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EMILIE JASOVA

University of Finance and Administration, Czech Republic

THE NATURE AND INTENSITY OF THE IMPACT OF THE LABOR MARKET, POPULATION AND FAMILY ON POVERTY FROM DIFFERENT PERSPECTIVES ACROSS WORLD ECONOMIES

Abstract:

The aim of the article is, with the help of empirical analysis, to verify and further expand knowledge about the existence and nature of the influence of selected indicators of the labor market, population and family on poverty from different points of view. In global economies, for example, the NAIRU indicator of men with auxiliary occupations and the percentage of women working at home with 1 child aged 12 and over had an adverse impact on the indicator of the inability to face unexpected financial costs. An adverse impact was found on the indicator of people's risk of poverty or social exclusion by age and gender, including the NAIRU indicator of men with the occupation operator and the tax rate indicator of an earning spouse with two children. On the contrary, the percentage of women working at home with 1 child 12 had a positive impact on the indicator of people's risk of poverty or social exclusion by region, for example. The NAIRU indicator of women with less than primary education aged 40-44 had a positive impact on the indicator of the risk of poverty for the elderly, among others years and an indicator of the length of working hours of an employed man as a sales and service worker.

Keywords:

Inability to face unexpected costs, People at risk of poverty or social exclusion, Share of housing costs in household disposable income, Risk of poverty for the elderly, Labor cost index by NACE, GPG, Long working hours in main job, NEET, NAIRU.

JEL Classification: C01, P36, I38

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1. Introduction

In an analysis, Ruiz-Huerta, Martínez and Ayala (1999) states that social protection programs are effective in mitigating the negative impact on inequality and poverty. In order to reduce the risk of poverty in Europe, EFILWC (2007) suggests creating new jobs; establish minimum standards. The European Anti-Poverty Network (2018) recommends supporting e-training for people suffering from poverty and social exclusion; recommends involving social economy enterprises in job creation in new service markets; proposes to provide people with full information about their rights and opportunities. Simmonds and Bivand (2008) argue that more should be done for parents with children under five. The concept of family policy (MPSV, 2017) pays special attention to families with specific needs (single-parent families, families with a disabled member, families with three or more children and families most at risk of relative and absolute poverty). Hick and Lanau (2017) recommends increasing work intensity in households; raising wages, especially at the lower end of the income distribution, and using the transfer to support families with additional needs (additional costs of large families). McKnight, Stewart, Himmelweit, and Palillo (2016) suggest improving pay, job stability, and quality; facilitate the employment of mothers, including improving the quality of part-time work and a fundamental increase in state financial support for households with children.

Culliney, Haux and McKay (2014) argue that the expansion of working poverty raises doubts about whether employment is a panacea. The impact of the measure on employment retention and progression is unclear. Vandelannoote and Verbist (2017) state that job support can help fight poverty in Europe, but it is important to pay careful attention to the design and the specific context. Santos (2009) proposes a model that provides an opportunity to break out of the vicious cycle of the poverty trap by equalizing the quality of education. Brewer and Kanabar (2017) argue that some tax reforms that are generally promoted to help people in poverty are either very ineffective ways of reducing poverty or have undesirable side effects. In the short term, an anti-poverty strategy could focus on raising income tax, rather than raising benefits, or raising the basic National Insurance threshold. There are other reforms that would increase the efficiency of the tax system and also raise money: 1) increasing the upper limit of earnings in the National Insurance; 2) increase in contributions to the national insurance of self-employed persons; 3) increase in national insurance contributions by employees; 4) making payments by employers to pension funds, which are responsible for both employee and employer contributions.

The aim of this article is to assess the presence and character of the influence of selected indicators of the labor market, population and family on poverty across world economies, to estimate the intensity of their influence on segments of selected areas. In the article, we compare the conclusions for individual countries with each other and with the results of international and domestic research and with the measures of strategic documents. The interpretation of the article is divided into the following parts. The second part provides an overview of the results of international and domestic theoretical and empirical analyzes and strategic materials. The third part characterizes the data sources and the method of analysis. In the fourth part, empirical testing of the influence of selected indicators on poverty was carried out from six points of view using a detailed breakdown of the selected indicators. The final

section summarizes the conclusions from the analysis and compares them with international and domestic research and policy documents.

2. Overview of the results of international and domestic research and strategic documents

Conclusions of foreign and domestic research on the issue of poverty

Defina (2002) notes that historically the number of employees has generally moved with changes in ***unemployment***, rising when unemployment has risen and vice versa. The author confirmed that the relationship between unemployment and the revised poverty rate was much weaker than that between unemployment and the official poverty rate. Holmes, McCord, Hagen-Zanker, Bergh, and Zanker (2013) point out that short-term wage receipts through public service employment serve to temporarily increase consumption in fragile states. Thiede and Kima (2015) confirmed that the increase in poverty was mainly due to shifts in the amount of work among some groups (black men), while in other groups (white women) it was due to factors such as declining wages and changes in employment among other family members. Loayza and Raddatz (2009) concluded that sectors that are more labor intensive have a stronger impact on poverty alleviation.

