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Globalization and income inequality: A panel data econometric approach for the EU27 countries

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ABSTRACT

This paper investigates the relationship between income inequality and globalization, measured with both trade and financial variables. We estimate an econometric model using appropriate panel data techniques for the EU-27 countries over the period 1995–2009. The analysis is also performed at subgroups of countries within the EU27, such as the Core, Periphery, High Technology, and the New EU Member countries. Overall, the results suggest that trade openness exerts an equalizing effect, while financial globalization through FDI, capital account openness and stock market capitalization has been the driving force of inequality in the EU-27 since 1995. The highest contribution to inequality stems from FDI. Although the trade impact remained robust, disparities were observed in the financial globalization effects within a certain group or among country groups. The recent financial crisis led to a significant rise in inequality only in the EU-periphery and the New Member states. The impact from the other control variables was either minor or insignificant.

1. Introduction

Rising inequality across most countries over the years has been a styled fact that creates a lot of concern among economists and policymakers in both developed and developing countries. Despite the improvements in technology, liberal market-oriented reforms and the integration of countries, the benefits of the rising incomes and output growth have not been shared equally across all segments of the population.

In general, income inequality may rise due to a) changes affecting the labor supply (immigration, part-time labor, institutional changes related to minimum wages, unionism, etc.) and b) changes affecting labor demand such as capital market liberalization, outsourcing, technological change, etc. (Nielson et al., 2005). Understanding the causes of inequality is fundamental to devising policy measures that can allow for a more equalized society.

On the other hand, globalization is viewed as a multi-dimensional phenomenon, which is accomplished through a range of different processes. Its main drivers are trade liberalization, financial openness and capital movements, Information and Communication Technologies (ICT), international migration, etc.[1] The fast rise of globalization over the decades (International Monetary Fund, 2007a,b) has given rise to an increasing debate about its implications for inequality and the distribution of income within and between countries. As a matter of fact, there exists sufficient empirical evidence that globalization has contributed to increased inequality in most developed and developing countries (Beck et al., 2007; Dollar and Kraay, 2004; Goldberg-Koujianou and Pavcnik, 2007; International Monetary Fund, 2007a,b).

This paper investigates empirically the relationship between income inequality and various measures of globalization, such as trade and financial variables in the European Union area. For that purpose, we estimate an econometric model using appropriate panel data techniques for the EU-27 countries over the period 1995–2009. To account for heterogeneity issues, the analysis was also performed at subgroups of countries within the EU27, such as the Core, Periphery, High Technology, and the New EU Member countries.

This paper differentiates from the existing literature in three aspects: First, it is focused on the effects of trade and financial globalization on inequality and not on growth or poverty which have been extensively elaborated in the literature. Second, it concentrates on developed countries only, namely the EU-27 group over the last fifteen years, on which the evidence is scarce and only up to EU-15. Third, it tries to identify the separate effects of globalization due to greater trade and greater financial openness, to account for heterogeneity across countries within the EU and, finally, to measure the contribution of each factor to observe changes of inequality among countries and over time.

The results suggest that trade openness has been equalizing everywhere, but high technology exports have harmed equality

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[1] See e.g., Begg et al. (2007), International Monetary Fund (2007a,b), Jaumotte et al. (2008), Kose et al. (2006), and Mills (2009) for a comprehensive analysis of the economic and social drivers of globalization.

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in the periphery. Financial globalization through FDI, capital account openness and stock market capitalization has been the driving force of inequality in the EU-27 since 1995. The influences exerted by these variables however are not uniform within a certain group, neither among country groups. In terms of contribution in distributional changes, FDI seems to be the main contributing factor over the entire period in all country groups, except the High Technology one where R&D had the highest contribution. The recent financial crisis led to a significant rise in inequality only in the EU-periphery and the New Member states.

The rest of the paper is organized as follows. Section 2 establishes the links between the various channels of globalization and inequality based on the existing literature. Section 3 presents the data set, the methodology and the empirical results. Section 4 discusses the results and policy issues. Finally, Section 5 concludes.

2. Links between globalization and inequality

In this paper we are searching for the links between trade & financial globalization and inequality. We will attempt to specify these links through various macroeconomic channels that have been identified by previous theoretical and empirical work. For that purpose, we follow the coherent conceptual framework developed by Winters et al. (2004) which they applied to review the literature on trade liberalization and poverty. Similarly, Kose et al. (2006) have developed an organizational framework in order to specify the links between financial globalization and growth or volatility. More recently, Harrison and Rodríguez-Clare (2010) have also provided a unified framework for reviewing the empirical literature related to trade, foreign investment and industrial policy in developing countries.

