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**INCOME INEQUALITY AND ECONOMIC
GROWTH IN CENTRAL AND EASTERN
EUROPEAN TRANSITION COUNTRIES**

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PREVIEW

RESUMO

A evidência dos países em transição para economias de mercado no que toca à relação da desigualdade de rendimentos com o crescimento económico é preocupante e inconclusivo. A tese assenta na análise do fenómeno da desigualdade em dez países da Europa Central e Oriental (CEE), que aderiram à União Europeia em 2004 e 2007. Destacam-se dois aspetos: (1) a ligação entre a desigualdade económica e o crescimento económico; e (2) as políticas redistributivas que os governos adotaram na tentativa de equilibrar o crescimento económico com os níveis de desigualdade de rendimentos. São revistos os mecanismos de transmissão da desigualdade de rendimentos ao crescimento económico e é dada uma visão geral das políticas aplicadas durante a transição para a economia do mercado e durante a crise financeira global. As imperfeições do mercado de crédito e desigualdade da política orçamental são analisadas através de modelos não lineares de crescimento e são testadas empiricamente utilizando a técnica econométrica do modelo de distribuição autorregressiva desfasada, para o os dados do rendimento no período de 1995 a 2017, para a CEE como região idiossincrática e desagregados pela desigualdade média do rendimento em dois grupos de países. Os gastos do governo e a urbanização têm um efeito negativo sobre o crescimento económico, mas a região não é idiossincrática relativamente a esse fenómeno, esse fenómeno pode ser o resultado de diferentes políticas regionais durante levadas acabo durante a fase de transição. Os resultados empíricos sugerem que a desigualdade do rendimento afeta o crescimento económico em vários aspetos. As medidas de desigualdade de rendimento, focando-se nas mudanças no rendimento médio, têm um forte poder explicativo. Os resultados da revisão da literatura sugerem que as políticas liberais e produtivistas do bem-estar dos governos, empreendidas durante as recessões da transição dos mercados em 1990 e a crise económica global de 2008-2010, foram acompanhadas por políticas redistributivas, dependentes das disponibilidades orçamentais, mas falharam no apoio aos grupos vulneráveis, bem como foram feitas transferências sem considerar as circunstâncias específicas dos países. Para um crescimento sustentado a longo prazo, os governos devem empreender uma abordagem política de investimento social para combater as desigualdades e promover um crescimento inclusivo.

Palavras-chaves: Desigualdade de rendimentos; Crescimento económico; regressão de distribuição autorregressiva desfasada; Europa Central e Oriental; Economia de desenvolvimento.

ABSTRACT

Evidence from countries transitioning to market economy regarding income inequality and growth relationship is scarce and inconclusive. The paper sets to analyse the phenomenon in 10 countries from Central and Eastern Europe (CEE) that accessed European Union in 2004 and 2007, highlighting two aspects: (1) the link between income inequality and economic growth; (2) the redistributive policies governments have taken to balance economic growth with income inequality levels. Different income inequality – growth transmission mechanisms are reviewed, and an overview of policies during the transition to a market economy and during the global financial crisis is given. Unified credit market imperfection and fiscal policy inequality – growth nonlinear models are tested empirically using autoregressive distributed lag regression with market income data from 1995 to 2017 for CEE as an idiosyncratic region and disaggregated by average income inequality into two country groups. Empirical results are not robust but suggest that income inequality affects economic growth through various channels, and income inequality measures focusing on changes in the middle-income have strong explanatory power. Government expenditure and urbanisation have negative effects on growth, but the region is not idiosyncratic in respect due to different regional policies during the transition. Results from the policy literature overview suggest that the liberal and productivist welfare policies governments have undertaken during recessions of market transition in the 1990s and global economic crisis in 2008–2010 have been accompanied by redistributive policies, depending on budget availability, but have failed to support vulnerable groups, as well as have been transferred not accounting for specific circumstances of recipient countries. Governments should undertake a social investment policy approach to tackle inequalities and promote inclusive growth for sustained long-run growth.

Keywords: Income inequality; economic growth; autoregressive distributed lag; Central and Eastern Europe; development economics.

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PREVIEW

INTRODUCTION

Governments commonly aim to lower socioeconomic inequalities, although the overall long-run impact of inequality on economic development, in particular growth, is not well understood, and therefore important to study across different development stages.

Since the emergence in the 1990s, the growth-inequality nexus has been researched, for the most part, in studies of developed countries. Research on Central Eastern Europe (CEE) post-communist economies, which underwent a transition to a full-fledged market economy model and saw the increase in inequality alongside the economic growth, however, is scarce and mostly found as a separate panel in European-wide studies.

