

Essays in Structural Change in Labour Force - A View from the Standpoint of Caste, Gender and Informality

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Abstract

The nature of employment generation in India is undergoing important changes in its structural composition. Changes in composition are happening in terms of sector, employment status, gender, caste as well geographic (rural/urban) composition of employment. Non-farm sector (industry and services combined) employs more than half of the India workforce as per the 68th NSSO EUS. Though agriculture remains as the single largest employer of workforce in India, non-farm sector has gained importance in terms of total employment and new jobs created. The change in the sectoral dynamics of employment has important consequences on structural change in employment of the economy. In the context of developing and less developed countries, the process of structural change from a predominantly agrarian economy to a non-agrarian economy is viewed as essential for growth and development. ‘Structure’ in development economics commonly refer to the relative importance of sectors in the economy in terms of production and factor use¹. The process of structural transformation consists of two interdependent processes - the accumulation of physical and human capital and shifts in the composition of demand, trade, production, and employment² and concomitant productivity growth is referred to as structural transformation³.

The process of structural transformation, the main theoretical framework of this thesis, is associated with changes in the composition of output as well as employment. A gradual decline in the share of primary activities in national income and an increase in the share of secondary and tertiary activities has historically been regarded as a benchmark of moving to a ‘modern economy.’ However, if the transition in the sectoral contribution to national income is not followed by a concomitant change in the structure of employment, or if it lags significantly behind, it hampers productivity growth by slowing down the shift of labour out of low productivity agriculture. In short, for an economic transition to be successful, there should be

¹ Syrquin, M. (1988). Patterns of structural change. Handbook of development economics, 1,203-273

² Chenery, H. B. (1986). Structural transformation: A program of research (No. 232). Harvard Institute for International Development.

³ Syrquin, M. (1988). Patterns of structural change. Handbook of development economics, 1,203-273

a movement away from dependence on relatively low productivity agriculture and a concomitant move towards high productivity non- agricultural sectors, both in output and employment.

Including the Conclusion, the thesis is organized into 6 chapters. Chapter 1, 2, 3 are inter-linked essays focused on analyzing the process of structural transformation through the lens of gender, social group respectively. Chapter 4 is an essay on the income and education effects in female workforce participation. Chapter 5 is the essay on inter-state variations in structural change. The data for our analysis is obtained from NSSO⁴'s Employment Unemployment Survey reports and unit level NSSO data between 1993-94 and 2011-12 (i.e. Round 50 to Round 68). The PLFS⁵ (2019) reports a sharp decline in workforce participation ratios which translates into a contraction in workforce. Besides the change in methodology and accompanying comparability issues, the period between the 68th round of NSSO EUS and PLFS (2019) is analytically different from the period in our study. Therefore, we do not consider PLFS (2019) in our study.

Chapter 2 - Dynamics of Employment Generation in India: A View from the Standpoint of Gender: This essay analyzes the process of structural transformation from the prism of gender. Structural transformation in output and employment has happened at different rates in India, with the latter lagging the former and thereby distorting the process of structural change. Given the fundamental differences in human and social capital accumulation across social groups and gender, the situation of uneven structural transformation has affected different segments of population asymmetrically. In this chapter we focus on understanding the differences in structural transformation in employment across gender and geography. On disaggregating we find that aggregate analysis at the national level hides important trends that shape the structural transformation of the Indian labour force.

Disaggregated analysis of sectoral patterns reveals that rural non-farm has replaced urban non-farm as the driver of employment generation over the period 2004/05-2011/12. However, the expansion of rural non-farm driven by construction sector employment has caused an *increased 'casualisation' of non-farm employment- a trend that is missed out in aggregate analysis*. Farm employment as a proportion of total employment has fallen below 50 percent for the first time in 2011/12. The chapter emphasizes on the role of female labour force as the conduit of quantity adjustments in the labour market. Based on the behaviour of agrarian workforce over the

⁴ National Sample Survey Office

⁵ Periodic Labour Force Survey

period, we divide the period of study into two phases- expansionary (1993/94 – 2004/05) and contractionary (2004/05 – 2011/12). This distinction enables us to view the structural transformation in female employment as an interplay of rural female agrarian workforce contraction and expanding of non-farm employment. *Therefore, the structural transformation that we observe among the rural female workforce is, unfortunately, dominated by the withdrawal of female workforce from agriculture rather than occupational diversification into non-farm sectors.* Despite the withdrawal of women from farm sector, the share in farm sector in female workforce is higher than that of male workforce. So, we conclude that the pace of structural change in employment in female workforce is slow.

