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Crisis Averted: Navigating Fiscal Policy Instruments in Member States on the Example of the Covid-19 Pandemic

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Dr Waldemar Szymanski[1], Dr Monika Szczerbak[2], Dr Małgorzata Oziębło[3]

Abstract:

Purpose: *The primary objective of this paper is to assest the impact of the applied anti-crisis fiscal policy instruments (on the example of the Covid 19 pandemic) on the budgetary policy of selected Member States.*
Design/methodology/approach: *A critical analysis of the literature and a quantitative method were used. Statistical data for the period 2012-2021 were used, affecting the adopted anti-crisis solutions on the tax policy of Austria, Belgium, the Czech Republic, Lithuania, Germany, Slovakia, Italy and Poland.*
Findings: *It was shown that the applied tax intervention was ad hoc and did not affect the tax policy of the surveyed countries. The main objective of the introduced solutions was to defer tax burdens, which had no long-term impact on both the level of tax burdens and the economic structure of taxation (capital, labour, consumption). It has been proven that the taxes most suitable for the implementation of the anti-crisis tax policy are direct taxes.*
Practical implications: *The added value of the article are the conclusions that can be used by governments in developing more flexible and effective tax policies to minimize the negative effects of subsequent crises.*
Originality/value: *The article can also be a starting point for a discussion on different approaches to pandemic crisis management, help to understand different perspectives and develop solutions for the future.*

Keywords: *Tax system, crisis management, tax base, anti-crisis fiscal policy, economic crisis, direct taxes, indirect taxes.*

JEL codes: *G38, H12, H25.*

Paper Type: *Research study.*

[1]*Helena Chodkowska University of Technology and Economics, Faculty of Management and Logistics, ORCID: 0000-0002-6480-7116, waldemar.szymanski@uth.edu.pl;*
[2]*Warsaw Military University of Technology, Faculty of Security, Logistics and Management, ORCID: 0000-0001-8073-7122, monika.szczerbak@wat.edu.pl;*
[3]*Warsaw Military University of Technology, Faculty of Security, Logistics and Management, ORCID: 0000-0001-7884-974X malgorzata.ozieblo@wat.edu.pl*

1. Introduction

On the basis of the course of the crises hitherto, it can be concluded that their effects concern both the real economy and entities included in the public finance sector. Assuming that one of the tasks of the state is to protect market mechanisms, it should be pointed out that there is a need to revise the existing fiscal policies, which can be described as anti-crisis fiscal policies.

Anti-crisis fiscal policy instruments should limit the current effects of the crisis, prevent the possibility of disturbances in the economic system in the future, strive to maintain fiscal stability, ensure long-term and stable economic growth of the country (Grauwe and Foresti, 2015; Schoenmaker, 2011). Therefore, the essence of the anti-crisis fiscal policy is to limit the effects of disturbances and crises in the economy (Breuer, 2015). Thus, its instruments should not affect the basic direction of the tax policy.

However, taking into account the links existing in the economy, the assessment of the effects of fiscal policy should be carried out in conjunction with monetary policy, international policy or the business cycle (Alesina and Giavazzi, 2013; Țibulcă, 2021; Grima *et al.*, 2020; Khan *et al.*, 2020). Therefore, the instruments used should not cause disturbances in the implementation of the fiscal function and other non-fiscal functions of taxes in a market economy (redistribution, allocation, information, stimulation). The introduced solutions should be characterized by a specific time horizon and intensity of support.

The suddenness and global scale of the crisis caused by the pandemic, as well as the unpredictability of its duration, made it necessary for many countries to intervene (Zbroińska, 2022). Discretionary fiscal policy, aimed at financial support for enterprises, caused further budgetary effects of the crisis. The simultaneous increase in budget expenditure related to combating the effects of the crisis and the decrease in tax revenues resulted in a sharp increase in the budget deficit and public debt in relation to GDP, which was the price of mitigating the effects of the crisis in the private sector (Baker and Murphy, 2019).

The aim of the article is to determine the impact of crisis factors (on the example of the Covid 19 pandemic) on the tax policy of selected Member States for further improvement of tax policy management in times of threat and minimizing negative effects on society and the economy.

