Widening the gap. The influence of inner areas in the income inequality in Italy

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Extended Abstract

In the last decade, the debate on rural and remote areas has gained greater attention at European level. In Italy, in addition to the North-South divides, territorial imbalances, such as the urban-rural divide (Bertolini et al., 2008), are playing a key role. Remote rural municipalities suffer from a lower availability of essential services (e.g. education, health, mobility), population shrinkage, reduction of economic activities, and disaggregation of the fabric of society (Barca et al., 2014). Such a territorial imbalance may also have nationwide negative effects: remote and rural areas may affect income poverty and inequality at national level. In fact, rural areas largely suffer from both income and subjective poverty (Bishop et al., 2006; Bertolini et al., 2008; Copus et al., 2015), and they also seem to increase the national income inequality, at least in China (Chotikapanich et al., 2007).

This study assesses whether and to what extent rural areas affect the national income inequality, considering Italy as a case study. The novelty of this paper is twofold: i) urban-rural divides are considered through the classification proposed by the National Strategy for Inner Areas (SNAI, in Italian) (Barca et al., 2014); ii) the econometric analysis is based on the new unconditional quantile regressions (UQRs) proposed by Firpo et al. (2009).

SNAI has fuelled the attention of Italian policymakers towards the need for improving socio-economic conditions of people living in inner areas, shedding new light on income inequalities within and between them. Adopting the SNAI classification has positive implications because inner areas are not generic rural municipalities, only defined in terms of geographical features, but those that - being distant from urban poles - suffer from a limited service provision. Moreover, the SNAI classification overcomes the breached urban-rural dichotomy: it returns six types of municipalities (from poles to ultra-peripheral areas) and emphasizes the territorial heterogeneity issue.

As for the econometric analysis, this study differs from previous works exploring the inequality-rurality nexus, since it estimates the effect of rural areas through the UQRs rather than a macro-level comparison of Gini index. This econometric methodology allows to calculate the 'contribution' of a given observation to the statistic of interest, regressing the Influence Function (IF) of the dependent variable on the explanatory variables. Here, IFs refer to the individual influence on three specific statistics: mean, median, and the Gini index.

The analysis relies on a municipality-level data set for the period 2012-2015, retrieved by multiple administrative sources: SNAI classification; fiscal declarations, by the Italian Ministry of Economy and Finance; population registers and statistical registers of local units, by ISTAT. To consider income inequality within municipalities, eight classes of individual declared taxable income are taken. Given the number of taxpayers included in each income class and the total amount of taxable

income declared by them, we can calculate eight representative mean incomes by municipality, so that our sample consists of about 64,000 observations per year. Descriptive statistics and estimations are weighted to consider population differences among municipalities.

Results show that inner area's inhabitants always have both a much lower mean individual income than pole's ones and a lower income inequality within from 2012 to 2015. However, estimations of IF regressions highlight that inner areas have a positive and significant effect on the Gini index, and a negative one on the national mean and median income. These effects are stable over the 2012-2015 period and hold even when controlling for relevant socio-economic characteristics and NUTS-3 region fixed effects. They also hold when controlling for different cost-of-living levels, which widely vary across Italy. However, estimated impacts of inner areas on inequality turn out to vary across Italian macro-regions. In particular, effects appear greater in the Centre and in the South than in the North.

This paper highlights a further source of income inequality across Italy: the presence of inner areas. This source is mostly geographical, but it is also affected by both socio-economic features and political choices (e.g. on infrastructure endowment or on incentives for municipalities mergers and for the common provision of services). Thus, any interventions targeted to rural areas is expected to make Italy as a whole a more equal country.

References

Barca, F., Casavola, P., Lucatelli, S. (eds.) (2014). A strategy for inner areas in Italy: definition, objectives, tools and governance. Materiali Uval Series 31.

Bertolini, P., Montanari, M., Peragine, V. (2008). Poverty and Social Exclusion in Rural Areas. Bruxelles: European Commission.

Bishop, J., Luo, F., Pan, X. (2006). Economic transition and subjective poverty in urban China. *Review of Income and Wealth*, 52(4), 625-641.

Chotikapanich, D., Rao, D.S.P., Tang, K.K. (2007). Estimating income inequality in China using grouped data and the generalized beta distribution. *Review of Income and Wealth*, 53(1), 127-147.

Copus, A., Melo, P.C., Kaup, S., Tagai, G., Artelaris, P. (2015). Regional poverty mapping in Europe – Challenges, advances, benefits and limitations. *Local Economy*, 30(7), 742-764.

Firpo, S., Fortin, N.M., Lemieux, T. (2009). Unconditional quantile regressions, *Econometrica*, 77(3), 953-973.