The region is a good example of both economic boom and bust periods over just two decades; therefore, this paper sets to study inequality – growth nexus in CEE during 1995-2017 and undertakes an analysis of the accompanying government policies. In particular, the research questions whether there is a significant causal relationship between economic growth and income inequality and whether the relationship changes between short-run and long-run effects. Due to the short time span of data availability, the long-run cannot be tested with sufficient reliability. First, mechanisms transmitting income inequality effects onto economic growth and current developments are studied, policy analysis is undertaken, and qualitative research results are incorporated into the statistical model and tested empirically employing the autoregressive distributed lag model. Thus, the research contributes to inequality – growth literature by studying CEE as an idiosyncratic region and fulfils the research gap on such a relationship for the former Soviet Bloc countries.

Section 1 establishes the theoretical framework for income inequality – economic growth relationship, section 2 reviews recent studies on the general relationship, income inequality and growth relationship during the global financial crisis and in CEE countries specifically, and section 3 reviews policies and their effects during the transition to the market economy and the global crisis. Sections 4, 5, and 6 deal with the empirical study, describing the data used, methodology applied, and an overview of preliminary model estimation results. Conclusions briefly discuss the results and policy implications.

PREVIEW

Chapter 1

A theoretical framework for income inequality and economic growth

To study how units of income, power, or status are distributed or possessed by components of a social system – people, places, or social groups – one must first establish equality standards (Coulter, 2019). To frame the theoretical issue of inequality in real-world economy, concepts of equality standard, as an income share (aiming for an optimal increase of national income share attributed to the relatively disadvantaged group), and partially also income crystallisation (elimination of disproportionate advantages in education, political power, social acceptability) (Cowell, 2009), is adapted in the following research, as scholars generally agree that hundred-per cent equality is not optimal for growth. Both global inequality measures and partial indices are used in literature and the following research, allowing for locating the surplus and deficit created by inequality (Coulter, 2019). The combination of Lorenz consistent Gini index and partial indices that satisfy the weak transfer principle allows detecting inequality changes that influence economic growth. Economic growth in this research can be defined as an increase of production of economic goods and services by all resident producers in the economy; coherent assessment is thus prioritised over accounting for informal economic activities, economic sustainability, and negative externalities (World Bank, n.d.).

The theoretical underpinnings of interlinkage between inequality and economic growth can be found in classical economics through the savings channel. A modern approach later emerged, emphasising political economy, including fiscal policy, and modelling with market imperfections. In the next paragraphs, an overview of the foundations of inequality and economic growth relationship is given and diving the theoretical models by their positive, negative, or time-varying effects on growth. A model accounting for globalisation and savings in imperfect credit markets is proposed.

A positive relationship between inequality and growth has been proposed by Aghion et al. (1999), who argue for positive effect through incentives channel – individuals are given the motivation to increase personal effort and become more productive to either earn high executive salaries or take on additional risk and engage in entrepreneurial and innovative activities, assuming that agents are identical and/or capital markets are perfect. Banerjee and

Newman (1991) suggest the choice between entrepreneurship and job to be skewed towards the latter in imperfect markets.

A positive effect is also supported by the classical approach of Kaldor (1975) through the physical capital accumulation channel, with more inequality favouring aggregate savings. Here, it is assumed that saving rates are increasing functions of wealth, implying that the rich would save relatively more than the reduction in the poor's investments. Bourguignon (1981) also shows that with convex savings function, the output is higher along more unequal steady-state, and in an endogenous growth model with constant exogenous saving rate and a fixed level of technology, equal income distribution leads to faster growth; with linear saving function, aggregate growth is independent of distribution. It is worth mentioning the note by Neves and Silva (2014) here that the assumption of increased savings benefiting growth is not universally accepted among classical economists. In Keynesian economics, increased savings would hamper growth due to a decrease in aggregate demand, especially during recessions.

A negative effect of net income inequality on economic growth is theoretically implied through lower cooperation and specialisation in the classical view, but inequality effects are generally abstracted from. The modern neoclassical growth theory relies on technology, labour, and capital as sources for growth, with the last two being more evident in earlier growth theoretical models.

The oldest of modern inequality-growth literature strands is tied to fiscal policy. Within the endogenous growth model accounting for political economy, growth is modelled as a function of capital, labour, and public good (Neves & Silva, 2014). Considering redistribution in models where all government spending is allocated for production and therefore does not appear in the utility function, income inequality leads to a higher tax rate and lowers growth (Alesina & Rodrik, 1994). Within a more general framework, when government spending is used for both production and consumption, voters try to optimise between public and private consumption, leading to ambiguous effects on growth (Li & Zou, 1998). The second – economic – transmission link states that the higher redistribution in itself distorts investment, removing incentives for accumulating wealth and engaging in more productive, risky activities.

