

Inequality, Manufacturing Industry and Spatial Dependence in the Districts of India

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Abstract:

The dual economy models predict uneven benefits in the economy due to differential growth process across sectors wherein the workers moving to high productivity economic activities, such as manufacturing, earn higher incomes leading to increase in inequality. However, in the latter period others catch up and inequality falls. Conversely, it can also happen that the initial growth in manufacturing is equalising given that it provides incomes to the surplus labour and then disequalising as the production becomes more capital intensive. Following the latter type of we hypothesize that there exists a U-shape relationship between manufacturing activity and inequality for the period 2005-2012 in India at the district level. Our measures of manufacturing activity are the manufacturing plants with various normalizations and data for the same is availed from Annual Survey of Industries. Our measures of inequality are Gini and 90/10 ratio defined on consumption and earnings data availed from the National Sample Surveys. Two panel data models, viz. standard fixed effects model and spatial models are used in estimation. Possible endogeneity concerns are addressed by lagging the manufacturing activity variables. The spatial dependence tests – Moran's I test and LM tests suggest the use of spatial error model. The results show that that there exists U-shape association between the measures of manufacturing industry and inequality which indicates that inequality first decreases and then increases following the manufacturing activity growth. The robustness checks show that this association is robust to the alternative measures of manufacturing activity and the measures of inequality. The relationship is primarily driven more by the indirect i.e. spill-over effect than the direct effect. The results of the spatial models show that the estimation of the coefficients is biased in the absence of spatial parameter. The overall development within the district has positive association with inequality of that district however, the overall development in the neighbouring district has negative association with the inequality of the focal district. The results imply that promoting growth of manufacturing activity in the districts with low manufacturing industry base and with labour abundance can improve the welfare of the bottom of the income distribution and reduce inequality. This study is the first to carry out such an analysis, as the representative data was unavailable. Estimation of effects via indirect channel is not possible due to lack of availability of consistent and representative data. The same reason limits the study period.

Keywords: manufacturing industry, inequality, spatial models

JEL codes: I32, O14, O15