



Paradoxes of the Anti-crisis Role of Fiscal Federalism: Analytical Review of Studies

Alena F. Kireyeva¹, Kiryl V. Rudy²

¹ Financial University under the Government of the Russian Federation, Moscow, Russian Federation

² Belarusian State Economic University, Minsk, Republic of Belarus

¹ EFKireeva@fa.ru, <https://orcid.org/0000-0003-2917-7347>

² kvrudy@bseu.by, <https://orcid.org/0000-0001-8630-2330>

Abstract

The analytical review of studies of the anti-crisis role of fiscal federalism during economic, ecological, epidemic challenges and territorial conflicts in 1950–2024 reveals four paradoxes. The first of them indicates the scientific validity of the positive anti-crisis effect of fiscal decentralization. But when crises arise in practice, decentralization turns out to be unclaimed, and preference is given to centralization. The second paradox is related to the nonlinear positive effect of fiscal decentralization on economic growth, natural resources consumption, and carbon emissions. For example, the nonlinear positive effect of decentralization is achieved when the institutional context is improved. The third paradox is the relatively weak methodological elaboration of fiscal federalism during pandemic challenges, although it had the greatest practical relevance compared to more in-depth econometric studies of economic and environmental challenges. The fourth paradox is that fiscal federalism can both resolve the territorial conflict and create the preconditions for its resumption in the future. The peacemaking conditions of fiscal federalism are transparency and stability of inter-budget transfers, as well as insured access of the conflict region to its natural resources.

Keywords: fiscal federalism, public finance, economic crises, sustainable development, pandemic, conflicts

JEL: H12, H71, H77, R11, R58

Funding: The article was prepared as the result of the research financed by budgetary funds upon the state request from Financial University.

For citation: Kireyeva A.F., Rudy K.V. (2024). Paradoxes of the Anti-crisis Role of Fiscal Federalism: Analytical Review of Studies. *Financial Journal*, 16 (3), 86–97. <https://doi.org/10.31107/2075-1990-2024-3-86-97>.

© Kireyeva A.F., Rudy K.V., 2024

INTRODUCTION

Each new crisis increases interest in fiscal federalism as an anti-crisis mechanism. Wars, recessions, inequality, poverty, environmental and epidemiological challenges and territorial conflicts have triggered waves of research on fiscal federalism. To date, a sufficient body of work has been accumulated to allow a review of studies on the anti-crisis role of fiscal federalism. On the one hand, it provides an insight into the scientific thought and arsenal of research methods in this area. On the other hand, it allows us to search for answers to practical questions which today are becoming more and more relevant.

The analytical review of the studies of fiscal federalism and its anti-crisis role between 1950 and 2024 reveals a number of paradoxical observations that provide both motivation and purpose for this article.

First, considering the anti-crisis role of fiscal federalism solely from the perspective of public finance not only narrows but also distorts the vision of the problems. An interdisciplinary approach becomes essential with the inclusion in the review of frontier scientific papers related to crisis management (Haas et al., 2021), natural resource management (Cao et al., 2021), epidemiology (López-Santana, Rocco, 2021) and conflict studies (Bakke, Wibbels, 2006).

Second, for a long time, popular econometric methods of research on the anti-crisis role of fiscal federalism in crisis periods suddenly began to lose their popularity and practically disappeared from the most cited publications. They give way to methods of comparative and descriptive nature, more understandable to the general public, which both increases the accessibility of scientific recommendations and gives them declarative and insufficient validity in an acute crisis moment (Carroll et al., 2023).

Third, the analysis of the anti-crisis role of fiscal federalism on the example of large groups of countries over a long time series usually provides a number of general recommendations that do not always take into account social and cultural differences, country specifics and the moment of crisis. Therefore, the review is complemented by the increasingly popular case studies short-term country-specific case studies. In turn, this research approach suffers from a lack of ability to identify trends common to several countries during crises and universal recommendations for stabilization measures.

Fourth, theoretical reflections and calculated results of studies of anti-crisis effects of fiscal federalism often provide a number of specific and unambiguous practical recommendations. But when there is a need for fiscal federalism to respond to different challenges, in practice, decisions directly opposite to the recommended ones are more often taken.

The article consists of an introduction, four parts devoted to the effects of fiscal federalism in the context of economic, environmental, epidemiological challenges and territorial conflicts, as well as conclusions on the observed paradoxes.