The thesis was adopted that crisis factors do not affect the tax policy of the Member States. To verify the thesis, statistical data for the period 2012-2021 was used to determine the impact of the adopted anti-crisis solutions on the tax policy of selected Member States.

2. The Role of Taxes in Counteracting the Crisis Effects Caused by the COVID-19 Pandemic

Taxes are a financial instrument commonly used by the state in economic and social policy (Owsiak, 2023). They stimulate the desired activities of entrepreneurs by means of tax privileges and enable the intended redistribution of income in order to ensure social security for citizens and to mitigate disproportions in the spatial differentiation of the level of economic development of the country.

Taxes, as an instrument of obtaining state revenue, are their most important source (Breuer, 2015). It is thanks to tax revenues that individual governments can implement certain budgetary expenditures for the benefit of society. Taxes are certainly a better instrument for reducing the risk of a crisis than administrative standards. However, they are not the only panacea and should be complementary to other systemic regulations (Masiukiewicz and Dec, 2014; Fernandes, 2020).

Conscious use of taxes to perform, broadly understood, non-fiscal functions in the economic and social policy of the state, adapting tax systems to the changing environment and technological development makes it necessary to look for new solutions in the field of taxation techniques (Wyszkowski, 2010). Hence, the tax system is faced with specific tasks that depend on many factors, both economic, political and social. During the pandemic, taxes were an instrument to counteract its effects.

In assessing the legitimacy of using taxes as an instrument to counteract the effects of the pandemic, their properties and the division into direct and indirect taxes were used (cf. Szczepańska, 2015; Horodecka, 2008; Małecka, 2005; Mastalski, 2011; Guziejewska, 2011; Owsiak, 2023; Mirek, 2016; Olchowicz, 2015; Grycuk, 2010; Felis, 2016; Kuzińska, 2008; Sosnowski, 2016; Balasoiu *at al*., 2023).

Taking into account the objectives of the anti-crisis fiscal policy, it should be pointed out that the instruments used should: ensure the effectiveness of their implementation, e.g., the expected duration of economic effects in connection with their use, at the same time low costs; be selective, e.g., allowing the legislator to influence the revenues or tax deductible costs of specific professional groups that have been affected by the pandemic; direct specific tax preferences to those professional or social groups that have been affected by the pandemic; take into account the taxpayer's profitability in the tax burden, e.g., a reduction in his income due to a pandemic; minimize the social and economic effects of the crisis (Nguyen *et al.*, 2022).

Against the background of the above criterion, it is reasonable to indicate that the taxes that meet them to the greatest extent are direct taxes. Assuming the time criterion, i.e. waiting time for the implementation of a given solution and waiting time for budgetary effects, the most appropriate taxes should be indicated as indirect taxes - monthly or quarterly settlement period.

The conducted analysis of the properties of taxes allows for the preliminary assumption that direct taxes will be selected for state intervention in the economy as part of the anti-crisis fiscal policy.

3. Assessment of the Impact of Anti-Crisis Regulations on the Tax Policy of Selected Member States

The assessment of the impact of the crisis effects on the example of the COVID-19 pandemic on the tax systems of the Member States was made for the period 2012-2012 on the basis of tax revenues in selected Member States in relation to GDP, VAT revenues in relation to GDP, revenues from corporate income tax to GDP, personal income tax receipts to GDP, and economic ratios of taxable areas to GDP.

The analysis of the introduced changes shows that the main intention of the legislator was to reduce the current tax burden, i.e. its deferral or the possibility of temporarily reducing the tax burden by increasing the scope of tax preferences. Assuming tax revenues as a criterion for evaluating the impact of the introduced solutions, one should therefore expect a reduction in current tax revenues and then an increase in them in subsequent settlement periods.