The extended fiscal policy view, accounting for a political lobby, takes into consideration the fact that imperfect democracies are biased against the poor in their political

power, and income inequality further reduces participation and enlarges the participatory gap, as proposed by Filetti and Janmaat (2017). However, even then, inequality has a more substantial impact on redistribution and growth in left-wing, populist regimes, and less so in right-wing or wealth-biased ones (Benabou, 1996). Benabou (1996) emphasises that it is the mix of not only increasing divide in income, but also political lobby power that harms growth, opposed to Rachinsky and Guriev (2005), who sees lobby as a vehicle for the development of market institutions, and Rachinsky and Guriev (2005) and Aghion et al. (1999) who assuming only economic wealth crystallisation, develop a model where investment indivisibilities are necessary for predominantly private and underdeveloped capital markets. Benabou's (1996) model has an implication of the emergence of multiple steady states, depending on the balance between incentive distortions and market effectiveness. Bourgeuignon and Verdier (2000) attempt to endogenise the voter with the most political power at some point of income distribution ranking. It may change during the growth process and finds that fiscal policy effects on growth are largely negative, but only when not accounting for political power.

While distribution has no effects on output in perfect markets, as the opportunity cost is the rate of interest (Benabou, 1996), in the presence of extreme market imperfections with decreasing returns to individual capital investments, less inequality leads to better opportunities to invest and increased productivity and growth (Bo, 2016). In the model by Aghion et al. (1999), even with some slight degree of market imperfections, there is not necessarily a trade-off between equity and efficiency: not affecting the wealthy's efforts to save yet raising borrowers' incentives, redistribution can give rise to credit-fuelled economic growth. The less wealthy middle-class individuals would invest in education and skill acquisition, thus improving productivity and socio-economic mobility (Alesina & Rodrik, 1994; Alesina & Perroti, 1996; Bubicco & Freytag, 2018). Here, however, cautionary adjusting fiscal policy is important, as limited investment opportunities and credit availability may have a negative effect by generating persistent credit cycles, which undermine stable growth and development (Aghion et al., 1999).

The political instability approach states that with more income inequality, social discontent and uncertainty in the politico-economic environment prevails due to policy uncertainty and threatened property rights, undermining investment necessary for growth, and generating macroeconomic volatility (Alesina & Rodrik, 1994; Aghion et al., 1999). In their summary, Neves and Silva (2014) give a different definition of political stability and

focus on the socio-political rather than politico-economic environment. Instability in their view includes unstable existing government decisions; they emphasise expectations of future extreme deviations in society and politics against, by, or within the regime.

Another strand of literature examining reverse causality from growth to inequality can be traced back to Kuznets' (1955) hypothesis, an inverted-U relation of countries increasing income inequality until reaching the wealth tipping-point of full industrialisation, and reverting it to higher income levels due to legislative interference, high population growth in lower income levels, and entrepreneurial activities (Aghion et al., 1998; Fisher & Erickson, 2007). Galor's (2000) unified income distribution model also leads to the same inverted-U relation. Nevertheless, the change from physical to human capital as the engine for growth in developed countries determine the use of classical and modern credit market imperfection approaches instead of Kuznets' classical savings channel basis of Kaldor's (1975) model. In his model, focusing on inequality effects on growth, development increases with an aggregate capital and skill accumulation, assuming the marginal propensity to save increases with income; credit market imperfections result in underinvestment in human capital, and physical capital accumulation makes inequality growth-enhancing. In contrast, as human capital forms a larger stock if it is spread among individuals, equality is conducive to its accumulation. Later, Galor and Moav (2004) adjust the model for credit market constraints to have no influence on skill acquisition in the later development stage, when inequality-growth relationship ceases to exist. Thus, for the Kuznets, Galor (2000) and Galor and Moav (2004) models, causality runs in opposite directions. Contrary to Galor's investment channel reasoning, Kuznets derives the relationship mostly from institutional and demographic drivers. While both models achieve the reversal of relationships during industrialisation, the mechanisms at work are different.

Adjusting theory to evidence of recently rising inequality, Milanovic (2016) theorises a recurring Kuznets' curve due to technology, openness, and politics, naming it "Kuznets waves". The more recent theoretical debate discusses globalisation and technological change positive effects on growth via more productive resource allocation and inequality via wage decompression, whereupon aggregate income gains are increasingly redistributed to tackle rising inequalities, even when mobile production factors (capital, labour) are prone to flight (Gozgor & Ranjan, 2017).

This paper focuses solely on inequality's effects on growth and aims to test the non-linear inverted-U relationship based on the model by Galor and Moav (2004) and Gozgor