	36.04	45.97
	Commerce	16.75	9.29	13.29
	All	100.00	100.00	100.00
rural+urban				
percentage distribution of students pursuing general course	up to class X	81.64	80.67	81.21
	others (other than up to class X)	18.36	19.33	18.79
	All	100.00	100.00	100.00

percentage distribution of students pursuing general course above class X by type of course	Humanities	45.17	62.59	53.08
	Science	46.41	31.53	39.66
	Commerce	8.42	5.88	7.27
	All	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - XII

Percentage distribution of students pursuing technical/professional course by type of course

Uttar Pradesh			
type of course	Percentage		
	Male	female	person
Rural			
Medicine	3.41	3.14	3.32
Engineering	14.68	4.75	11.38
Agriculture	0.36	0.12	0.28
Law	2.79	1.72	2.43
Management	2.59	7.62	4.27
Education	11.21	40.69	21.01
CA and similar courses	0.25	0.30	0.26
IT/computer courses	9.50	1.81	6.94
courses from ITI/recognized vocational institutes	34.00	5.25	24.44
Others	21.20	34.61	25.66
All	100.00	100.00	100.00

Urban			
Medicine	5.17	12.49	7.27
Engineering	40.19	17.80	33.76
Agriculture	0.16	0.48	0.25
Law	3.97	3.37	3.80
Management	5.13	13.20	7.45
Education	6.16	27.53	12.30
CA and similar courses	1.97	1.67	1.88
IT/computer courses	23.64	4.14	18.04
courses from ITI/recognized vocational institutes	9.86	2.95	7.88
Others	3.74	16.36	7.37
All	100.00	100.00	100.00
rural+urban			
Medicine	4.31	7.46	5.29
Engineering	27.81	10.78	22.53
Agriculture	0.26	0.29	0.27
Law	3.40	2.48	3.11
Management	3.90	10.20	5.85
Education	8.61	34.61	16.67
CA and similar courses	1.13	0.93	1.07
IT/computer courses	16.78	2.88	12.47
courses from ITI/recognized vocational institutes	21.58	4.19	16.19
Others	12.22	26.18	16.55
All	100.00	100.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - XIII

Percentage distribution of students pursuing general curse by gender of the students for each type of course

type of course	Percentage		
	Male	female	person
Rural			
up to class X	56.21	43.76	100.00
Humanities	48.46	51.54	100.00
Science	64.01	35.99	100.00
Commerce	59.89	40.11	100.00
All	55.98	44.00	100.00
Urban			
up to class X	56.04	43.96	100.00
Humanities	37.84	63.69	100.00
Science	63.69	36.31	100.00
Commerce	67.63	32.37	100.00
All	55.50	44.50	100.00
rural+urban			
up to class X	56.18	43.80	100.00
Humanities	46.49	53.51	100.00
Science	63.92	36.08	100.00
Commerce	63.31	36.69	100.00
All	55.88	44.10	100.00

The table header "Uttar Pradesh" spans the top of the table.

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - XIV

Percentage distribution of students pursuing technical/professional course by gender of the student for each type of course

type of course	Percentage		
Uttar Pradesh			
	Male	**female**	**Person**
Rural			
Medicine	68.56	31.44	100.00
Engineering	86.11	13.89	100.00
Agriculture	85.71	14.29	100.00
Law	76.54	23.46	100.00
Management	40.57	59.43	100.00
Education	35.61	64.39	100.00
CA and similar courses	62.48	37.52	100.00
IT/computer courses	91.35	8.65	100.00
courses from ITI/recognized vocational institutes	92.86	7.14	100.00
Others	55.14	44.86	100.00
All	66.74	33.26	100.00
Urban			
Medicine	50.67	49.33	100.00
Engineering	84.86	15.14	100.00
Agriculture	45.65	54.35	100.00
Law	74.52	25.48	100.00
Management	49.09	50.91	100.00
Education	35.71	64.29	100.00
CA and similar courses	74.51	25.49	100.00