In contrast, male workforce witnessed favourable transformation in employment structure in terms of a falling share of farm sector and rising share of non-farm sector in employment brought about by a net increase in the participation in non-farm sector. Analysis based on activity status composition of workforce reveals the high presence of self-employment among Indian workforce (male and female). The proportion of casual employment among female workforce is higher than male workforce due to the higher presence of women in rural farm employment. Male workforce has a higher share of regular/salaried employment as compared to female workforce due to the higher presence of services sector employment. To conclude, the pace of structural change in employment composition among female workforce is slow, with women relatively more preponderant in low productivity agriculture and stuck in more vulnerable employment statuses (self-employment and casual employment). Equally importantly women's participation is a conduit for labour market adjustments through quantity changes.

Chapter 3 – Dynamics of Employment Generation in India: A View from the Standpoint of Social Groups: In the second essay, the process of structural change in employment is viewed from the perspective of social groups in India and therefore analyses the social dimensions of an economic transformation. The social groups analyzed in this paper are Scheduled Tribe (ST), Scheduled Caste (SC), Other Backward Class (OBC), UCH and Other religions (the Others category of NSSO surveys is classified on the basis of religion to form Upper Class Hindus (UCH) and Other religions) based on NSSO EUS 55th to 68th rounds. We analyze the changes in population composition, employment composition, consumption expenditures (MPCE⁶), educational attainment to arrive at conclusions on how diverse the process of structural change is among different social groups. This essay highlights the systemic nature

⁶ Monthly per-capita consumption expenditure

of relative backwardness among certain social groups and how they are manifested in educational attainments, consumption expenditure and employment compositions. From the analysis of data across four NSSO rounds spanning 12 years, a clear and consistent pattern emerges – the ST and SC communities remains at the bottom of India’s social and economic ladder and UCH remains at the top. Our analysis reveals no change in social hierarchy despite increases in MPCE and improvements in educational attainments.

Based on statistical analysis, we find that in rural farm employment the likelihood of self-employment is significantly higher than the likelihood of a casual employed among ST/UCH. The likelihood of casual employment among SC/OBC is significantly higher than the likelihood self-employment among SC/OBC. In rural non-farm, the likelihood of a regular employment among ST is higher than the likelihood of self-employment. The likelihood of casual employment among SC is greater than the likelihood of regular employed or self-employment. The likelihood of self-employment among OBC is greater than the likelihood of casual employment or regular employment. The likelihood of regular employment among UCH is higher than the likelihood of self-employment and casual employment. Overall, ST and OBC workers have significantly more likelihood to be in self-employment. The SC workers have a significantly higher likelihood to be in casual employment while the UCH has a significantly high likelihood to be in regular salaried employment. The stability and consistency of the likelihoods illustrates disadvantages that social groups face despite improvements in levels of education and average MPCE. *We also find that even though ST and SC groups are able to make gains and close the gap between them and UCH, they are unable to hold on to those gains.*

Chapter 4 – An Investigation into the Income and Educational Effects on Female Workforce Participation in India: A Multinomial Logit Approach: The low and falling participation of women in India’s workforce is an issue of immense concern. In recent literature falling female workforce participation rates (WPR) have been attributed to the “income effect” according to which women withdraw from the workforce as household income increases. In this study, we utilize large sample employment surveys conducted by India’s NSSO to understand the effect of rising household incomes on the participation of women in work in India. We analyze survey data for 2009-10 and 2011-12 at the aggregate and sectoral levels using a multinomial logit model. Our analysis of the aggregate data establishes that in rural areas the probability of female work participation has no relation with household income. However, in urban areas there is a U-shaped the relationship. Disaggregating into rural farm and rural non-farm however establishes a complicated picture. It shows no ‘income effect’ in rural farm in 2009-10 whereas

rural non-farm has an inverted U-shaped relationship. In urban non-farm in 2009-10 has a U-shaped relationship. In 2011-12 we find that the relationship is inverted U-shaped in both the rural farm and urban farm sectors, whereas it is U-shaped in both the rural non-farm and urban non-farm sectors. This chapter also examines the relationship between the predicted probability of female workforce participation and average number of years of education of female workforce. The relationship is inverted U-shaped in rural farm and urban farm and it is U-shaped in rural non-farm and urban non-farm in 2009-10. More or less similar results hold in 2011-12 as well. This paper also establishes large inter-state variation in the participation of women in the workforce. *Perhaps the most important conclusion of this chapter is that the social institution of 'caste' plays a pivotal role in determining the levels of participation of women in the workforce.*

