

DESCRIPTION FOR THE GENERAL PUBLIC (IN ENGLISH)

The main reason to undertake the study on the nature of technological progress on the Polish labour market within the project „The polarisation of the Polish labour market in the context of technical change”, is a limited availability of such research studies, both in Poland and other countries of Central and Eastern Europe, belonging to the group of emerging economies. The Researchers involved in this issue in developed countries turned their attention to that observed in recent years, changes in the occupational structure and distribution of wages, induced by the development of Information and Communication Technologies, have led to unequal growing disparities between high and low-skilled workers. The reasons for the appearance of these changes are usually explained by the theoretical models, which combine supply-side, demand-side and institutional factors. Although there is a consensus that technology is a main driver of occupational change in the long run, both theory and empirical studies have not provided yet clear and unambiguous answer to the question about the directions of this change. There are two dominant hypotheses in the literature: Skill-biased Technical Change (SBTC) and Routinisation-Biased Technical Change (RBTC), the latter leading to labour market polarisation. Both hypotheses have been tested extensively in the developed countries.

Consequently, there is no empirical evidence to suggest which of these two paths of technological change occurs in the labour market in developing countries, like Poland. An attempt to fill this gap is the research project „The polarisation of the Polish labour market in the context of technical change” which main aim is to diagnose **whether the technical change on the Polish labour market is of SBTC or RBTC type**.

The **specific goals** of the project included to development of a methodology for analysis used to analyse the structure of tasks performed by workers in different occupations, taking into account the characteristics of the Polish labour market; as well as to identify factors determining, of labour market polarisation in Poland, based on individual choices of the employees all research tasks were divided into four basic research components:

- Module I - it will include complex analysis of technological changes on labour markets basing on previous research results development and testing the methodology to analyse the structure of tasks (in line with the classification of tasks presented by Autor et al. (2003)), made by employees based on descriptions of occupations in the Polish Classification of Occupations and Specialisations, thus taking into account the specific features of the Polish labour market.
- Module II – integration of different data sources: linking individual LFS data with individual data from the Survey on Structure of Earnings by Occupations provided by the Polish Central Statistical Office, the results of research carried out by other research teams within grants of the National Science Centre and HCOP programme. The effect of these activities will be a unified database, which is the basis for further analysis.
- Module III – analyses of changes in the structure of employment and wages on the Polish labour market, which capture the polarisation processes. Analysis covers the period 2004-2016. To verify the research hypotheses, will econometric modelling carried out within the 3-step procedure has been utilised. In the first step, method presented by Goos and Manning (2007) have been testing ALM hypothesis, his is the hypothesis that changes in the demand for labour in Poland are concentrated within the best and worst paid professions / jobs. In the second step, the parameters of the Mincer type wage equation for Poland have been estimated. By comparing changes in the estimates describing , wages in the low-wage, medium-wage and high-wage group will draw conclusions as to the process of polarization of the Polish labour market.. In the third step a nested logit model approach is used to identify factors influencing individuals’ decisions about taking job offers in specific occupations, that affect the processes of polarisation in Poland.
- Module IV – synthesis will include a synthesis of research results obtained under the different modules and developing conclusions of empirical as well as theoretical character within the field of labour economics, particularly with regard to the nature and determinants of technological change on the labour market in developing countries (Poland’s case study).

The project is the attempt to test the ALM (polarisation) hypothesis for the Polish labour market. It combines the micro-level approach (analysing the individuals’ decisions as for participation in selected branch/occupation) with the macro-level focus on changes in the employment and wage structures. It provides methodological framework for task content analysis of the types of tasks performed by people of other professions in Poland, which will not be exposed to a systematic error by referring to the US data O-NET. The research project identifies differences and similarities in the polarisation process of the labor market between Poland and other countries (mainly EU Member States and the U.S) and can be a benchmark for other developing countries in such issues.