ECONOMIC CHALLENGES

There is a relative consensus in the scientific community that fiscal federalism is aimed at social rather than economic problems and has been successful in solving them. For example, the analysis of 1,300 annual EU recommendations on regional economic policy for member states confirmed the priority of social expenditures at the regional level over economic expenditures (Haas et al., 2021). In addition, regional social expenditures are less elastic to regional income compared to economic expenditures, i.e. social expenditures are more resistant to economic crises. This is proved by the example of the Russian regions for 2011–2019 (Gurvich, Krasnopeeveva, 2024). Calculations for 50 countries from 1990 to 2020 show that with increasing fiscal decentralization, the human development index, which includes an assessment of the social sphere such as health and education, also increases

(Jin, Jakovljevic, 2023). And although the social effects of fiscal federalism are higher than the economic ones, the latter still exist.

The key mechanism of the anti-crisis role of fiscal federalism is fiscal decentralization. It demonstrates its effects in solving various economic challenges. There are studies on how fiscal decentralization reduces budget deficits and inflation, increases investment in infrastructure, promotes the development of the manufacturing industry and leads to interregional alignment. The main thing that many studies have in common is that fiscal decentralization accelerates economic growth, mostly in the short term (Jin, Rider, 2022). At the same time, a number of works note that a positive economic effect is achieved if, simultaneously with decentralization, administrative reform is carried out to improve the quality of public administration and fight corruption. This condition was identified by different methods in different countries and in different periods of time. For example, using the generalized method of moments in 15 developing federal countries in 2000–2015 (Hanif et al., 2020), regression of panel data in 62 regions of Vietnam in 2006–2015 (Thanh, Canh, 2020), the PCSE standard error method in 63 Vietnamese regions in 2011–2019 (Bui et al., 2023).

Fiscal decentralization also has positive microeconomic effects, but again only in combination with administrative reform. For instance, enterprises reduce costs and increase profits. An analysis of Chinese companies of various forms of ownership in 2003–2013 showed that the increased level of fiscal decentralization in inter-budget relations led to an increase in enterprise debts, with state-owned companies having higher debts than private ones (Jin, 2023). This can be explained by the reduction of direct budget subsidies from the central government, which began to be replaced by loans from enterprises rather than subsidies from the regions. In turn, only the administrative reform had a positive impact on private companies more than on foreign ones, and a negative impact on state-owned enterprises. This finding can be explained by the fact that the improvement of local government quality in China is aimed at supporting more efficient private enterprises, but their own rather than foreign ones.

The positive effect of fiscal decentralization on economic growth is best observed in regions with a number of characteristics. For example, in regions with lower levels of social infrastructure and human development per capita, as shown by regressing panel data Spanish regions in 1986–2010 (Aray, Pedauga, 2024). We can explain this by the impact of the low base and the acceleration of economic growth through additional financing of productive social expenditures, e.g. by promoting education and using innovative methods to increase the financial independence of regions (Pinskaya, 2013). The economic effect of fiscal decentralization can also be observed in regions with low factor productivity. Strengthening the regions' authority to spend budget funds stimulated economic growth there, and restrained tax collection (Aray, Pedauga, 2024). The latter is sometimes associated with the chaotic introduction of additional taxes by the regions and ineffective tax incentives. In turn, budgetary stimulation of regional economic growth can be explained by the presence of development institutions in the regions (Tatarkin, Kotlyarova, 2013), as well as by the cluster type organization of production (Buyanova, Dmitrieva, 2012).

Therefore, fiscal decentralization often has a positive impact on economic growth, provided that the quality of public administration is improved. The paradox is that despite the supposed positive economic effect of fiscal decentralization, when an economic crisis occurs, the authorities hardly use it as an anti-crisis mechanism. Panel data analysis of groups of 91 developed and developing countries in 1960–2018 and OECD countries in 1995–2018 showed that the level of fiscal decentralization did not change during economic recessions (Sampedro et al., 2023). The only exception is the growth of decentralization of budget spending during economic crises in OECD countries. We explain this exception by the fact that

developed countries can probably afford fiscal decentralization without compromising their budget deficits. Their use of budgetary rather than tax decentralization during the economic crisis confirms its greater short-term effect on economic growth. Overall, it can be concluded that fiscal federalism through decentralization has diverse positive short-term economic effects in calm periods, but tends to fail to respond to economic challenges during crises.

ENVIRONMENTAL CHALLENGES

Research shows that, as in the previous case, fiscal decentralization is expected to have a generally positive effect on environmental problems. However, it is achieved under certain conditions, and this effect is more layered and complex in terms of timing and instruments. Environmental challenges within the sustainable development agenda include mainly greenhouse gas emissions and natural resource depletion. Attempts to influence them can be made both linearly and non-linearly – through the development of energy-saving, environmental technologies, use of renewable energy sources, etc. Fiscal centralization in this case, as a rule, is recognized as ineffective. An example is the distribution of environmental transfers by the Ministry of Finance of the People's Republic of China among Chinese regions, which, unless if they do not play their role, rather compensate for environmental damage than prevent it and stimulate environmental protection measures (Cao et al., 2021).