IT/computer courses	93.41	6.59	100.00
courses from ITI/recognized vocational institutes	89.23	10.77	100.00
Others	36.22	63.78	100.00
All	71.28	28.72	100.00
rural+urban			
Medicine	56.30	43.70	100.00
Engineering	85.18	14.82	100.00
Agriculture	66.85	33.15	100.00
Law	75.31	24.69	100.00
Management	45.98	54.02	100.00
Education	35.64	64.36	100.00
CA and similar courses	73.02	26.98	100.00
IT/computer courses	92.83	7.17	100.00
courses from ITI/recognized vocational institutes	91.98	8.02	100.00
Others	50.94	49.06	100.00
All	69.00	31.00	100.00

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - XV

Expenditure (Rs.) per student on education relating to basic course during the current academic year

Uttar Pradesh			
Type of course	**Average expenditure (Rs.)**		
	Male	**female**	**person**
Rural			
general course	4824	4191	4546
technical/professional course	31727	31320	31592
any course(general or technical/professional course	5275	4481	4962
Urban			
general course	14537	11936	13380
technical/professional course	136253	60901	114610
any course(general or technical/professional course	22868	13680	18858
rural+urban			
general course	6741	5744	6301
technical/professional course	85528	44979	72959
any course(general or technical/professional course	8899	6363	7788

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Percentage of persons of age 5 years and above with ability to operate computer, ability to use internet and used internet

persons of age 5 years and above	Percentage		
	male	female	person
	Rural		
Able to operate a computer	8.4	3.5	6.0
Able to use internet	12.5	4.9	8.8
Used internet during last 30 days	10.8	4.0	7.5
	Urban		
Able to operate a computer	28.5	17.9	23.5
Able to use internet	35.1	21.9	28.9
Used internet during last 30 days	32.9	20.3	27.0
	rural+urban		
Able to operate a computer	12.6	6.5	9.7
Able to use internet	17.2	8.4	13.0
Used internet during last 30 days	15.5	7.4	11.6

(Header row above the table: "Uttar Pradesh")

Source: NSSO survey of 75th Round i.e. Household Social Consumption on Education (July 2017- June 2018)

Annexure - XVII

Percentage of Household with female and no female, 0-29 years

	Rural	Urban	Total
No female	23.0	33.7	25.5
Female	77.0	66.3	74.5
Total	100	100	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure - XVIII

Percentage of Household with Social Group, 0-29 years

	ST	SC	OBC	Others	Total
No female	33.0	22.9	23.9	32.2	25.5
Female	67.1	77.1	76.1	67.8	74.5
Total	100	100	100	100	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure - XIX

Percentage of Household with Female and No Female (Religious Group-wise), 0-29 years

	Hindu	Muslim	ORM	Total
No female	26.7	18.9	43.3	25.5
Female	73.3	81.1	56.7	74.5
Total	100	100	100	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure - XX

Percentage of Household with Female and No Female by Household Type (Rural), 0-29 Years

	No female	Female	Total
Self employed in agriculture	22.3	77.7	100
Self employed in non agriculture	21.3	78.7	100
Regular wage in agriculture	31.6	68.4	100
Regular wage in non agriculture	28.7	71.3	100
Casual labour in agriculture	23.0	77.1	100
Casual labour in non agriculture	16.4	83.6	100
Others	45.6	54.4	100
Total	23.0	77.0	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure - XXI

Percentage of Household with Female and No Female by Household Type (Urban), 0-29 Years

	No female	Female	Total
Self employed	25.7	74.3	100
Regular wage	34.1	65.9	100
Casual labour	23.5	76.5	100
Others	64.7	35.3	100
Total	33.7	66.3	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure - XXII

Percentage of Household with Female and No Female by Region-wise, 0-29 Years

	No female	Female	Total
Northern Upper Ganga Plain	23.7	76.3	100
Central Region	30.7	69.3	100
Eastern Region	24.2	75.9	100
Southern Region	32.2	67.8	100
Southern Upper Ganga Plain	21.5	78.5	100
Total	25.5	74.5	100

Source: Computed from Periodic Labour Force Survey data, 2017

Annexure-XXIII

Consumption Expenditure per Household in a Month by Items in Rural and Urban Areas of U.P. (Rs.)

