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Financial Inclusion, Inequality in Financial Access, and Income Inequality– Evidence from European Countries

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Financial non-inclusion and financial illiteracy are basically the problems of economically vulnerable population. A notable share of the population in the developing regions in Europe and also in other continents still are unbanked and the major part of them are women in the era of highly technology driven globalised world. While in the high-income regions of Europe most adults have access to bank and other financial institutions, the less developed parts of Europe have much lower levels of banked adults. The Reports based on Global Findex database reveal that lack of trust in institutions is a major issue for many people remain unbanked. Gender gap in financial inclusion is another issue particularly in countries like Turkey where just above 50 per cent of women have bank account. Financial non-inclusion is associated with non-inclusion in labour market contributing to income inequality and slow economic growth.

Against this backdrop this study contributes to the literature by providing an objective measure of financial inclusion, inequality in access to finance and examining the variation in financial inclusion among countries in East and West Europe using microdata from the 2021 Global Findex. Multidimensional financial inclusion index is constructed by using different indicators of access to finance as available in Findex separately for financial institutions and financial markets and the two indices are aggregated into the overall measure of financial inclusion. The study investigates the role of inequality in financial inclusion in explaining income inequality based on a composite financial inclusion index constructed by using correspondence analysis by employing one way error component model in 30 European countries during 2011-2021.

Access to finance is one of the important issues in the financial system. If financial development is non-inclusive and financial institutions are not accessible to larger part of the economic agents (households and firms), its contributions to economic growth would be limited (Jinjarak, and Park 2015). We define financial inclusion as ability of economic agents to access financial services from financial institutions and financial markets. Financial institutions include banks, insurance companies, mutual funds, and pension funds. Financial markets include stock and bond markets.

In calculating financial inclusion index, Sarma (2016) computed the sub-index of different dimensions and aggregated each index as the normalized inverse of the Euclidean distance, where the distance is calculated from a reference point and normalized by the number of dimensions included in the composite index. The weights assigned for each dimension are subjectively chosen based on the author's intuition. Amidžić et al. (2014) constructed a financial inclusion index using Factor Analysis (FA) to determine dimensions and weights. Cámara &Tuesta (2014) applied two-stage Principal Component Analysis (PCA) for the construction of a multidimensional financial inclusion index. We construct country-aggregates of financial inclusion by using 2021 Findex waves. As most of the information are categorical, the use of conventional PCA may not be appropriate to construct the composite index. Categorical variables often do not have comparable scale and distance properties. Correspondence analysis solves the problem ingeniously giving nominal variables a notion of distance. In this study correspondence analysis is used to calculate scores of financial inclusion.

Since 2011, the World Bank has been providing a large set of indicators on financial inclusion related to the number of accounts and the use of financial services, also provides information about education, income, gender, and age based on Global Findex. The Global Findex Database provides 300 indicators on account ownership, payments, saving, credit, and financial resilience by country, region, and income group. These data are available for 2011, 2014, 2017 and 2021. The Findex 2021 covered nationally representative surveys of over 125,000 adults in 123 economies during the COVID-19 pandemic.

Theoretical models predict that financial inclusion enhances growth and reduces inequality in the presence of financial frictions (Galor and Zeira 1993; Aghion and Bolton 1997; Galor and Moav 2004). Greenwood and Jovanovic (1990), Townsend and Ueda (2006) argued for a Kuznets-type of relationship implying that at early stages of development, only the rich can afford to access financial markets, while the benefits of financial development are more widely distributed at higher levels of economic development. Perotti and Volpin (2007) found that access to finance is better in countries with more equal income distributions and in those with greater political accountability implying that causality may run in the opposite direction. Dabla Norris et al. (2015) found empirically that financial inclusion reduces income inequality by reducing participation costs of the poor.

Financial inclusion index computed in this study by applying correspondence analysis is roughly similar to the index developed by Park and Mercado (2018). We find a strong association between inequality in financial access and income inequality after controlling for a set of structural and policy determinants of income inequality. The study observes that economically vulnerable populations are significantly less likely to be financially included. Households with higher levels of financial literacy are more likely to save and less likely to borrow from informal sources. Inequality in financial access and gender gaps in financial inclusion affect income inequality directly through enabling economic participation, providing access to productive tools, and helping to improve economies of scale. This study observes that financial inclusion is more powerful in alleviating income inequality in the East European countries.