Table 1. *Tax revenues in selected Member States in 2012-2021 in million euro*

	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Austria	88 503,4	91 594,5	94 257,3	98 897,8	97 707,9	100 965,8	106 377,7	110 380,1	101 830,4	113 830,1
Belgium	120 227,5	124 728,9	127 012,8	128 854,8	132 267,4	139 610,0	145 320,3	145 040,8	138 154,8	153 782,3
Czech Republic	32 268,6	32 346,8	31 087,1	33 889,4	36 285,0	39 939,2	43 455,1	46 236,9	43 289,5	46 132,8
Lithuania	5 397,8	5 653,6	6 004,6	6 488,1	6 833,7	7 296,0	7 921,0	10 074,3	10 267,0	12 374,6
Germany	636 628,0	655 251,0	677 650,0	712 148,0	746 118,0	780 055,0	815 089,0	841 361,0	790 108,0	895 078,0
Poland	78 251,2	77 542,8	81 440,1	86 171,9	88 379,9	99 594,7	109 800,1	116 978,3	116 101,5	136 777,6
Slovakia	12 062,7	13 086,6	13 986,0	15 045,4	15 267,1	16 305,4	17 279,4	18 351,1	18 073,3	20 041,5
Italy	489 458,0	486 273,0	488 622,0	494 943,0	498 507,0	505 715,0	508 066,0	520 123,0	481 704,0	531 134,0

Source: *Eurostat (online data code: GOV_10A_TAXAG__custom_4124017) (Accessed on March, 2023).*

Based on the presented data, it should be concluded that at the turn of 2019 and 2020 (i.e. during the COVID-19 pandemic) there was a significant decrease in tax revenues in nominal terms in most of the surveyed Member States. The decrease in revenues varied (from 0.75% in the case of Poland to 7.75% in the case of Austria), which indicates the combined impact of other factors affecting tax revenues. In some countries, an increase in tax revenues was recorded in the same period, e.g. Lithuania (an increase in tax revenues in 2020 by 1.91% compared to 2019).

Expanding the horizon, it should be noted that in the case under consideration, the increase was long-term, which indicates that it results from the impact of other factors, such as the distribution of income in society, the degree of internationalization of the economy, the tightness of the tax base, the level of professional activity of the population.

At the same time, it should be noted that in the case of Lithuania, the increase in tax revenues in the given period was slower than in previous years. Based on the data collected in Table 1, it can be seen that after the COVID-19 pandemic in all selected Member States there was an abrupt increase in tax revenues, which indicates the temporary nature of the intervention instruments used.

Table 2. *VAT receipts in selected Member States in 2012-2021 in million euros*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Austria	24 506,5	24 894,5	25 385,5	26 247,3	27 301,4	28 304,3	29 323,3	30 405,4	28 384,0	30 872,3
Belgia	27 420,2	27 738,1	27 804,3	27 951,5	29 179,2	30 254,7	31 545,1	32 181,3	29 761,2	34 783,3
Czechy	11 376,8	11 694,5	11 602,4	12 217,2	13 091,5	14 720,7	15 929,3	16 963,8	15 969,7	18 078,0
Litwa	2 520,8	2 611,2	2 764,4	2 889,0	3 027,6	3 310,4	3 522,2	3 850,2	3 974,8	4 701,6
Niemcy	194 034,0	197 005,0	203 081,0	211 616,0	218 779,0	226 582,0	235 130,0	244 111,0	221 562,0	259 385,0
Polska	27 783,4	27 780,1	29 317,0	30 088,9	30 854,2	36 338,7	40 423,3	42 383,4	41 855,5	49 316,6
Słowacja	4 327,7	4 696,1	5 021,1	5 422,5	5 423,6	5 918,7	6 319,3	6 830,2	6 820,2	7 494,1
Włochy	95 768,0	93 571,0	96 567,0	100 345,0	102 086,0	107 576,0	109 333,0	111 464,0	99 669,0	120 807,0

Source: *Eurostat (online data code: GOV_10A_TAXAG__custom_4124260) (Accessed on March, 2023).*

Based on the data in Table 2, it should be stated that in most of the Member States selected for the study, during the pandemic there was a significant decrease in tax revenues from tax on goods and services. The analysis of the data shows a significant diversification of decreases from 0.15% in the case of Slovakia to 10.58% in the case of Italy (Poland recorded a decrease in VAT receipts of 1.25%).

Among the selected countries, only Lithuania recorded an increase in VAT revenues in this period, which may indicate the operation of other factors influencing the level of tax revenues, eg increase in consumption, change in tax rates. At the same time, it should be noted that after the pandemic period, all the Member States covered by the study saw a sharp increase in revenues from this tax, which confirms the thesis that the introduced solutions have a temporary impact.