Rodgers (2001) argues that ***part-time*** and casual work is an important part of today's labor market. The poverty rate for those employed part-time is higher than the poverty rate for those employed full-time, as is the poverty rate for those not in the labor force, but much lower than the poverty rate for the unemployed. McKnight, Stewart, Himmelweit, and Palillo (2016) report that in-work poverty is fueled by a combination of low household-level work intensity, low wage levels, and household structure. Those working part-time or part-year face a high risk; fixed-term contracts rather than open-ended contracts; people in low paid work; single persons in the household and persons with family responsibilities.

Larsson and Sevä (2012) found that the ***self-employed*** have a high rate of poverty. These results are conditional, so self-employed people generally do not have a higher level of deprivation than an employee. Belhorma (2014) presents evidence that self-employed women generally have lower education and lack of skills, leading them to make a living in this form of work.

Sen, Rybczynski, and Van De Waal (2011) report that if a higher ***minimum wage*** results in lower employment, the corresponding welfare costs are low because the number of minimum wage earners as a share of the labor force is relatively low. McKnight, Stewart, Himmelweit, and Palillo (2016) argue that households with children need additional assistance from the state if they are to stay out of poverty. Net incomes at the minimum wage for full-time working lone parents are below the poverty line in almost all EU countries.

Volejničkova (2015) among the most important impacts of ***gender differences in remuneration and pensions*** includes: poorer ability to accumulate financial reserves, poorer ability to pay contributions for various types of insurance, lower level of economic independence, higher level of vulnerability in case of long-term illness or job loss. Dias, Joyce, and Parodiz (2018) report that differences in work experience are critical in explaining the gender wage gap among college graduates, explaining up to two-thirds of the wage gap 20 years after giving birth.

Strothmann, Marsh, and Brown (2015) expected that ***income*** would have a negative impact on poverty, unemployment would increase the poverty rate. However, the original tests did not support this view. The most surprising result was the insignificance of total unemployment. Farwell (2014) found that as women's incomes rise relative to men's incomes, child poverty does not decrease. Bennett and Daly (2014) argue that the likelihood of risks leading to women's poverty has been moderated by societal gender equalization. Norton and West (2014) point out that increasing pensioners' incomes is the most effective way out of poverty.

Gemmell and Morrissey (2002) confirm that ***taxes*** on food, especially staple foods, have an adverse impact on the poor. Reforms often include reducing or rationalizing business taxes and eliminating intermediate product taxes, which help the poor. Since different income groups consume similar goods, it is generally difficult to achieve redistribution through indirect taxes. Therefore, not only are taxes on specific goods harmful to the poor (e.g., paraffin is used for heating by the poor but not by the rich), but they should also be exempted from more general taxes (e.g., on fuel) in order to improve equity without promoting inefficient substitution of fuel types.

Tunstall, Bevan, Bradshaw, Croucher, Duffy, Hunter, Jones, Rugg, Wallace, and Wilcox (2013) found, based on interviews, that there is strong evidence that ***housing costs*** create poverty and material deprivation. There is also evidence that regional differences in housing costs affect poverty and material deprivation. Housing Benefit reduces work incentives and creates unemployment and poverty traps.

Conclusions of foreign and domestic strategic materials for poverty policy

The starting material is the Europe 2020 strategy (European Commission, 2010b), which set the vision of the European social market economy for the 21st century. As part of it, it defined the level it wants to reach by the end of 2020. One of the targets is a decrease in the number of people by 20 million, which means a reduction of the number of Europeans living below the national poverty line by 25%. The framework for the implementation of the Europe 2020 strategy and reforms at Member State level is the Integrated Guidelines (European Commission, 2010a). In the area of poverty, this is guideline 10: Promoting social inclusion and combating poverty. Ensuring the efficient functioning of the labor market should be the central theme of the member states' reform programs. Member States should also promote the social economy and social innovation.

The strategic document that implements the European strategy Europe 2020 is the Employment Policy Concept 2013-2020. According to it, the most vulnerable groups on the labor market include young people, older workers, parents with children, especially mothers and women in general, as well as socially excluded people, for whom employment is a tool to combat poverty and social exclusion. Employment policy priorities were further elaborated in the Employment Policy Strategy until 2020 (MPSV, 2013). In connection with social exclusion, low qualification is manifested, which is associated with low "working poverty" wages, which do not motivate people from dependence on the benefit system. Support should not only focus on creating jobs for low-skilled people, but on continuing education and strengthening their position on the labor market.

The purpose of the Social Inclusion Strategy 2014 – 2020 (Ministry of Internal Affairs and Communications, 2014) is to contribute to the fulfillment of the national goal of reducing poverty and social exclusion within the framework of the Europe 2020 strategy by 30,000 people.

