

Spatial origins of multidimensional poverty and industrial development in Turkey*

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Extended Abstract

Poverty has been extensively analyzed on monetary grounds. However, neglecting non-monetary dimensions of poverty can result in under-estimation of the actual poverty problem. Human capital, living standards, housing conditions and environmental concerns are the primary candidates to describe the non-monetary dimensions of poverty measurement (see Alkire and Foster (2011) among many others). Meanwhile, there is a consensus that structure of production has massive influence on income distribution and the poverty problem. Among a host of other candidates, the role devoted to industrial development is getting more central for understanding why some countries and regions suffer more from the poverty problem (Aggarwal and Kumar, 2015). The job creation and sectoral spillovers are important background mechanisms to understand why industrialization matters for poverty reduction. That said, majority of the studies focus on the monetary dimension of poverty leaving the non-monetary aspects under investigated. Moreover, regional dimension of the link between structure of production and poverty reduction for developing countries is also an overlooked issue.

In this research, we aim to fill this gap by exploring the 2014-2024 period for Turkey. We construct a unified multidimensional poverty index (MPI) for Turkish regions by using the Survey on Income and Living Conditions (SILC). Next, we analyze whether regional and temporal evolution of industrial development have influence on the distribution of multidimensional poverty. Empirical design of our research has two core steps: (i) We follow the Alkire and Foster (2011) AF methodology and construct the aggregate MPI and sub-MPI for different segments (based on gender, age, employment status, sector of employment and skill level) at the regional level (NUTS-2), (ii) Next, we explore the spatial distribution of MPI and its connection with regional distribution of industrial production by using spatial econometric techniques. Following, Elhorst (2010) we implement the conventional panel fixed effect spatial specifications (SAR, SEM, SAC, SDM).

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Our preliminary results suggest a declining trend for the MPI at the national level. However spatial differences are visible and follow the known west-east duality in Turkey (see Karahasan (2020) for spatial distribution of inequalities). We also find out that different segments of the population suffer differently from the non-monetary poverty problem. Our results also show that regional MPI figures are subject to significant spatial autocorrelation, suggesting the existence of local externalities in terms of non-monetary poverty. Interestingly, spatial autocorrelation is stronger for the disadvantaged segments of the population. Specifically, female population, retired people and agricultural population witness stronger clustering at regional level. We also trace the local decomposition of spatial autocorrelation and find out very limited mobility across different spatial clusters, suggesting strong spatial inertia in the MPI's distribution. Next, our spatial modelling exercises show that the structure of production which we measure by industrial production has stronger poverty alleviation effects at the regional level. These results are stronger and more robust compared to the growth performance of Turkish regions. Moreover, we find out visible spatial networks for the MPI's regional variation. Those regions which are clustered with high (low) MPI levels witness higher (lower) non-monetary deprivation. Finally, our sub-MPI analyses show stronger effects for industrial production as those regions with denser industrial production have lower propensity to suffer from the multidimensional poverty problem. These final set of results also show that industrial production is even more central for the non-monetary deprivation level of the most disadvantaged segments of the population.

We also carry out a set of sensitivity and robustness checks to validate the strength of our first set of empirical findings. We first re-construct the MPI for different poverty cut-off levels and estimate the same set of spatial models with the newly constructed MPI. While in original analyses we use 0.33 as the main cut-off level we also re-construct MPI for the 0.5 cut-off level. Next, we estimate the same set of models with the MPI index for 0.5 cut-off level. Results are strongly favoring the poverty reduction effect of industrial development, suggesting that our earlier results are robust to construction of MPI at different cut-off levels. Note that, our first set of spatial models use inverse distance weight matrix. As robustness checks we also re-estimate the same models (with different poverty cut-off levels) by using contiguity and threshold distance weight matrices. While, the strength of spatial effects varies across different specifications, our overall finding on the poverty reduction effect of industrial development remains strongly robust.

Our results remind that poverty problem is not bounded by the monetary indicators as non-monetary dimension of poverty is equally important. Moreover, we our results show that poverty reduction policies are beyond implementations that directly target regional growth. Specific policies that focus on the structure of production can be more operative to combat with the poverty problem. We believe, our result can be generalized for countries with similar fundamental problems. Territorial disparities, unhealthy structural change (deindustrialization trends) and spatial externalities are the main pillars of our analyses carried out for Turkey. Therefore, we believe findings from Turkey can be reference points for the construction of policies targeting poverty reduction and territorial cohesion.

Keywords: decomposition, MPI, spatial, Turkey

JEL codes: I32, R11, R12

Preliminary references

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