The increase in VAT receipts varied in the analyzed Member States and ranged from 8.77% - in the case of Austria to 21.21% - in the case of Italy (Poland recorded an increase in VAT receipts of 17.83%). Therefore, it can be concluded that the instruments of tax intervention in the field of value added tax were temporary in nature.

Table 3. *CIT receipts in selected Member States in 2012-2021 in million euros*

	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Austria	6 679,4	7 240,4	7 273,0	7 941,4	8 632,7	9 362,7	10 695,7	10 981,6	**8 380,2**	11 444,7
Belgium	11 623,9	12 192,0	12 584,7	13 643,7	14 639,6	18 097,8	19 788,4	17 729,5	**14 941,9**	19 093,5
Czech Republic	5 069,0	5 102,3	5 224,8	5 739,7	6 183,6	6 680,8	7 288,0	7 495,6	**6 687,2**	8 911,6
Lithuania	432,9	476,7	499,8	573,9	627,6	631,0	691,2	759,1	**779,7**	1 183,2
Germany	69 284,0	67 188,0	68 858,0	71 466,0	83 439,0	86 961,0	94 650,0	91 909,0	**74 993,0**	110 195,0
Poland	8 092,1	6 992,5	7 179,2	7 911,9	7 833,7	9 011,0	10 401,3	11 775,6	**11 900,1**	15 023,9
Slovakia	1 714,8	2 117,8	2 504,4	2 916,8	2 817,6	2 925,5	2 942,9	2 878,3	**2 799,7**	3 594,7
Italy	37 781,0	40 422,0	35 162,0	33 428,0	36 046,0	35 995,0	32 848,0	35 105,0	**34 093,0**	33 960,0

Source: *Eurostat (online data code: GOV_10A_TAXAG__custom_4139760) (Accessed on March, 2023)*

In almost all Member States selected for the study, there was a decrease in corporate income tax revenues in 2019-2020. The analysis of the data shows a significant diversification of the decrease in CIT receipts from 2.73% in the case of Slovakia to 23.69% in the case of Belgium. Among the selected countries, only Lithuania recorded an increase in CIT revenues in this period, which may indicate the operation of other factors influencing the level of CIT tax revenues.

Comparing the decrease in VAT and CIT tax receipts, it should be noted that in the case of CIT they were higher than in the case of VAT . The reason for the difference may be a wider range of tax solutions introduced in connection with the COVID-19 pandemic than in the case of indirect taxes, which results from the possibility of maximizing the effectiveness of tax preferences with the use of taxes from this group and the sensitivity of enterprises to economic changes - the tax base is income.

In addition, it should be noted that after the pandemic period there was an increase in tax revenues from this tax, which indicates that the instruments used were temporary in nature and thus did not affect the tax policy of selected Member States.

Table 4. *PIT revenues in selected Member States in 2012-2021 in million euros*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Austria	31 651,0	32 819,9	34 673,0	37 079,1	33 300,0	34 522,9	37 196,3	39 031,2	36 398,3	40 488,0
Belgium	48 499,5	51 103,1	52 106,7	51 864,1	51 458,1	53 271,1	54 552,1	54 303,5	54 560,0	57 162,1
Czech Republic	6 566,1	6 552,5	6 582,2	6 843,8	7 661,5	8 696,1	10 161,1	11 189,2	11 252,6	8 904,8
Lithuania	1 159,7	1 249,8	1 325,4	1 439,5	1 547,4	1 632,1	1 847,1	3 529,3	3 516,7	4 247,0
Germany	237 946,0	252 728,0	261 411,0	275 032,0	288 059,0	309 946,0	324 999,0	338 746,0	327 569,0	347 209,0
Poland	17 328,8	17 659,1	18 788,6	20 042,8	20 614,0	23 248,5	26 399,9	28 330,9	27 642,8	30 768,6
Slovakia	2 122,8	2 175,0	2 275,1	2 463,6	2 679,5	2 855,2	3 218,0	3 533,7	3 500,0	3 814,9
Italy	191 871,0	191 740,0	193 490,0	200 167,0	200 469,0	203 951,0	204 935,0	212 669,0	207 216,0	222 424,0

Source: *Eurostat (online data code: GOV_10A_TAXAG__custom_4139760) (Accessed on March, 2023)*

The analysis of the data in Table 4 shows that due to the pandemic, there was a decrease in tax revenues in nominal terms in most of the Member States covered by the study. As in the case of CIT and VAT, the amount of these decreases varied. The reason for the diversity of inheritances is the specificity of tax systems.

