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## TAXATION EFFICIENCY OF MODERN EMPLOYMENT ADMINISTRATION

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**Abstract.** *This article examines the problem of unemployment and the effectiveness of fiscal instruments for regulating employment. Authors have analyzed 131 countries of the world, classified into 5 groups, depending on their welfare level and also into 10 geographical groups. It was a period from 2009 to 2016. The practical significance of the material is to identify the factors that stimulate and limit the impact of the tax rate on unemployment in particular, and the level of tax comfort in countries as a whole. The conclusions we obtain here can be further used for the purposes of national policies modernization with regard to labor market stimulation and overcoming the social problems related to (un)employment by means of taxation instruments. This became possible due to economic reforms already carried out and due to already achieved levels of private business development (see their ranks in “Doing Business” and their tax ranks especially).*

**Keywords:** *taxation regime, globalization, economic stimulation, tax rate, taxation comfort, employment, unemployment.*

**Raktiniai žodžiai:** *apmokestinimo tvarka, globalizacija, ekonomikos stimuliavimas, mokesčių tarifas, apmokestinimo komfortas, užimtumas, nedarbas.*

## Introduction

Taxation regimes today (and always actually) are not only an important factor and instrument in implementation of national external and internal economic policies, but they also determine, to a larger extent, a country's position and rank in international labor division as well as a country's attractiveness for foreign capital. Also, taxation serves as an efficient and effective mechanism for social processes' management, such as employment which itself is a process and a phenomenon at the intersection of economic and social processes (Kaldiyarov et al. 2014; Rodrigues et al. 2018; Carrillo 2019).

In its turn, population employment serves as the indicator, on one hand, of the national macroeconomic model efficiency, and this model's capacity to attract and use the resources available to the maximum degree (and not only human resources, but also capital and/or natural resources). On the other hand, employment serves to guarantee high labor productivity which is the vital factor for country's competitiveness globally (Kapitonov et al. 2018). At the same time, state employment policy is the major factor of the economic system's fairness and social justice; it is supposed to promote the fair distribution of material benefits within the society, thus guaranteeing social stability in the long term. Due to the actuality of this topic in its wider sense and meaning, determining the interdependence between population (un)employment and the state tax reforms implemented has already got certain attention in both the theoretical research field, and also of the experts representing various international economic research organizations (Lukiyanova et al. 2018).

Already the research on the threshold values of taxes guaranteeing maximum employment and productivity can be called classical (Dalton 1954). Equally, on the mechanisms of the contemporary market functioning (Hamermesh 1993), and, by the same author, on the conditions for crisis actions implementation for the aims of state economic regulation (Andolfatto 1996). Also, on the impact of country's tax system on the unemployment level in it and on the dynamics of minimum wage (Pissarides 1998; Hansen 1999; Lockwood and Manning 1993). All works cited above have formed the basis for numerous further, more applied works on the issues concerning labor, employment and state fiscal policy in their interrelation.

For example, J. Michaelis and M. Pflüger have analyzed revenue-neutral tax reforms for a small open economy which is constrained to a balanced current account and whose producers have market power on the world market (Michaelis and Pflüger 2000; Asyaeva et al. 2016). This work has been based on the profound analysis of the commodity taxes as well as taxes on income, on payroll, and on the imported factor of production. The authors have come to the conclusion that the tax reforms' impact on the private sector employment dynamics depends, first of all, on the level of economic system openness, and also on the degree of its engagement in international migration flows. Interestingly, in their view, international migration dynamics can both negate as well as strengthen

the impact of tax on population employment. Also, curiously, these authors state that the size of tax rate has more influence on employment within a country (this conclusion though is applicable to SME sector only) than the minimum wage in this country! The authors explained this dependence by highlighting the determining economic role of business which for population becomes more important than the state itself.

A sort of strategy was suggested by B. J. Heijdra and J. E. Ligthart – increasing employment, reducing the equilibrium unemployment rate, and thus increasing public revenue as long as workers do not have all the bargaining power in wage negotiations. Their study became the logical continuation of the work started several years earlier by P. M. Picard and E. Toulemonde (2001) and also J. Boone and A. L. Bovenberg (2002). Heijdra and Ligthart (2009) have analyzed labor tax reforms to determine that income tax and corporate income tax are able to have a directly opposite impact on the employment level on a country (Picard and Toulemonde 2001; Toulemonde and Bovenberg 2002; Heijdra and Ligthart 2009; Boone and Bovenberg 2002). They also described the whole set of criteria and factors defining the degree and the effect of this impact.