The government strategy for equality between women and men in the Czech Republic for the years 2014 – 2020 (Office of the Government of the Czech Republic, 2014) states that the risk of poverty is increasing in families consisting of a single parent and dependent children. Female pensioners are at risk of poverty twice as much as male pensioners.

2. Description of used data sources and methods of analysis

The time series of Eurostat became **the explanatory variables** when examining the influence of selected indicators on poverty, its nature and intensity across world economies (Eurostat, 2019). The data covers poverty from six perspectives. The first view represents the indicator *Inability to face unexpected financial expenses* in %. The second indicator is *People at risk of poverty or social exclusion by age and sex* in %. The third area of looking at poverty is the indicator *People at risk of poverty or social exclusion by NUTS regions* in %. Another view of poverty is provided by the indicator *People at risk of poverty or social exclusion by degree of urbanization* in %. The fifth indicator is *Share of housing costs in disposable household income,*

by type of household and income group in %. The sixth point of view brings the indicator *At-risk-of-poverty rate of older people by sex and selected age groups*.

Among the explanatory (numerical) variables are the following labor market, population and family indicators published by Eurostat: *Monthly minimum wages* - %, which is expressed in purchasing power parity; *Gender pay gap in unadjusted form by age* - %; *Gender pay gap in unadjusted form by NACE Rev. 2 activity* in %; *Gender pay gap in unadjusted form by working time* in %; *Tax rate* - %; *Tax rate on low wage earners: Tax wedge on labor costs* - %; *Labor cost index by NACE* - %; *Inactive population by sex, age and educational attainment level* - %; *Long working hours in main job by sex, age, professional status and occupation* - %; *Job tenure by sex, age, professional status and occupation* - %; *Young people aged 15-24 neither in employment nor in education and training by sex* - %; *Active population by sex, age and educational attainment level* - %; *Number of private households by household composition, number of children and age of youngest child* - %; *Percentage of employed adults working at home by sex, age groups, number of children and age of youngest child* - %*; LMP expenditure by type of action* - %; *Number of persons by working status within households and household composition* - %; *Number of adults by working status within households, number of children and age of youngest child* (All adults working full time) - % *and Number of adults by working status within households, number of children and age of youngest child* (At least one adult working and one adult not working) - %.

From the calculated and adopted unemployment rates, the values of the non-accelerating inflation rate (hereinafter NAIRU) were estimated with the help of the HP filter. Specifically, it was the NAIRU by occupation, type of contract and by sex, age and educational attainment. We apply the NAIRU to the analysis, as this concept shows the long-term potential of the labor market. In addition to these numerical variables, time series of categorical variables were compiled: time, country, type of household, age, region and level of urbanization.

The analysis covered the following countries: Belgium (hereafter BE), Bulgaria (hereafter BU), Czech Republic (hereafter CZR), Denmark (hereafter DE), Germany (hereafter GE), Ireland (hereafter IR), Greece (hereafter GR), Spain (hereinafter SP), France (hereinafter FR), Croatia (hereinafter CR), Italy (hereinafter IT), Cyprus (hereinafter CY), Latvia (hereinafter LA), Lithuania (hereinafter LI), Luxembourg (hereinafter LU), Hungary (hereinafter HU), Malta (hereinafter MA), Holland (hereinafter NE), Austria (hereinafter AU), Poland (hereinafter PO), Portugal (hereinafter POR), Romania (hereinafter RO), Slovenia (hereinafter Slove), Slovakia (hereinafter Slova), Finland (hereafter FI), Sweden (hereafter SW) and United Kingdom (hereafter UK).

The time series used cover the period from 2007 to 2017. In some cases, year-on-year changes in % were calculated from the original time series of numerical variables before the analysis. Specifically, it was the minimum wage indicator, labor cost index, inactive population, active population, household composition, household workers and working adults.

All used time series were tested with the ADF test (EViews, 2013), which confirmed their stationarity. We use linear regression to assess the intensity and nature of the influence of selected labor market, population and family indicators on poverty indicators. The influence of selected labor market, population and family indicators on poverty from six perspectives (inability to face unexpected financial costs; people at risk of poverty or social exclusion according to age, gender, region and degree of urbanization; share of housing costs in disposable household income; risk of poverty elderly) we then extract by defining **categorical variables** in interaction with these explanatory variables. In this way, we can specifically determine the impact of the labor market, population and family on poverty according to household type, age, gender or region, but also according to the level of urbanization together with the country.