A comparative analysis of the introduced legislative solutions in the field of PIT and CIT in conjunction with the analysis of the decrease in tax revenues within these taxes shows that the scale of the effects of the introduced solutions was smaller in the area of PIT.

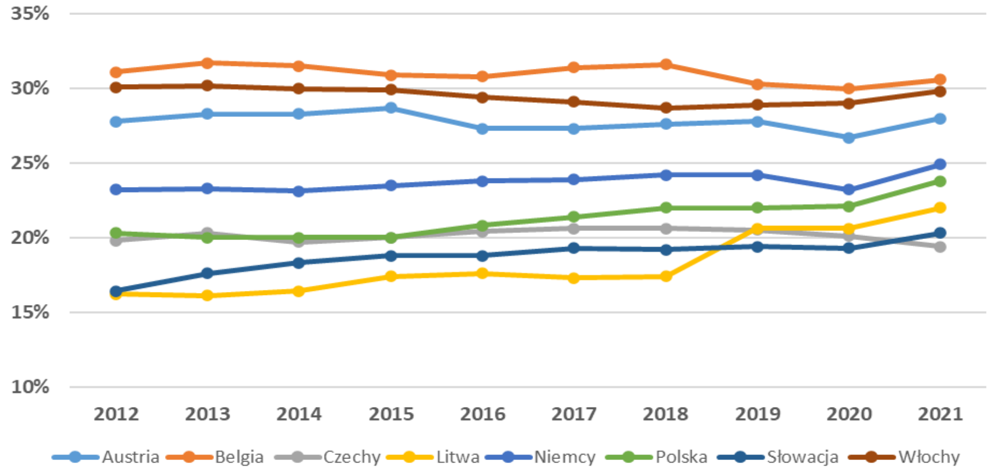
As in the case of other taxes covered by the analysis, after the pandemic period there was a sharp increase in revenues in almost all countries covered by the study. The exception in this case is the Czech Republic, which recorded a decrease in revenues from this tax in the post-pandemic period.

The data contained in the table 4 shows that the increase in PIT receipts varied in individual selected Member States and ranged from 11.31% - in the case of Poland to 4.77% - in the case of Belgium.

Taking into account the economic situation as one of the factors determining the level of tax revenues, to assess the impact of tax solutions introduced in connection with the COVID-19 pandemic, the ratio of tax revenues in total and from individual taxes to gross domestic product (GDP) was adopted as a macroeconomic size[4].

[4]*Tax receipts as % of GDP.*

Figure 1. *Tax receipts as % of GDP in selected Member States in the years 2012-2021*



Source: *European Commission, DG Taxation and Customs Union, based on Eurostat data (Accessed on March, 2023)*

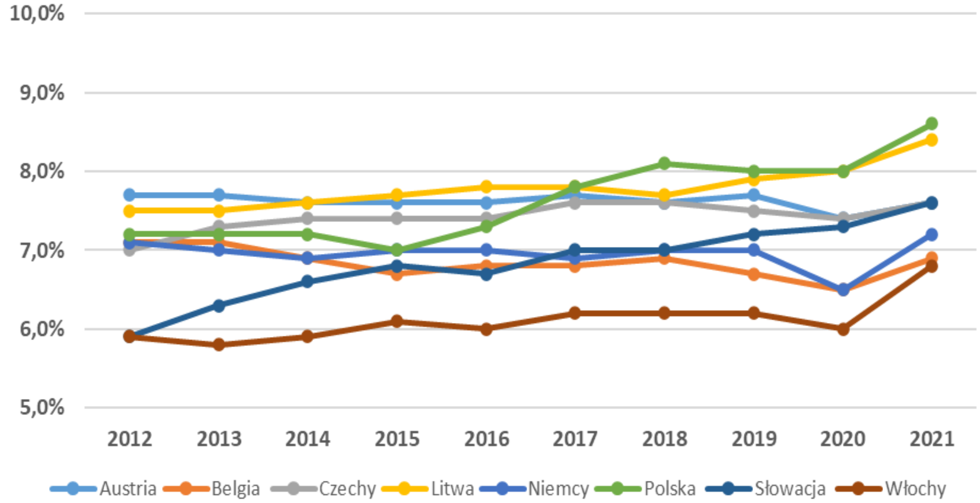
Tax revenues measured as a percentage of GDP did not change significantly as a result of the introduction of tax solutions related to the epidemiological crisis. Despite the decrease in tax revenues in nominal terms, their share in GDP did not change, which means that the decrease in GDP was followed by a proportional decrease in tax revenues.