Items	Rural	Urban
Cereal (wheat, rice, other)	1021.4	1055.0
Pulse	324.8	335.7
Vegetables (Potatoes and others	725.2	859.7
Sugar, salt, edible oil, tea	839.3	851.7
Milk and milk products	1440.3	1895.2
Meat and eggs	333.2	396.7
Processed foods	144.7	211.1
Fruits and dry fruits	320.6	537.9
Cosmetic	359.9	507.2
Health	23963.7	11340.7
Insurance	102.1	738.5
Cloth & footwear	6664.7	10648.9

Source: Based on field data

Consumption Expenditure per Household in a Month by Items in Rural Areas of U.P. (Rs.)

Items	SC	OBC	General	Total
Cereal (wheat, rice, other)	969.0	1047.9	1112.7	1021.4
Pulse	314.8	334.3	328.5	324.8
Vegetables (Potatoes and others	683.8	747.6	786.2	725.2
Sugar, salt, edible oil, tea	799.0	831.4	984.1	839.3
Milk and milk products	1017.8	1634.3	2171.6	1440.3
Meat and eggs	464.5	234.3	225.5	333.2
Processed foods	131.2	153.2	164.2	144.7
Fruits and dry fruits	242.1	339.8	500.2	320.6
Cosmetic	334.8	350.6	468.0	359.9
Health	39829.8	10669.3	14127.2	23963.7
Insurance	9.4	93.7	405.3	102.1
Cloth & footwear	5782.8	6734.9	9179.0	6664.7

Source: Based on field data

Annexure-XXV

Consumption Expenditure per Household in a Month by Items in Urban Areas of U.P. (Rs.)

Items	SC	OBC	General	Total
Cereal (wheat, rice, other)	968.0	1089.8	1082.7	1054.3
Pulse	309.8	346.9	344.3	335.5
Vegetables (Potatoes and others	808.4	883.5	876.4	860.2
Sugar, salt, edible oil, tea	760.1	886.1	886.1	851.0
Milk and milk products	1544.0	1784.5	2354.7	1894.6
Meat and eggs	528.5	423.1	236.5	395.9
Processed food	164.1	221.5	239.2	210.9
Fruits and dry fruits	385.4	505.3	721.1	538.7
Cosmetic	427.7	542.5	533.8	507.6
Health	9605.0	9437.4	15219.6	11260.1
Insurance	252.7	428.7	1597.0	739.8
Cloth & footwear	9222.7	10390.2	12280.4	10652.5

Source: Based on field data

Annexure-XXVI

Consumption Expenditure per Household in a Month by Items in Rural Areas of U.P. (Rs.)

Items	Hindu	Muslim	Total
Cereal (wheat, rice, other)	1013.8	1206.8	1021.4
Pulses	323.8	353.0	324.8
Vegetables (Potatoes and others	718.6	853.1	725.2
Sugar, salt, edible oil, tea	835.3	921.2	839.3
Milk and milk products	1452.2	1211.7	1440.3
Meat and eggs	306.8	893.1	333.2
Processed	143.8	164.9	144.7
Fruits and dry fruits	322.2	296.1	320.6
Cosmetic	361.4	333.0	359.9
Health	24735.7	8969.4	23963.7
Insurance	107.2	0.0	102.1
Cloth & footwear	6683.4	6241.5	6664.7

Source: Based on field data

Annexure-XXVII

Consumption Expenditure per Household in a Month by Items in Urban Areas of U.P. (Rs.)

Items	Hindu	Muslim	Total
Cereal (wheat, rice, other)	1051.3	1102.3	1055.0
Pulses	331.6	379.7	335.7
Vegetables (Potatoes and others	858.0	868.3	859.7
Sugar, salt, edible oil, tea	849.6	827.6	851.7
Milk and milk products	1921.9	1472.5	1895.2
Meat and eggs	373.9	718.9	396.7
Processed	210.6	186.0	211.1
Fruits and dry fruits	552.6	282.8	537.9
Cosmetic	510.1	438.3	507.2
Health	10818.1	11696.3	11340.7
Insurance	668.4	0.0	738.5
Cloth & footwear	10723.1	8969.4	10648.9

Source: Based on field data