Among the conditions under which fiscal decentralization has positive effects on environmental challenges, the following can be distinguished.

First, *improving the quality of regional institutions and the level of human capital development*. As in the case of economic challenges, combined with fiscal decentralization, this has a positive effect, e.g. on reducing the consumption of natural resources. If these conditions are not met, fiscal decentralization may even lead to an increase in resource consumption per capita. Local authorities, having received fiscal powers, start to develop transport and energy infrastructure and thus increase the demand for relevant natural resources. Therefore, it is important to improve the quality of public administration and human potential. These results are obtained by the method of autoregression and distributed lag on the example of OECD countries in 1996–2017 (Shao, Razzaq, 2022). Another study also confirms the nonlinear positive impact of fiscal decentralization on environmental issues, such as reducing greenhouse gas emissions by improving the institutional environment (Shan et al., 2021).

Second, *the baseline level of environmental and conservation technology development in regions*, which is a prerequisite for the positive impact of fiscal decentralization on greenhouse gas emissions. A PSTR panel regression analysis of 285 Chinese cities in 2003–2018 showed that the predominant development of environmental technologies is already sufficient for fiscal decentralization to reduce regional greenhouse gas emissions (Du, Sun, 2021). If energy-saving technologies are primarily developed, or the level of environmental protection and energy-saving technologies is initially low compared to other regions, greenhouse gas emissions increase in the case of fiscal decentralization.

Third, *the development of energy-saving technologies* due to fiscal decentralization, which ultimately leads to a reduction in greenhouse gas emissions. At the same time, decentralization of budgetary powers immediately stimulates the development of energy-saving technologies, and in the long term starts to restrain it when local authorities change their budget priorities. As for tax decentralization, it promotes energy-saving technologies only in countries with the highest tax decentralization. These conclusions are based on regression analysis of 16 developed countries from 2000 to 2018 (Kassouri, 2022). Fiscal decentralization can also stimulate the development of energy-saving technologies through price regulation and market shifting.

Fourth, *increasing renewable energy consumption* is an intermediate tool through which fiscal decentralization contributes to the reduction of greenhouse gas emissions in the regions. Moreover, this effect is stronger in the long run than in the short run, as shown by the CS-ARDL model on cross-country data (Sun et al., 2023). Regression analysis of panel data from 31 Chinese provinces in 2006–2015 showed that fiscal decentralization contributes to the growth of renewable energy consumption in a nonlinear manner, e.g. by increasing urbanization (Elheddad et al., 2020). Another case study of seven fiscally decentralized OECD countries in 1990–2018 confirmed that fiscal decentralization increases renewable energy consumption by developing environmental technologies and accelerating economic growth (Safi et al., 2022). Also in the literature there are calculations of the impact of fiscal decentralization on renewable energy consumption by increasing the price of resources obtained from non-renewable sources.

The review of research on the anti-crisis role of fiscal federalism in solving environmental problems showed a deep elaboration of the topic in the scientific community. Various methods of empirical analysis are widely used, including quantile regression, panel data, autoregression and distributed lag. Data over large periods are analyzed for different groups of countries and a large number of regions of individual countries. As a result, it is possible to identify complex, linear and nonlinear, heterogeneous, short- and long-term effects of fiscal decentralization. This significantly distinguishes and makes innovative the level of scientific study of the environmental side of the anti-crisis role of fiscal federalism.

When comparing the anti-crisis role of fiscal federalism during economic and environmental challenges, some conditions that seemed episodic in the first case are confirmed in the second. For example, the condition of improving the quality of public administration turned out to be a full-fledged characteristic of the anti-crisis role of fiscal decentralization during various challenges. As for the paradox of fiscal federalism in the context of environmental challenges, according to the results of the review, it can be formulated as follows: fiscal centralization in the environmental agenda is recognized as ineffective, but decentralization does not give an unambiguous linear effect, and its nonlinear effects are most clearly manifested through different instruments and conditions of different orders.

EPIDEMIOLOGICAL CHALLENGES

The COVID-19 pandemic posed a serious challenge to fiscal federalism and interbudget relations in general. Although China, the first country to face the pandemic, increased decentralization in response, other countries reacted differently. Despite the extensive coverage of countries affected by the pandemic, there have been few studies of fiscal federalism on large samples so far. For example, a rare analysis of 150 countries showed that unitary states responded more strongly to the pandemic than federal states, including lifting restrictions more quickly (Nelson, 2021). A regression analysis of 31 European countries showed that countries with greater centralization, lower levels of government efficiency and public trust in the authorities, but with a separate Ministry of Health in the structure of government bodies, responded more quickly than others: schools were closed and quarantines were imposed (Toshkov et al., 2022).

Most studies of fiscal federalism's crisis response to the pandemic have focused on individual countries rather than groups.