Among the surveyed countries, only Austria and Germany recorded a decrease in the ratio of tax revenues to GDP, while in the remaining countries this ratio remained at the same level (Belgium, Italy, Poland, Lithuania, the Czech Republic, Slovakia). The pandemic did not significantly affect the fiscal policy of selected Member States, while the instruments of anti-crisis tax policy applied contributed to maintaining fiscal stability.

A supplementary measure to the above measure is the ratio of tax revenues from individual taxes to GDP. Tax solutions related to the epidemiological crisis have been introduced both in the field of value added tax and income taxes (CIT, PIT). Use of supplementary measures pozwoli określić wpływ wprowadzonych rozwiązań podatkowych w obrębie poszczególnych podatków na ich efektywność fiskalną w zależności od koniunktury.

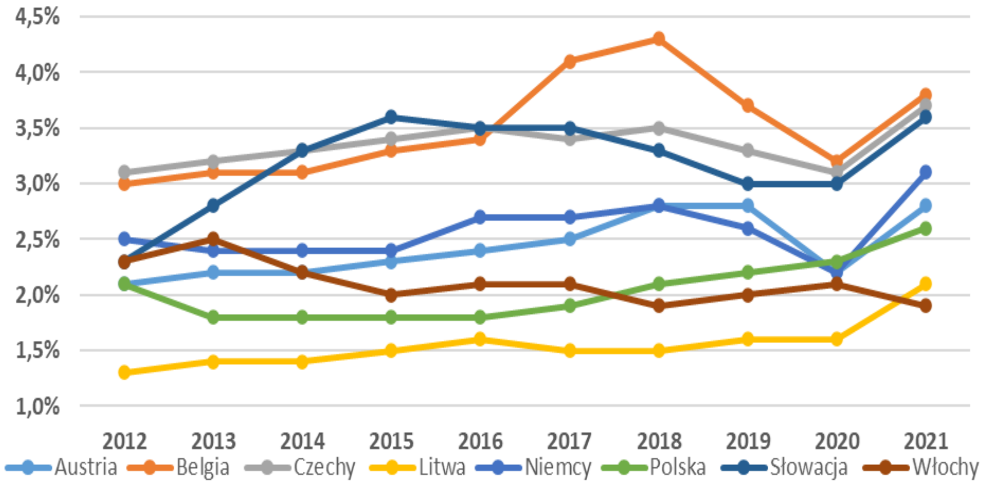
Observing the course of the relation of VAT receipts to GDP in the years 2012-2021, it can be seen that in the period 2019-2020 this relation fluctuated. This situation has been observed in almost all Member States selected for the analysis. The largest decrease was recorded in Germany, Austria and Belgium. Changes in the value of this relation result from the sensitivity of the value added tax to economic changes. This conclusion is confirmed by the dynamic growth of this indicator in the post-pandemic period, which may be the result of government intervention to minimize the economic effects of the pandemic - increasing the scope of tax preferences by lowering the tax rate or increasing the scope of the tax exemption.

Figure 2. *VAT receipts as % of GDP in selected Member States in 2012-2021*



Source: *European Commission, DG Taxation and Customs Union, based on Eurostat data (Accessed on March, 2023)*

Figure 3. *CIT receipts as % of GDP in selected Member States in the years 2012-2021*