Chapter 5: Dynamics of Employment Generation in India: A State Level Analysis: In this essay, we extend our analysis of structural change in output and employment to state-level in India. Using the NSSO unit level data, we aim to explore the gender and social group dynamics of employment composition at state-level. The study will be limited to the states with adequate data points in each of the social group classification, making it amenable for statistical analysis. We narrow down 18 major states (accounting for 95 percent of the total population) for the state level analysis. To understand the nature of efficacy of the process of structural transformation among various states, we primarily categorize the states bases on per-capita income (PCY) and relative surplusness (L/O ratio)⁷ of labour in farm sector. This classification of states into high per-capita income, high L/O ratio; high per-capita income, low L/O ratio; low per-capita income, low L/O ratio and low per-capita income, high L/O ratio. There is a great deal of stability in PCY categorisations - there is little movement among states from low PCY to high PCY with the notable exception of Andhra Pradesh (undivided). Stability in categorization of low PCY states is worrying because it suggests a low-level equilibrium trap. However, movements occur in terms of relative surplusness. Increase in PCY can occur with or without convergence in productivities. The impact of PCY growth without convergence in productivities would lead to higher rural-urban inequality as demonstrated by diverging ratio of urban to rural MPCE in states with high PCY and no convergence.

We find no evidence of convergence (measured by σ (sigma) – standard deviation of log PCY) at state level. Also, the gap between low PCY and high PCY states is increasing. To understand

⁷ L/O ratio refers to the ratio of share of farm employment in total employment to the ratio of farm output to total output and allows us to gauge the efficacy and speed of the transfer of labour out of agriculture. The farm sector includes agriculture and allied activities.

these trends in PCY, we analyze the average productivities of farm and non-farm sectors in the selected states. We find that differences in agrarian productivity drive differences in per-capita income at the state level which is reflected in the significant rank correlation between PCY and agricultural productivity (1993/94 to 2011/12, also 2017/18). We also find that the growth in agricultural productivity feeds the growth in non-agricultural productivity. During the distress employment⁸, we find that the growth rate of productivity between 1999/2000 and 2004/05 is not statistically different from zero for both farm and non-farm sectors.

We find that low PCY states did not reach Lewis turning point⁹ even in 2011-12 (except West Bengal). All high PCY states except Andhra Pradesh have a lower share of farm employment in their workforce as compared to non-farm employment. The analysis of social group composition in high and low PCY states reveal a staggering result. No high PCY state except Punjab in our study (8/9) have a majority SC, ST (combined) population. Also, all states (except West Bengal) with a high proportion of UCH in its population are high PCY states.

Given this background, when we analyze the educational attainments among social groups ST, SC and OBC and compare it with UCH between 1999/2000 and 2011/12. We find that *no state has narrowed the gap between ST, SC and UCH in tertiary education*. Andhra Pradesh is the only state that has closed the gap in tertiary educational attainments between OBC and UCH. This essay also analyses the issue of informality at state level (for the period 1999-2000 to 2011-12). Analyzing the shares of formal and informal employment in non-farm enterprises, we find no significant association between PCY and formalization of non-farm sector. This means that growth in PCY does not guarantee employment growth in formal sector.

Through the disaggregated analysis, we are able to identify and understand the variations in structural change at state-level. Aggregate level analysis often hides the heterogeneity in structural change experienced by rural/urban workforce, male/female workforce, social groups or states. In the analysis of structural change at the state level, we do not consider two important factors -the role of migration and wages. We hope to include these variables in our futures studies to get a more precise and complete picture of structural change.

⁸ Abraham, V. (2009). Employment growth in rural India: distress-driven?. *Economic and Political Weekly*, 97-104.

⁹ Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester School*, Vol.22, No.2, pp.139-191.