Directions in taxation policy implementation and their impacts on entrepreneurial activity of population and population's potential self-employment have been evaluated by Magnus Henrekson, Dan Johansson and Mikael Stenkula, who have shown that high and/or distortive taxes and heavy labor market regulations impinge on the creation and functioning of competence blocs, thereby reducing high-impact entrepreneurship (Henrekson et al. 2010; Gurieva et al. 2016). Separately we need to mention here quite a successful attempt, in our view at least, by V. Lipatov and A. Weichenrieder (2015) to model, using the game theory, the interstate competition (including the one related to taxation conditions) for the qualified labor force (which is known to have rather high mobility). These authors came to the conclusion that tax competition reduces the distortion from information asymmetry and increases labor supply of less productive individuals. When one country has a larger population, this effect is more pronounced in the smaller country (Zai-tang and Rui 2013; Iswari et al. 2019).

Despite the depth of many research studies already carried out and the high topicality and variety of the conclusions obtained, the problem of taxation system influence on the employment dynamics does not lose its importance, neither for the science, nor for more applied practical work related to fiscal reforms and fiscal policies of separate states. Thus, the aim of our research presented here is to reveal, on the basis of statistical analysis of national tax reforms' dynamics and population employment by countries, the leading trends and regularities in stimulation/repression of unemployment due to fiscal policy change. According to this objective set, we also determine the following research tasks:

- to determine the correlation between the dynamics of national tax reforms (from the standpoint of tax rates, level of taxation comfort and rank of national tax system) on the one hand and the employment dynamics on the other, both in short and long terms;
- to measure the stimulation effect from tax reforms on employment by geographical groups of countries;

- to study the level of material wellbeing as a factor defining the volume of stimulating effect from taxation changes on employment.

## Material and methods

Here we plan to determine the correlation between tax reforms' dynamics and employment trends dividing the contemporary states into the groups. Statistical data on unemployment by countries used here is from the World Bank database.

*Table 1. Groups of countries as presented in this research*

| Group # | Name of the group | Level of GDP per capita | Number of countries in the group |
|---------|-------------------|-------------------------|----------------------------------|
| 1       | Rich              | Over \$40,000           | 18                               |
| 2       | Well-to-do        | \$25,000-\$39,999       | 10                               |
| 3       | Average income    | \$15,000 – \$24,999     | 20                               |
| 4       | Underperforming   | \$5,000 – \$14,999      | 22                               |
| 5       | Poor              | Less than \$4,999       | 61                               |
| Total:  |                   |                         | 131                              |

*Table 2. Geographical groups of countries in this research*

| Group # | Name of the group          | Number of countries in the group |
|---------|----------------------------|----------------------------------|
| 1       | African countries          | 34                               |
| 2       | Eastern European countries | 12                               |
| 3       | Latin America countries    | 17                               |
| 4       | Middle East countries      | 15                               |
| 5       | North American countries   | 2                                |
| 6       | Nordic countries           | 5                                |
| 7       | Asian Pacific countries    | 13                               |
| 8       | South Asian countries      | 5                                |
| 9       | Post-Soviet countries      | 14                               |
| 10      | Western European countries | 14                               |
| Total:  |                            | 131                              |

In our analysis of tax reforms' dynamics, we have used the data from rather well known "Doing Business" ranking, more specifically, the following indicators:

- international ranking of country's taxation system;
- time spent on all tax formalities in the country;
- the number of tax reports per year by countries;
- the average tax rate (this is a synthetic indicator of tax rates for both legal bodies and private individuals).

## Results and discussion

We have analyzed 131 countries of the world, classified into 5 groups, depending on their welfare level (Table 1) and also into 10 geographical groups (Table 2). The time period chosen for our analysis is 2009 to 2016. The results of our research analysis are presented further in Tables 3 and 4.

*Table 3. Impact of separate components of taxation regime on employment (countries divided by material wellbeing, maximum is 100 points)*

| Country groups  | Taxation regime components |                     |                  |                     |                  |                     |
|-----------------|----------------------------|---------------------|------------------|---------------------|------------------|---------------------|
|                 | Taxation system rank       |                     | Taxation comfort |                     | Tax rates        |                     |
|                 | <i>Incentive</i>           | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> |
| Rich            | 21                         | 21                  | 0                | 100                 | 12               | 52                  |
| Well-to-do      | 66                         | 100                 | 20               | 100                 | 10               | 50                  |
| Average income  | 100                        | 80                  | 32               | 85                  | 100              | 40                  |
| Underperforming | 95                         | 95                  | 36               | 51                  | 75               | 35                  |
| Poor            | 32                         | 25                  | 51               | 30                  | 74               | 24                  |