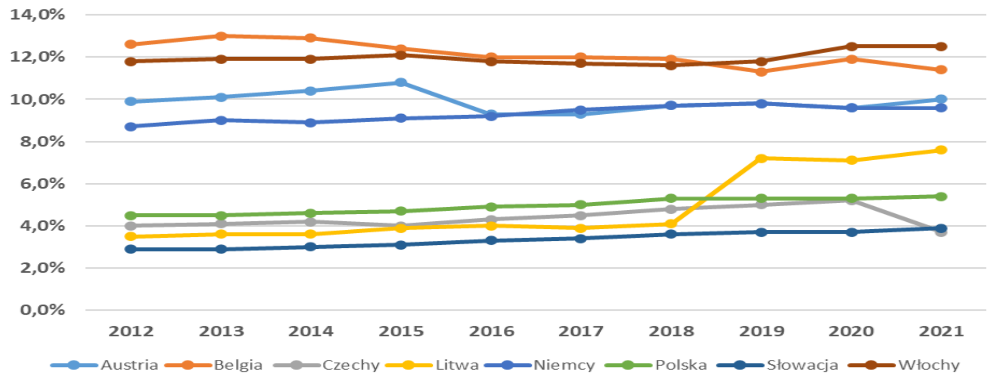


Source: *European Commission, DG Taxation and Customs Union, based on Eurostat data (Accessed on March, 2023)*

Analyzing the course of the relation of CIT receipts to GDP in the years 2012-2021, it can be seen that in the period 2019-2020 this relation fluctuated significantly. The economic downturn, interrupted supply chains, or suspension of economic activity in connection with the introduced epidemiological restrictions significantly affected the income of enterprises as the tax base. After the pandemic period, the share of CIT receipts in relation to GDP increased in all Member States covered by the study.

The increase in the value of this ratio can be explained to some extent by government interventions aimed at minimizing the economic effects of the pandemic - increasing the scope of tax preferences for economic entities in connection with the introduced epidemiological restrictions. It should therefore be pointed out that the anti-crisis fiscal policy instruments used limited the effects of the pandemic crisis.

Figure 4. *PIT receipts as % of GDP in selected Member States in 2012-2021*

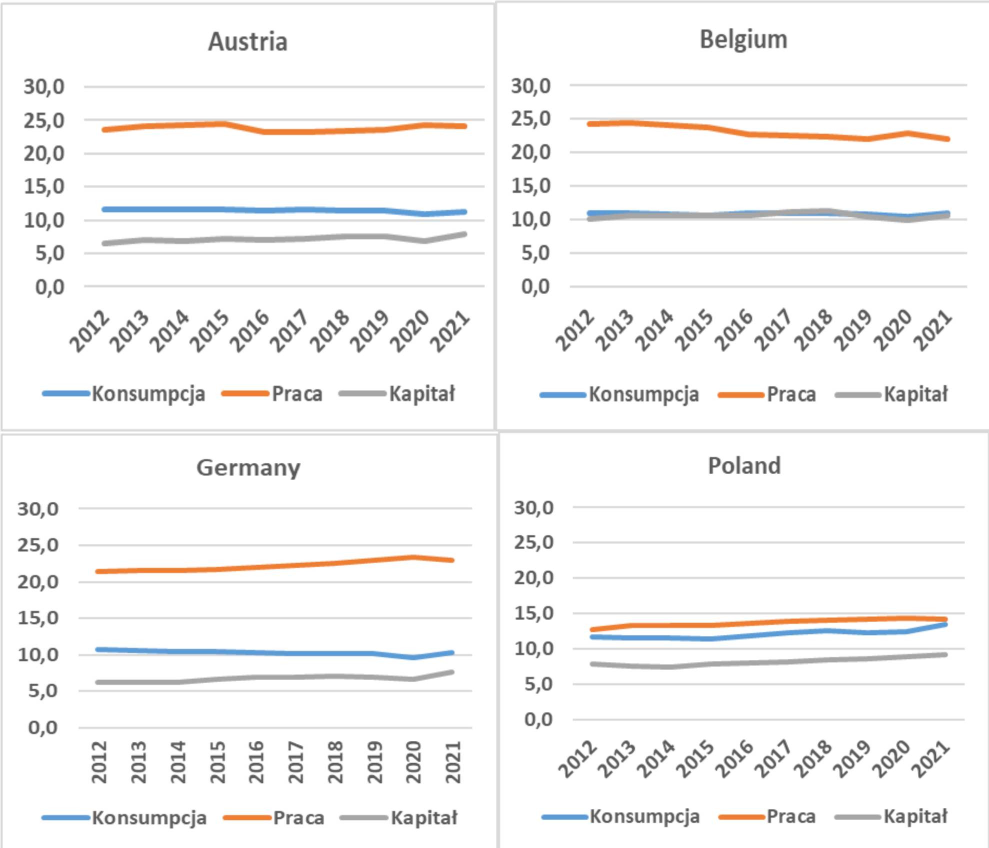


Source: *European Commission, DG Taxation and Customs Union, based on Eurostat data (Accessed on March, 2023)*

