

Employment composition and labour earnings inequality within EU countries

David Martínez Turégano, European Commission

Abstract

This paper presents a novel methodology that combines different datasets to decompose estimated changes in labour earnings inequality into the contributions of a number of employment characteristics. Based on this approach, we provide empirical evidence for recent developments in 18 EU countries starting in 2000. We find that the common upward trend in inequality is related to shifts in the composition of employment within sectors, rather than to sectoral reallocation. In particular, we estimate that the expansion of part-time and fixed-term contracts, as well as the higher share of tertiary educated workers within sectors, have been the main contributors to the rise of earnings inequality. Cross-country differences are exacerbated when taking into account unemployed population due to divergent capacities to create jobs in face of successive economic crises and external competition. In policy terms, a specific concern deals with the possibility that a higher share of flexible contractual arrangements is masking the rise of underemployment. On a broader perspective, we deem that the overall growth and competitiveness strategies are essential within the fairness agenda, while the enhancement of education, social and income-redistribution tools is needed to face economic and technological challenges in the most inclusive way possible.

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Introduction

A myriad of factors have reshaped labour markets around the world in the 21st century. This includes the emergence of China as a dominant economic player – both on the demand and the supply side, the sluggish productivity growth and crises legacies in many developed countries, as well as the cheapening of productive capital fuelling automatisisation in manufacturing activities. These trends are having an impact on the reallocation of employment across countries, sectors and occupations, eventually affecting the income distribution at the global and national level.

In the case of the EU, the loss of competitiveness has been particularly relevant in manufacturing activities, contributing to the decline of both the sectoral weight in total GDP and its participation in global manufacturing value chains. This feature, which has been shared with other developed economies, was mirrored by the emergence of China, a phenomenon having a decisive impact on EU employment in this sector (Breemersch et al. 2017). Around one million jobs serving manufacturing value chains were lost in the EU between 2000 and 2014 due to the declining shares in worldwide markets (Marschinski and Martínez-Turégano 2019).

Nevertheless, sluggish growth, particularly in face of successive economic crises, has been the main driver of limited job creation in the EU and the rise of unemployment in a number of countries in Southern Europe (Martínez-Turégano 2019). A differentiated picture emerges for countries that have joined the EU in the 21st century, which softened the effect of global developments due to structural transformation associated with their integration in EU markets and value chains. Accordingly, inequality developments have been rather heterogeneous across broad-defined regions within the EU (Benczur et al. 2017).

Technological progress has also reshaped the nature of employment within labour markets. In addition to the shift of employment to the service sector supported by stronger productivity gains in primary and manufacturing activities, the price of productive capital has kept on declining relative to other products. This has favoured the mechanization of certain tasks in capital-intensive industries and the substitution of associated employment, but it has also generated an increasing demand for tasks that are complementary to the use of capital. At the same time, demand for non-routine tasks has remained unaltered in other economic activities.

The literature on international economics has extensively documented this phenomenon of factor-biased technological change and job polarization, such as in Acemoglu and Autor (2011), Autor et al. (2003, 2006), Krusell et al. (2000) and Violante (2008). On the empirical side, a number of studies have provided specific evidence for European countries, underlining the role of technological progress, the routinization hypothesis and changes in the occupational structure when explaining the increase of job polarisation; Breemersch et al. (2017), Goos et al. (2009) and OECD (2017) among others. On cross-country differences, De La Rica and Gortazar (2016) and Michaels et al. (2014) show the relevance of ICT adoption, while Lewandowski (2017) finds that in central eastern Europe no job polarization

occurred as workforce upskilling to tertiary education aligned well with job upgrading.

All these factors – resilience to global competition, economic crises, technological progress and a shift in skills demand – would have contributed to the observed increase of inequality in developed countries (Alessi et al. 2018, OECD 2011). Among the different dimensions of inequality, we are interested in those changes that are related with the composition of employment and its implications for the distribution of labour earnings. Labour earnings are the main source of income for households and their degree of inequality define to large extent the targets for both redistribution and education policies. The characterization of employment has changed over time due to shifts in the sectoral composition, mainly driven by macroeconomic factors, and in the composition of employment within sectors, which capture changes in labour demand and supply redefining the nature of jobs. Given the strong heterogeneity of labour earnings by employment characteristics (Foster-McGregor et al. 2013), these changes in the composition of employment have a potential significant impact on inequality.

The contribution of this paper falls also on the empirical side. While it shares the broad view of some studies aforementioned that consider a number of explanatory factors for inequality or polarization, it deviates substantially in many other aspects. First, instead of focusing on job polarization, our interest is to better understand the recent increase of earnings inequality across EU countries. Second, in doing so we develop a novel methodology that decomposes these changes into the contribution of different employment characteristics, including those related to the individual (gender, age and level of education), the firm (sector, size) and their labour relation (occupation, hours and type of contract). Third, this approach abstracts from the evolution of wages and exclusively accounts for structural shifts in the composition of employment. And four, we complement this analysis with an analogous one developed to study the role of macroeconomic factors explaining sectoral and aggregate (un)employment.

We provide empirical evidence for 18 EU countries in different sub-periods between 2000 and 2017, comparing alternative inequality indicators and making use of different data sources. As in Foster-McGregor et al. (2013) we exploit the Eurostat's Structure of Earnings Survey (SES) to estimate the contribution of different employment characteristics to labour earnings, while we then use the employment weights from the Eurostat's Labour Force Survey (LFS) to build time series of earnings inequality. Finally, the complementary analysis on macroeconomic factors is based on the World Input Output Database (WIOD).

In sum, we find that earnings inequality has increased across the board in the EU, being the main contributors the expansion of part-time and fixed-term contracts, as well as the higher share of workers with tertiary education within sectors. While the first factor widened the population group with lower earnings, the second this the same for those more highly remunerated, with the consequence of a higher dispersion (inequality). On

the contrary, according to our structural approach, we estimate that shifts in the sectoral composition of employment and in the occupational content played a more heterogeneous and limited role. From a broader perspective, the capacity to create jobs was very divergent between Member States and that had a significant impact on inequality when including also unemployed population.

The remaining part of this paper is organized as follows. Section 2 presents the different data sources and details the methodological approach. Section 3 focuses on the characteristics shaping the average and dispersion of earnings, including recent trends in the composition of employment. Section 4 presents the results from the structural decomposition analysis developed at country level and applied to different inequality indicators. Finally, Section 5 summarizes the main findings and discusses policy implications.