Cleaned R^2 is applied to select the most appropriate model to approximate the analyzed data. The Jarque Ber test (EViews, 2013) is used to test the normality of the residuals. The Breusch-Godfrey test is applied to test autocorrelation of residuals (EViews, 2013). The Wald test

(EViews, 2013) is used to test for heteroskedasticity of residuals. The Variable Inflation Factor (EViews, 2013) is used in the analysis to measure the carrying capacity of multicollinearity. The failure of residual normality tests due to fluctuations in the development of some segments of the explained variable and interannual changes calculated from them in the case of a large number of observations allows us to assume the validity of the central limit theorem, which states that *t* tests are asymptotically valid.

The influence of selected labor market, population and family indicators on poverty indicators is examined using the Method of Least Squares. The determined value of the regression coefficient then indicates the intensity of the influence of the selected indicators on poverty and the sign of its character. In the case of a positive sign, the text speaks of a positive influence, and in the case of a negative sign, of a negative influence. In the event that the categorical variable in interaction with the selected indicator is not statistically significant in the model, we speak of failure to demonstrate its influence on poverty.

A positive value of the regression coefficient means that poverty increases with the growth of the selected indicator. A negative value of the regression coefficient means that the poverty indicator decreases with the growth of the selected indicator. Regression coefficients in the interval from 0.010 to 1.100 in our analysis indicate a very weak sensitivity of poverty to the development of the selected indicator of the labor market, population and family, in the interval from 1.101 to 2.300 weak sensitivity, in the interval from 2.301 to 3.500 indicate medium, in the interval from 3.501 to 4.800 a strong sensitivity and in the interval from 4.801 to 6.100 they locate a very strong sensitivity of poverty to changes in the labor market, population and family indicators.

3. Overview of results from empirical testing of the influence of labor market, population and family indicators on poverty across world economies and in the Czech Republic

In this part, we analyze the nature and intensity of the influence of labor market, population and family indicators on poverty from the point of view of the inability to face unexpected financial costs; people at risk of poverty or social exclusion according to age, or gender, region and degree of urbanization; the share of housing costs in the disposable income of households and the risk of poverty of the elderly. We divide the regression coefficient values obtained by regression analysis into three groups. The first group will summarize all proven positive values of regression coefficients of categorical variables of household type, age, gender, region and level of urbanization in interaction with selected areas of the labor market, population and family.

The second group will summarize all proven negative values of regression coefficients of categorical poverty variables by household type, age, gender, region and level of urbanization in interaction with selected areas of the labor market, population and family.

In the third group, no statistically significant influence of the selected area of the labor market, population and family was confirmed, e.g. on the share of housing costs in the disposable income of households and the risk of poverty of the elderly. The results are presented in the following regression analysis. The poverty, labor market, population and family indicators used in all countries are viewed in the structure presented in part 2 of this article.

In the following section, we will present an overview of the summary results from the in-depth analysis of the influence of selected indicators on poverty for the world economy and CZR. In accordance with part 2 of the article, we evaluate the intensity of the influence of changes in selected labor market, population and family indicators on poverty as very weak, weak, medium, strong, very strong and unproven. First, section A compares the average positive values of the regression coefficient across world economies and CZR. Part B then deals with a comparison of the average negative values of this regression coefficient. Part C provides an overview of the total number of unproven effects of labor market, population and family indicators on poverty.

3.1 Development of the influence of labor market, population and family indicators on the Inability to face unexpected financial expenses

As part of the analysis of the impact of selected labor market, population and family indicators on poverty, this area was first tested from the point of view of the ***indicator Inability to face unexpected financial expenses***.

A. A statistically significant positive value of the regression coefficient, which indicates a very weak adverse impact on the ability to face unexpected financial costs across **world economies** (+0.366), was found only for *the NAIRU indicator of men with auxiliary occupations*. From the perspective of household types, there was mainly a very weak adverse impact on the ability to face unexpected financial costs in the case of one person with dependent children (+0.492), one person (+0.386) and one adult 65 years or older (+0.315).

B. The highest statistically significant negative value of the regression coefficient (-0.544), which indicates a very weak positive impact on the ability to face unexpected financial costs, was found for the NAIRU *indicator of women artisans*. Specifically, it was primarily about its favorable impact on one adult aged 65 or older (-0.654), one person (-0.550) and one person with dependent children (-0.375). Furthermore, there was a very weak positive effect (-0.370) for *the GPG indicator aged 25-34* per adult aged 65 or over (-0.505), one person (-0.367) and one person with dependent children (- 0.141). We also include here the *indicator of one adult working and one not working with 1 child aged 6-11*, with a regression coefficient value of -0.053. From the perspective of household types, it was only a very weak positive impact on one person (-0.067).

C. Unproven regression, i.e. a statistically insignificant effect was found across **world economies** mainly in the case of a change in the *indicator of one adult working and one not working with 1 child 6-11 years old*. Specifically, there were 8 cases. From the point of view of household types, all groups were equally represented except for one person. For the *NAIRU indicator of men with auxiliary occupations*, for the *NAIRU indicator of female artisans and the GPG indicator aged 25-34*, there were always 6 cases, namely one adult under 65 years of age, one woman, one man, two adults with one dependent by a child, a household without dependent children and a household with dependent children.