Although the above literature is related mainly to poverty and growth, it can still provide an appropriate framework to develop a coherent theoretical and empirical background for the links between globalization and inequality. One school of thought argues that globalization through trade liberalization and increased financial integration has improved overall incomes, in relative and absolute terms, narrowing the inequality gap worldwide.[2] The other claims that, even though globalization raises income, the benefits are not equally distributed, leading to a rise in inequality, both within and between countries. Depending on the particular driving mechanism, globalization may generate increased or decreased inequality, within both industrialized and developing economies.

Thus, in reviewing the relevant literature and since we focus on, more or less, developed economies (EU-27), we will consider three different components a) the links to trade openness, b) the links to financial integration, and c) other links related to technology, education, etc. These issues are addressed in the following sections.

2.1. Links between trade and inequality

Standard trade theory predicts that trade openness (through tariff reduction) should reduce the wage gap between skilled and unskilled labor in developing countries, resulting in a reduction of income inequality (Stolper–Samuelson theorem). For an advanced economy, however, in which high-skill factors are relatively abundant, the reverse would hold. Trade openness may also worsen income inequality because of disparities in returns to education and skills (Stiglitz, 1998). Therefore, there is no definite theoretical conclusion on the relationship between trade openness and inequality.

The empirical evidence surveyed by Winters et al. (2004) demonstrated that trade liberalization in developing countries necessarily implies distributional changes which may contribute to poverty reduction, but not unconditionally. The ultimate outcome depends on many factors related to trade reform measures, institutions and other country specific factors. The evidence was stronger for the beneficial impact of trade liberalization on productivity, but not unambiguous on growth. That implies that the impact of trade liberalization on inequality is also inconclusive since income growth or poverty reductions may not be accompanied by income inequality reductions.

The recent evidence on the link between trade liberalization and wage inequality reviewed by Winters et al. (2004) showed differential impacts. Liberalization of trade led to an increase in the skills gap (relative wages between skilled and unskilled labor) as opposed to a narrowing of this gap in East Asia. The explanations provided relate to differences in experience with FDI, the skill-biased technological progress and other structural reasons (Wood, 1997).

A strong positive link between trade openness and inequality was found by Kraay (2006) and also by Goldberg-Koujianou and Pavcnik (2007). After reviewing a large number of studies and various measures of trade openness (degree of trade protection, the share of imports and/or exports in GDP), the latter concluded that trade openness does not have an equalizing effect in developing countries. This result was the less ambiguous among the various other channels of globalization they analyzed, but they were not able to establish a causal link between them. They also concluded that the particular mechanisms through which globalization affected inequality are country-, time- and case-specific like the trade patterns before liberalization, the flexibility of domestic markets (i.e. within-country labor and capital mobility), etc.

On the contrary, trade openness was associated with a reduction in inequality from a panel of 51 developed and developing countries over the period 1981–2003 (IMF, World Economic Outlook, 2007a,b). Cross-section evidence by Wu and Hsu (2012) suggests an equalizing effect of international trade on income distribution. The evidence by Jalil (2012) favors the existence of a non-linear relationship between trade openness and inequality in China. Using five alternative measures of openness for the period 1952–2009, he concluded that although inequality is rising with the increase of trade openness, it falls after a certain critical point. These results suggest that further expansion of trade may reduce inequality in the long run.

2.2. Links between financial globalization and inequality

Although an extensive literature shows that financial development boosts the growth rate of aggregate per capita GDP, this does not necessarily imply that it helps in a more equal distribution of income. Greater capital account liberalization may increase access to financial resources for the poor, inducing the incomes of the poor to grow faster than average per capita GDP growth, which reduces inequality (Beck et al., 2007). On the other hand, by exposing poor people to a likelihood of financial crises or when the quality of financial institutions is bad, then we may observe a disproportionate harm to the low-income people. As documented in a study by International Monetary Fund (2007a,b), we may observe opposing effects from the different components of financial globalization, with the net result depending on the relative strength of the individual effects.

Therefore, the composition of financial flows may matter for the net effect of globalization on inequality. Kose et al. (2006) provide a thorough analysis on the potential benefits and costs for developing countries that arise from financial globalization. They suggest that, in addition to traditional channels (e.g. capital accumulation), the benefits of financial globalization on growth and volatility are also realized indirectly through a set of 'collateral benefits' such as institutional development, better governance, and macroeconomic discipline, which may not be fully evident in the short-run. They also refer to the importance of threshold effects that are possible to influence the macroeconomic outcomes of financial globalization.

We continue by decomposing the links between financial globalization and inequality using the framework of Kose et al. (2006). A major component of financial globalization is international capital flows, for instance, FDI, usually directed to high-skill sectors in the host country.

[2] See Mills (2009) for a critical review of globalization and inequality from a sociological point of view, as well as the mechanisms linking globalization to inequality.