

Inequality and Financial Development: a Multidimensional Approach

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Lately, after the financial recession, the public has started paying considerable attention on the increasing level of inequality worldwide. Several factors might have contributed to exacerbate this phenomenon. However, this study focuses on the importance of one possible determinant of inequality. May, indeed, financial development play a role in assessing this worrying trend? Financial development should serve several functions: to allocate efficiently private savings, to manage the risk through pooling and reduce the information asymmetries in the credit market by screening and monitoring. Given the importance of its role, it is crucial to understand whether finance is, in practice, beneficial and/or harmful for income inequality. Assessing this relationship, if existing, may also shed light on the mechanisms which still prevent the income distribution from being egalitarian. Besides this, understanding whether and how finance is associated with inequality may also contribute to limit the political instability, that often arises as social reaction against unequal income distribution.

This work investigates, by studying a heterogeneous sample of countries between 1960 and 2014, the relationship between income inequality, proxied by three complementary indicators (the EHII index, the net and gross gini) and some specific dimensions of financial development. Indeed, finance is a too complex process to be reduced to only one aspect. More precisely, the main dimensions that have been tested are: the structure (banking versus stock market systems) in terms of size and liquidity, the non-linearity of depth dimension (or intensive margin), which is the amount of credit lent by banks and financial firms to the private sector; the efficiency (measured by the spread between lending and deposit rate), as proxy of the degree of market imperfections. In addition, some other contributions have been brought to light in this analysis: first, the aggregate private credit has been disentangled according to the type of borrower, both households and firms, for a subsample of countries to isolate their individual effect on inequality. Second, owing to the close link between inequality, economic and financial development, the model is estimated by also including an interaction term between each financial indicator and the level of GDP per capita. Third, given the real structure of the economy and the structural transformation, which has taken place over the past decades, we test whether and to what extent real and financial structures interact to each other and how they affect the level of inequality. More precisely, we analyse if bank based industry

oriented economies differ from those which are stock market based and more intensive in the service sector. The methodology in this empirical analysis consists of two main parts: the fixed effect estimator applies on annual data to take into account the potential endogeneity issue, which may arise due to omitted variables and unobserved country specific effects. Nonetheless, fixed effect estimator does not consider the potential reverse causation between inequality and financial development. Moreover, as the dynamics of inequality is slowly changing over time, some degree of persistence is expected to occur. Hence, the dynamic GMM estimator is applied to data averaged over five year intervals. In this way, possible cycles and fluctuations in data can be smoothed out. Three model specifications are estimated: the linear, the non-linear (as far as the depth dimension is concerned, both with aggregate and disaggregated data) and the one with interactions.

Results of this work are multiple and suggests that a) banking indicators tend to be associated with higher level of inequality, while stock market systems are found to enhance a more egalitarian income distribution; b) a U-shape pattern is depicted in data when the depth dimension is tested, meaning that for low and intermediate levels of private credit the level of inequality decreases up to a point, beyond which it starts rising again; c) a non-linearity is overall confirmed also when data on aggregate private credit are disentangled according by the type of borrower. However, while a U-shape relationship is always found between the different measures of inequality and the household private credit, an inverse U-shape has been depicted, in many cases, between income inequality and the private credit lent to firms. This reiterates the private credit channel as one of the most crucial mechanisms through which finance affects inequality. Regarding to the efficiency dimension, d) higher levels of spread are found to be positively linked to inequality, suggesting that whereas market imperfections and lack of banking competition take place, inequality rise accordingly. With respect to the interactions tested in the last model specification, as an economy develops, the effect of financial development tends to exacerbate the level of inequality. Last but not least, the real structure and the financial structure seems to exert a joint effect on inequality. Indeed, for increasing levels of industrial production the effect exerted by the banking system tends to decrease the level of inequality. On the contrary, for increasing levels of value added in the service sector, the effect of the stock market structure tend to exacerbate inequality.

To conclude, this work has the purpose to shed further light on the effect that financial development exerts on income inequality, by adopting a multidimensional approach. The main conclusion this work has come up with is that finance cannot be considered harmful or beneficial in toto for income inequality. Its effects, however, are mixed and further

studies are strongly encouraged in order to spot and better clarify the main channels and mechanisms between income inequality and finance.