3.2 Development of the influence of labor market, population and family indicators on people's risk of poverty or social exclusion by age and gender

In this part of the analysis of the influence of selected indicators of the labor market, population and family on poverty, the impact on the ***indicator of people's risk of poverty or social exclusion by age and gender*** was estimated.

A. The largest statistically significant positive value of the regression coefficient across **world economies** was found for the *indicator of the length of working hours of an employed man as a manager*, which had only a very weak negative effect on the indicator of people's risk of poverty or social exclusion according to age and gender (+0.075). From the point of view of gender and age groups, it was primarily a very weak adverse effect on men aged 11-15 (+0.636) and men under the age of 6 (+0.579). From the perspective of the countries, LI (+4.117 and +2.595 respectively) contributed to this result. Conversely, this indicator had the highest very weak positive impact on women and men under the age of 6 (-0.341 and -0.166, respectively). From the point of view of the countries, a weak favorable influence contributed to the result, especially in LI (-1.940).

For the *indicator one non-working adult with children*, the positive value of the regression coefficient was +0.041. From the point of view of gender and age groups, it was primarily a very weak adverse impact of this indicator on men under the age of 6 (+0.048) and a very weak positive effect on women aged 65 and over (-0.019). In the case of the *indicator one adult works part-time and the other full-time with a child 6-11 years old*, the average positive

value of the regression coefficient was only 0.019. In terms of gender and age groups, there was only a very weak adverse effect on males under the age of 6 (+0.026).

B. The highest statistically significant negative value of the regression coefficient, which indicates a very weak positive impact of the *GPG indicator at the age of 25-34*, was -0.060 on average. From the point of view of gender and age groups, it was primarily a very weak positive impact on men aged 65 and over (-0.187). The highest adverse effect was found in men aged 11-15 (+0.010). On the side of the *indicator, one adult person works and one does not work with 1 child 6-11 years old*, an average very weak positive effect was found (-0.035). Specifically, it was only men under the age of 6 (-0.049).

In the CZR, a statistically significant average negative value of the regression coefficient was mapped only for the *indicator length of working time of an employed man as a manager*, in the amount of -0.124. It was primarily men and women under the age of 6 (in both cases -0.135).

C. Across world economies, a statistically insignificant effect was found mainly for the change in the *indicator of the length of working hours of an employed man as a manager*, in 54 cases. From the point of view of gender and age groups, it was mainly men aged 25-49 years and 50-64 years (10 and 7 cases, respectively). From the point of view of the countries, BE, CZR, GE, LI, LU, Slove and Slova contributed to these results, which covered both tracked categories. In the case of women, it was mainly about the age of 25-49 years and under 6 years (8 and 4 cases, respectively). From the point of view of the countries, BE, GE, IR and LA contributed to these results, which covered both listed age groups for both sexes. For the indicator one adult works part-time and the others full-time with a child 6-11 years old, for the indicator one adult works and one does not work with 1 child 6-11 years old, 13 cases were mapped. Specifically, it was mainly women of all ages. For men, the age category under 6 years was missing. For the indicator of one non-working adult with children, 11 cases were found, where for men it was not the age group of less than 6 years and 65 years and over, but for women only the age group of 65 years and over.

In the CZR, a statistically insignificant effect was mapped only for the *indicator of the length of working hours of an employed man as a manager*. There were 3 cases in total. In terms of gender and age, there were men and women aged 25-49 and men aged 50-64.

3.3 Development of the influence of labor market, population and family indicators on people's risk of poverty or social exclusion by NUTS regions

In this part of the analysis, the impact of labor market, family and population ***indicators on the People at risk of poverty or social exclusion by NUTS regions*** was determined.

A. The largest statistically significant positive value of the regression coefficient across **world economies** was found for the NAIRU *indicator of male artisans*, which showed only a very weak negative effect (+0.336). From the point of view of the regions, this was mainly the result of a weak unfavorable value in the Severna Bulgaria region in the BU (+2.194). On the contrary, a weak positive effect was found in the Prague region in the CZR (-1.837). For the *GPG indicator aged 35-44 years*, the average positive value of the regression coefficient was 0.174, which indicates a very weak adverse effect on the investigated poverty indicator. This is primarily the result of a moderate adverse effect in the Sicilia region in IT (+2.697). On the other hand, a slight correction was caused, for example, by the region Provincia Autonoma di Bolzano/Bozen in IT, where a weak positive impact was mapped (-1.233). In the case of the *indicator one adult works part-time and the others work full-time with a child 6-11 years old*, the positive value of the regression coefficient was only 0.080, which indicates only a very weak adverse effect. The Wien region in AU acted in the same direction, showing a weak unfavorable tendency (+1.303), and the Molise region in IT in the opposite direction, with a very weak favorable influence (-0.287).