*Table 4. The impact of taxation regime components on employment by country groups (by geographical feature, 100 stands for the maximum impact)*

| Country groups   | Taxation regime components |                     |                  |                     |                  |                     |
|------------------|----------------------------|---------------------|------------------|---------------------|------------------|---------------------|
|                  | Taxation system rank       |                     | Taxation comfort |                     | Tax rates        |                     |
|                  | <i>Incentive</i>           | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> |
| Africa           | 25                         | 54                  | 21               | 18                  | 75               | 50                  |
| Eastern Europe   | 71                         | 24                  | 0                | 84                  | 16               | 44                  |
| Latin America    | 34                         | 79                  | 48               | 41                  | 62               | 31                  |
| Middle East      | 44                         | 31                  | 0                | 75                  | 32               | 32                  |
| Northern America | 0                          | 20                  | 0                | 24                  | 70               | 0                   |
| Nordic Europe    | 0                          | 33                  | 0                | 0                   | 75               | 0                   |

| Country groups        | Taxation regime components |                     |                  |                     |                  |                     |
|-----------------------|----------------------------|---------------------|------------------|---------------------|------------------|---------------------|
|                       | Taxation system rank       |                     | Taxation comfort |                     | Tax rates        |                     |
|                       | <i>Incentive</i>           | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> | <i>Incentive</i> | <i>Disincentive</i> |
| Asian Pacific region  | 11                         | 0                   | 78               | 36                  | 19               | 42                  |
| South Asia            | 30                         | 0                   | 0                | 0                   | 0                | 75                  |
| Post-Soviet countries | 11                         | 100                 | 100              | 0                   | 100              | 19                  |
| Western Europe        | 75                         | 31                  | 0                | 100                 | 60               | 48                  |

Generally high impact on unemployment has the tax system global rank, which is demonstrated by three middle groups of countries (not rich and not poor, those with the GDP per capita between \$5,000 and \$40,000). At the same time, in the countries with average level of income this impact was stimulating unemployment growth, while in well-to-do countries and also in underperforming countries higher tax system rank was, conversely, stimulating employment (Patlasov and Vasina 2014). Finally, in rich and poor countries, tax system rank does not really influence the employment trends as such. Lower tax rates stimulate the growth of unemployment in the poorest, underperforming and average income countries. The indicators of taxation comfort also had quite a noteworthy stimulation effect on employment in rich and well-to-do countries. Country's rank in the global taxation rating has the maximum effect on the employment level in post-Soviet countries, Latin America and Eastern Europe (Silagadze 2017). Also noteworthy, tax reforms have a more stimulating effect on unemployment in Western and Eastern Europe (Privarova and Privara 2016), while in the post-Soviet countries and in Africa they stimulate employment. With higher tax rates unemployment is also growing, in all world regions but for Eastern Europe and Asian Pacific region, and its growth is especially dramatic in post-Soviet, African and Latin American countries.

The level of taxation comfort tends to reduce unemployment in Western Europe and also in the Middle East, but at the same time it provokes more unemployment in post-Soviet countries and in the Asian Pacific region. Unemployment level as an economic category usually shows the efficiency of national labor force use. The dynamics of tax rates, being normally the incentive for the business activity of the population, also serves as the means of both foreign and domestic capital attraction, thus contributing to higher efficiency of labor force use. This, in turn, influences the dynamics of unemployment in a rather favourable way for the country. The conclusions obtained here demonstrate empirically a range of rather curious trends and regularities in the functioning of national economic systems today.

Tax rank of a country is not really able to change the level of employment in rich countries, and this shows that these countries already achieved a certain level of labor productivity so that to have a sufficient national entrepreneurial potential and also sufficient level of capital saturation within national economy, they do not feel the need to attract additional workers into their economic system. Therefore, even a very liberalized taxation regime and high level of business activity (partially provoked by this liberalized

taxation regime) would not be able to change the employment level significantly, simply because their rather stable level of labor potential itself guarantees growth. In the poorest countries the situation is quite similar, as are its causes – the labor is very much undervalued. However, if in rich countries this undervaluation happens due to maximum high productivity and availability of highly qualified (and thus also highly productive) labor resources, then in poor countries this undervaluation happens because of extremely high competition in labor markets which causes serious devaluation of the labor force (in such situations it is always easy to find a new labor force ready to work for less pay).