When examining the course of the relation of PIT receipts to GDP in the years 2012-2021, it can be seen that in the period 2019-2020 this relation did not fluctuate significantly. This means that the support that was provided in connection with the epidemiological crisis did not affect the current tax policy in the field of personal income tax. The permanent nature of this relationship confirms the low sensitivity of this tax to economic changes caused by crisis factors.

After the pandemic period, in most of the countries covered by the study (the Czech Republic is the exception), no significant changes in the value of this indicator were noted, a return to the pre-pandemic value is noticeable. This situation may be the result of extensive state intervention through taxes (indirect intervention) and the appropriate selection of anti-crisis fiscal policy instruments, i.e. those whose application prevents the possibility of disturbances in the economic system in the future.

Figure 5. *Economic areas of taxation as % of GDP in 2012 - 2021 in selected Member States*



Source: *European Commission, DG Taxation and Customs Union, based on Eurostat data (Accessed on March, 2023).*

Based on a narrowed sample, it was shown that the tax solutions applied during the COVID-19 pandemic did not affect the relationship between the economic areas of taxation (i.e. labour, capital, consumption) in relation to GDP. This statement proves that the introduced solutions did not affect the change in the direction of the tax policy, thus, taking into account the time horizon and the subjective scope of the introduced anti-crisis solutions, they should be indicated as irrelevant for the tax policy.

4. Summary

The comparative analysis of the introduced anti-crisis tax solutions related to the COVID-19 pandemic indicates that their main purpose was to alleviate the tax burden by deferring or temporarily reducing it (Donthu and Gustafsson, 2020) The presented tax solutions introduced as part of the anti-crisis packages in the analyzed countries ensured both the safety of employees and enterprises, as well as the stability of the public finance sector - they remained neutral for the state budget.

The confirmation of the formulated thesis is a temporary decrease in tax revenues in the surveyed Member States directly during the pandemic and their abrupt increase after this period. The temporary nature of the decline indicates the resilience of the tax policy to external factors, including crisis factors. On the basis of the presented data, it should be pointed out that the temporary instruments of tax intervention in the market economy sphere made it possible to offset the negative economic effects while minimizing the budgetary effects.

Based on the results of the proposed measures, it can be concluded that the introduced solutions did not change the fundamental direction of the tax policy of selected Member States and did not cause significant disturbances in this relationship. It should therefore be concluded that the COVID-19 pandemic and the anti-crisis regulations introduced in connection with it did not significantly affect the fiscal efficiency of the Member States' tax systems.

The scope of the anti-crisis tax policy instruments used should also be assessed positively, the application of which not only limited the current effects of the pandemic crisis, but also contributed to maintaining the financial stability of the state and reducing the likelihood of disturbances in the economic system in the future.

The effectiveness of using direct taxes as an instrument of state intervention in the material sphere of the economy was determined by such properties as direct impact on the level of net income of taxpayers and the possibility of maximizing the effectiveness of tax preferences.

The conducted research showed the resilience of Member States' tax policies to external factors. However, lessons learned from the Covid-19 pandemic and other crises can be drawn for the future of tax policy:

1) governments should introduce flexibility in their tax policies to respond quickly and effectively to crises,
2) adapt tax policy to the needs of society and the economy by reducing tax payments for sectors particularly affected by the crisis,
3) governments should cooperate at the international level to develop coordinated tax strategies, as indicated by the time consistency of the tax intervention instruments used,
4) the use of short-term tax preferences allows you to minimize the impact of intervention on the budget, while bringing economic benefits that allow you to reduce the negative effects of temporary crisis factors.These conclusions and proposals can help governments, especially Member States, to create

more resilient and effective tax policies that will contribute to reducing the pejorative effects of future crises.

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