B. The statistically significant negative value of the regression coefficient -0.395 indicates a very weak negative sensitivity of poverty to the *indicator of the percentage of women working*

at home with 1 child aged 12 and over. This is, for example, the result of a moderately strong favorable influence of the Comunidad Foral de Navarra region in SP (-2.999) and a very strong adverse impact in the Sicilia region in IT (+6.086).

In the CZR, the highest statistically significant negative value of the regression coefficient was mapped for the *indicator of the percentage of women working at home with 1 child aged 12 and over*, amounting to -2.217, which represents weak intensity. From the point of view of the regions, the medium favorable impact was mapped mainly in Prague (-2.650). In the case of the *male artisan NAIRU*, the average weak positive impact was -1.121. The only negative impact was the indicator for the Northwest region (+0.071), which was of very weak intensity. Conversely, a weak positive influence was found in Prague (-1.837). For the *GPG indicator aged 35-44*, the average negative value of the regression coefficient was -0.107, which indicates a very weak positive effect. This is the effect of this indicator mainly on the Prague region (-0.203). A certain compensation represented a very weak adverse impact on the North-West (+0.045). For the *indicator one adult works part-time and the other full-time with a child 6-11 years old*, the average very weak positive effect was -0.011, which represents a very weak intensity. From the point of view of the regions, a weak adverse impact was mapped mainly in the Northwest (+0.032). The impact on Prague was mainly in the opposite direction (-0.057).

C. Unproven regression was found across **world economies** mainly in the change of the *indicator one adult works part-time and the others full-time with a child 6-11 years old*, specifically there were 53 cases. From the perspective of the countries, it was mainly IT (e.g. Piemonte region) and SP (e.g. Cantabria region). For the *indicator percentage of women working at home with 1 child aged 12 and over*, there were 9 cases, of which 5 are covered by BU (mainly North-West) and 2 by IT (Lazio and Sud). In the case of the *GPG indicator at the age of 35-44*, 8 cases were found, of which in BU 5 (mainly North-West) and in IT 2 (mainly Molise). For the NAIRU *indicator of male artisans*, 7 cases were located, with 5 related to BU (mainly Northwest) and 2 to IT (mainly Isole).

3.4 Development of the influence of labor market, population and family indicators on people's risk of poverty or social exclusion according to the degree of urbanization

In this section, we analyze the impact of selected indicators of the labor market, population and family on the ***indicator People at risk of poverty or social exclusion by degree of urbanisation***.

A. The largest statistically significant positive value of the regression coefficient across **world economies** was found for the *NEET male indicator*, which showed only a very weak adverse effect on the selected poverty indicator (+0.384). From the point of view of the degree of urbanization, there was a very weak adverse effect in the countryside (+0.824), in the city and suburbs (+0.512), followed by the big city (+0.277). From the perspective of the countries, this was the result of weak sensitivity in RO and MA (+1.924 and 1.792 respectively), weak sensitivity in BU and LI (+1.224 and +1.130 respectively) and very weak sensitivity in BR and POR (+0.669 and 0.352). A very weak positive effect was then mapped mainly in the countryside (-0.307), in the big city (-0.295) and finally also in the city incl. suburbs (-0.234). From the point of view of the countries, this was the result of a very weak intensity of influence in NE (-0.638, respectively -0.405) and in CZR (-0.512, respectively -0.603 and -0.436).

In the case of the *indicator length of working time of an employed man as a manager*, the positive value of the regression coefficient and a very weak adverse effect was only 0.109. This was the result of a weak adverse impact in the countryside (+1.142) and a very weak one in the city incl. suburbs (+1.018) and big cities (+0.298). From a country perspective, this was the result of a weak influence in BU (+1.806), a strong influence in LI (+3.738) and a very weak influence in LA (+0.461). A very weak positive effect was found in the city incl. suburbs (-0.084), in the big city (-0.083) and in the countryside (-0.071). From the perspective of the countries, this was the result of a very weak influence in NE (-0.167), CR (-0.217) and in FR (-0.099).

B. The only statistically significant negative value of the regression coefficient was found for the *indicator index of labor costs in the administration sector*. The average very weak favorable effect was 0.069 and was a combination of a very weak favorable effect in the big city (-0.167) and a very weak unfavorable effect in the countryside (+0.150).

In the CZR, the highest statistically significant average negative value of the regression coefficient was estimated for the *NEET indicator of men*, in the amount of -0.517. Above all, it was about big cities (-0.603), rural areas (-0.512) and, at a distance, also about cities, incl. suburbs (-0.436). For the *indicator length of working time of an employed man as a manager*, the average negative value of the regression coefficient was -0.088. Of this, the highest positive impact was mainly on big cities (-0.098) and rural areas (-0.089).