Situations in well-to-do and underperforming countries are also nearly identical. In these two groups improved tax ranks of countries tend to stimulate employment, and this can be simply and logically explained by the economic growth due to liberalization of national taxation systems. We can also note that the maximum favourable effects from tax reforms on employment point to the well-to-do country group. This can be explained by the availability of business and trade infrastructure in these countries, which tend to magnify the stimulating effect from tax reforms. Only in the average income countries do taxation system improvements stimulate the growth of unemployment. This could be the result of unqualified labor resource overabundance in these countries. More specifically, tax reforms and taxation liberalization logically lead to business processes optimization in these countries, and this optimization tends to “disengage” the unnecessary labor force. At the same time, while unqualified workers are losing their jobs, the economic systems experience the lack of highly qualified labor force.

The high stimulating power of taxation comfort components (in particular, time spent on tax formalities) in the rich countries specifically is quite obvious and even predictable. In rich and well-to-do countries time is not only an important production resource but it also becomes a sort of precious reward for an employee (who gets more free time only reaching certain level of welfare). In underperforming and poor countries, the average tax rate usually has a more negative influence on employment, that is, if tax rates are getting higher – they provoke higher unemployment. This regularity is not observed in well-to-do countries because their taxation systems do not tend to decrease the tax rates by default.

## **Conclusions**

1. The results of our research confirmed that in developing countries tax rank is an important factor for population employment because it guarantees capital inflows, growth of business activity in a country, and its more intensive trade relations. This is also confirmed by the fact that the labor force in post-Soviet countries and in Africa remains extremely undervalued (thus tax rank growth promotes employment), while in European countries the situation is completely the opposite (and thus, tax rank growth stimulates only labor force “disengagement” because low-paid jobs are substituted by machines, while highly qualified labor becomes the top priority in their development).
2. Overall in the world, the tax load on business tends to stimulate unemployment which is, again, rather predictable. Only in the Eastern Europe and Asian Pacific

regions is the situation the opposite. This proves that these regions have a hidden potential for the development of sectors and activities not related directly to entrepreneurship/business (that is, public sector, public services, creative and cultural activities, etc.). This became possible due to economic reforms already carried out and due to already achieved levels of private business development (see their ranks in "Doing Business" and their tax ranks especially). Taxation comfort overall has a rather weak impact on unemployment, with the exceptions of Western Europe and Middle East. If in the former group of countries taxation systems simply do not assume tax rates can be reduced as such, the latter geographical group clearly has reached its threshold minimum rate of corporate tax (and thus the highest standards when it comes to taxation comfort). Therefore, we can conclude that in the majority of the countries worldwide the potential of fiscal instruments is rather high when it comes to socioeconomic development programs' implementation.

3. The conclusions we obtain here can be further used for the purposes of national policies modernization in part of labor market stimulation and overcoming the social problems related to (un)employment by means of taxation instruments. Obviously, however, the efficiency of taxation instruments when it comes to population employment is not always predictable. It depends, first of all, on the level of welfare already achieved by countries and also on their history of the implementation of economic reforms. For a higher level of public stimulation of employment and a more efficient distribution of labor force nationally, this research should be further deepened and extended in such directions as national public regulation by components. Or, for example, the impact of the refinancing rate by countries and regions could be considered since refinancing rate is an important indicator of entrepreneurial activity and business climate in any country, worldwide.

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## Šiuolaikinio užimtumo administravimo apmokestinimo efektyvumas

Anotacija

Šiame straipsnyje nagrinėjama nedarbo problema ir fiskalinių priemonių veiksmingumas reguliuojant užimtumą. Straipsnio autoriai išanalizavo 131 pasaulio šalį. Pagal kiekvienos iš valstybių gerovės lygį, šalys suskirstytos į penkias, o atsižvelgiant į valstybių geografinius aspektus – į dešimt grupių. Straipsnyje nagrinėjami duomenys apėmė laikotarpį nuo 2009 iki 2016 m. Praktinė šio tyrimo reikšmė yra veiksmių, kurie skatina ir riboja mokesčių tarifo poveikį nedarbui ir apmokestinimo komforto lygį visose šalyse, identifikavimas. Nustatyti veiksniai gali būti pasitelkti nacionalinėms politikoms modernizuoti, iš dalies stimuliuojant darbo rinką ir apmokestinimo priemonėmis įveikiant socialines problemas, susijusias su (ne)užimtumu. Dėl jau atliktų ekonominių reformų ir pasiekto privataus verslo plėtros lygio (įvertinus vietą „Doing Business“ ir mokesčių gretose), tam susidariusios visos reikiamos sąlygos.

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