C. Unproven regression was mapped across **world economies** mainly in the analysis of the impact of a change in the *NEET indicator of men*. Specifically, there were 19 cases, of which 12 occurred in a large city, 5 in a rural area, and 2 in a city including suburbs. From the point of view of the countries, these results were mainly contributed by GR, which covered all three stages of urbanization. For the *indicator length of working hours of an employed man as a manager*, there were 14 cases (large cities 8 cases, cities including suburbs 4 cases and rural areas 2 cases). From the point of view of the countries, these results were again mainly contributed by GR, which covered all stages of urbanization. For the *indicator index of labor costs in the administration sector*, there was only 1 case in the city incl. outskirts.

3.5 Development of the influence of labor market, population and family indicators on the share of housing costs in the disposable income of households

In this part, we investigate the impact of labor market, population and family on **the *indicator Share of housing costs in disposable household income, by type of household and income group***.

A. The largest statistically significant positive value of the regression coefficient across **world economies** was found for the NAIRU *indicator of full-time male employees aged 15-24*, when it reached a value of 0.218 and therefore represented a very weak adverse impact on the selected poverty indicator. In terms of household types, it was mainly one adult under 65 (+0.424), one person (+0.304) and two adults with one dependent child (+0.197). For the *indicator of the percentage of women working at home with 1 child aged 12 and over*, the positive value of the regression coefficient and a very weak adverse effect was 0.133. From the perspective of household types, on the one hand, a very weak adverse effect was revealed on one adult under the age of 65 (+0.935) and one person with dependent children (+0.936). From a country perspective, this was the result of strong influence in GR (+4.085) and medium sensitivity in CR (+2.485) and weak sensitivity in CR (+1.647). However, a weak positive effect on one adult 65 years or older (-1.359) and a very weak positive effect on one person with dependent children (-1.024) were also found. From the position of the countries, this was primarily the result of a medium influence in LA (-3.161).

In the CZR, the only statistically significant positive value of the regression coefficient was mapped for the *indicator of the percentage of women working at home with 1 child aged 12 and over*, at 0.911, which represents a very weak intensity. From the perspective of household types, a weak adverse impact was mapped on one adult under the age of 65 (+1,493), or per person with dependent children (+1.187) and a very weak adverse effect was associated with one person (+0.836).

B. The only statistically significant negative value of the regression coefficient, which indicates a very weak negative impact of *the indicator number of households with one adult with 1 child under 6 years of age*, was the average value of -0.048. From the perspective of household types, it was only a development in the case of one person (-0.050).

C. An unproven regression, i.e. a statistically insignificant effect, was found across **world economies** mainly in the change of the *indicator of the percentage of women working at home with 1 child aged 12 and over*, when it was 22 cases. Specifically, there were mainly 13 cases

in one adult aged 65 or older. After 3 cases, it had the option of one person, one adult under the age of 65 and one person with dependent children. From a country perspective, these results were mainly contributed by HU, which was reported in connection with one adult aged 65 years or older, one person and one person with dependent children. One adult under the age of 65 and one person with dependent children then belong to LI. One adult aged 65 years or older and one person with dependent children were identified in GE. For the *indicator number of households of one adult with 1 child under 6 years of age*, there were 8 cases, and all household types except for one person. In the case of the *NAIRU indicator of male full-time employees aged 15-24*, only 3 cases of non-significant observations were found (one male, one female and one person with dependent children).

3.6 Development of the influence of labor market, population and family indicators on the risk of poverty rate of older people

In this section, we test the impact of labor market, population and family ***indicators on the At-risk-of-poverty rate of older people by sex and selected age groups***.

A. Statistically significant average positive value of the regression coefficient across world economies incl. CZR was not detected.

B. The highest statistically significant negative value of the regression coefficient (-0.119) was mapped in the case of the *NAIRU indicator of a woman with less than primary education aged 40-44*. From the point of view of gender and age, it was primarily a very weak positive impact for men and women over the age of 65 (-0.391 and -0.240, respectively). From the point of view of the countries, it was the result of the development in RO (-0.709). In the opposite direction, there was a very weak adverse effect in the case of women over 65 (+0.327) and men under 65 (+0.097). From the point of view of the countries, this was the result of developments in, for example, CR (+0.333) with a very weak intensity.

Furthermore, there was a very weak influence of *the indicator percentage of women working at home with 1 child aged 12 and over*, which indicates a regression coefficient of -0.037. In terms of gender and age, it was only men under the age of 65 (-0.026). It was also a very weak positive effect of the *non-working couple with children indicator*, which was represented by the average coefficient value of -0.011. Of the statistically significant categorical variables, only a very weak adverse impact on men under the age of 65 (+0.019) can be taken into account.

In the CZR, the only statistically significant negative value of the regression coefficient was mapped for the *NAIRU indicator of a woman with less than primary education aged 40-44*, at -0.247, which represents a very weak intensity. From the perspective of gender and age, a very weak positive impact was mapped on men under the age of 65 (-0.336).

C. Unproven regression was found across **world economies** mainly in the change of the *NAIRU indicator of women with less than primary education aged 40-44*, when it was 54 cases. Specifically, it was mainly men over the age of 65 (17 cases) and women under the age of 65 (17 cases). In terms of countries, it was the result of development in IR, GR, SP, IT, LI and LU for men and DE, FR, HU, MA and AU for women. For *the indicator of the percentage of women working at home with 1 child aged 12 and over* and for the *indicator of a non-working couple with children*, there were 3 cases, and these were always primarily women under and over 65 years of age.

In the CZR, a statistically insignificant effect was found only for the *NAIRU indicator of a woman with less than primary education aged 40-44*, in which there were only 3 cases, i.e. men and women under the age of 65 and women over 65.

Conclusions from the analysis

Findings from the comparison of our analysis with the conclusions of foreign and domestic research, or strategic materials in the area of the impact of the labor market, population and family on poverty indicators can be divided into three groups:

A. Statistically significant average positive values of the regression coefficient and thus the adverse effect of labor market, population and family indicators on poverty across world economies and CZR

1) Within **world economies**, the ***indicator of Inability to face unexpected financial expenses*** had a statistically significant unfavourable impact, especially the *NAIRU indicator of men with a helping profession*, in the case of one person with dependent children, one person and one adult aged 65 or older. Bennett and Daly (2014) relate this conclusion to the fact that gender inequality confers an increased risk of poverty for women, but also contributes to the risk of poverty for some men. The decline in traditional male jobs then means that men are no longer as secure in terms of their own financial position.

2) On ***the People at risk of poverty or social exclusion by age and gender indicator***, the *NAIRU indicator of men with the occupation of operator* had a statistically significant unfavourable impact within the framework of **world economies**. Islam (2004) advises that a source of positive influence on poverty reduction is the structural transformation of employment towards manufacturing and other non-agricultural sectors.

B. Statistically significant average negative values of the regression coefficient and thus the favorable influence of labor market, population and family indicators on poverty across world economies and CZR

1) Within **world economies**, the ***indicator of Inability to face unexpected financial expenses*** had a statistically significant favourable impact, especially the *NAIRU indicator of female artisans*, in the case of one adult aged 65 or older, one person and one person with dependent children. Norton and West (2014) point out that improving the uptake of benefits remains a key way of addressing the number of pensioners in poverty.

2) The ***indicator People at risk of poverty or social exclusion by age and gender*** had a statistically significant favourable impact within the framework of **world economies**, especially the *indicator index of labor costs in transport and storage*, where specifically it was mainly about the age of 25-49 years. Sen, Rybczynski, and Van De Waal (2011) further explain that the consequences of unemployment (after a minimum wage increase) may not be severe because a significant majority of minimum wage earners live with another family member. Therefore, a higher minimum wage should clearly mean higher incomes and thus lower poverty.

C. Statistically insignificant average values of the regression coefficient and thus the unproven influence of labor market, population and family indicators on poverty across world economies and CZR

1) On the ***indicator People at risk of poverty or social exclusion by NUTS regions***, a statistically insignificant impact was found within the **world economies**, especially for the *indicator inactive men aged 15-24 with lower primary education*, in 82 cases (in IT, for example Nord-Ovest region, Piemonte, Valle d'Aosta/Vallée d'Aoste and Liguria; in SP eg Noroeste region (ES), Galicia, Principado de Asturias and Cantabria). For the *indicator one person with two children*, 62 cases were mapped, mainly in IT (e.g. the region of Liguria, Valle d'Aosta/Vallée d'Aoste and Piemonte) and SP (e.g. the region of Cantabria, Principado de Asturias and Galicia). For the *indicator one adult works part-time and the other works full-time with a child aged 6-11*, there were 53 cases, mainly IT (e.g. Piemonte region) and SP (e.g. Cantabria region. Holmes, McCord, Hagen-Zanker, Bergh and Zanker (2013) admit that there is insufficient evidence regarding the impact of job creation on poverty.

2) Within **world economies**, a statistically insignificant effect was found on the ***indicator Inability to face unexpected financial expenses***, especially for the *indicator of the percentage of women working at home with 1 child aged 12 and over*. Specifically, there were 46 cases (one man, households without dependent children and households with dependent children in 7 cases each in GR and POR). In the CZR, there were also a total of 7 cases in one person, one adult under 65, one adult 65 or older, a single woman, a single man, a household without dependent children, and a household with dependent children. For the *NAIRU indicator of male full-time employees aged 15-24*, there were 36 cases of which mainly

one male, one adult under 65 and two adults with one dependent child in mainly GR and NE. Holmes, McCord, Hagen-Zanker, Bergh, and Zanker (2013) confirm that there is currently no evidence to assess the effectiveness of direct employment, enabling macroeconomic policies, or promoting self-employment.

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