USA. A comparative analysis of the U.S. President B. Obama Administration's response to the 2008 economic recession and the D. Trump Administration's response to the 2020 pandemic showed that the speed of response in the second case was faster. At the same time, political and institutional procedures did not change, fiscal federalism did not adapt, neither centralized nor decentralized, and regions had to rely only on themselves (López-Santana, Rocco, 2021). The U.S. experience during the pandemic is usually criticized in the literature

for insufficient fiscal centralization, the federal government failed to properly conduct vertical synergies among the various federal levels and horizontal synergies among physicians, scientists, financiers and state officials.

EU. The experience of individual EU countries also showed a trend towards fiscal centralization. An analysis of documents and official decisions during the first wave of the pandemic in early 2020 revealed that, e.g., federal countries such as Austria and Switzerland increased fiscal centralization. In turn, Germany at first followed the path of fiscal decentralization, and local authorities managed to provide public services, such as health care, quite successfully. But in April 2020 Germany changed its anti-crisis policy and increased fiscal centralization, which reduced public support: opinion polls showed a drop in support for the authorities' anti-crisis actions from 80% in March to 40% in April 2020 (Kuhlmann, Franzke, 2022). The mechanism of fiscal centralization in response to the pandemic varied across European countries. For example, Switzerland took almost all anti-crisis decisions centrally, while Austria and Germany retained coordination of decisions with the subjects of the federation (Hegele, Schnabel, 2021).

India. This is another example of increased fiscal centralization in response to the COVID-19 pandemic, but with minimal regional specificity under the "one size fits all" approach. Despite the fact that India's regions have different needs and capacities, initially the policy of overall increased fiscal centralization was quite successful. But then the economic, transactional and other costs of centralization increased even in those regions that were less affected by the pandemic. For example, centralized strict quarantine measures proved ineffective in wide-scale disruptions, as shown by cell phone data on population movements across regions (Choutagunta et al., 2021). In addition, under conditions of fiscal centralization, Indian regions, dependent mainly on indirect consumption taxes, which declined during the pandemic, were forced to build up regional debt.

Russia. This example also illustrates the centralized response of fiscal federalism to the pandemic. A descriptive analysis of monthly and quarterly data showed that the quarantine imposed during the pandemic led to a decrease in income tax revenues and income receipts in Russia's large cities in general. In addition, tax revenues decreased in oil and gas producing regions due to the fall in global oil prices during that period. The financial package of assistance to the regions adopted by the federal authorities in the amount of 3.5% of GDP in 2020 proved to be effective and compensated for the lost regional revenues (Zubarevich, 2021).

The obvious conclusion from the country-by-country review of the response of fiscal federalism to epidemiological challenges is that fiscal centralization has become the only solution in practice. As can be seen, this contradicts the results of the review of economic and environmental impact studies. In the previous two cases, the practical recommendation is fiscal decentralization while improving the quality of public administration, and in the third case, centralization.

But the paradox is that despite the critical challenge of the pandemic and unambiguous fiscal centralization, the review of scientific research showed a weak methodological level of studying the response of fiscal federalism to epidemiological challenges. Therefore, it is impossible to draw an unambiguous conclusion that the fiscal centralization applied in the pandemic was indeed scientifically sound and the only correct solution.

Probably, fiscal centralization as a response to epidemiological challenges has confirmed the first paradox described in this article: despite calculations regarding the effectiveness and preferability of decentralization, centralization is used in practice. And in the case of epidemiological challenges, studies of fiscal federalism have indeed proved to be methodologically unconvincing. If we compare the anti-crisis role of fiscal federalism in the context of economic, environmental and epidemiological challenges, the latter have been studied

mainly by descriptive and comparative methods on the example of individual countries over a short period of time. For example, a review of 114 studies on state response to the pandemic showed that in 81% of cases the analysis was descriptive, and when empirical methods were used, they were very simple for historical, international and intersectoral comparisons (Carroll et al., 2023). The pandemic studies have examined the social and economic effects of usually only one crisis management tool of fiscal federalism, most often inter-budget transfers. At the same time, the issues of public reaction to the measures applied by the authorities were primarily studied and the level of public confidence in the authorities was assessed, as well as the economic consequences of the used instruments.

TERRITORIAL CONFLICTS

The “ancestral curse” of federalism, which has united many nations since the 17th century to overcome political and socio-cultural differences, is territorial conflicts. Their traditional causes are ethnic, religious, political and other contradictions. In practice, anti-conflict methods include, in particular, forced resettlement, reservation, consociationalism, etc. Federalism, with its fiscal instruments, is by no means the most popular and often used among them.

As in the case of epidemiological challenges, studies of the role of fiscal federalism in resolving territorial conflicts on the example of groups of countries are quite rare. Such works include an analysis of 22 federal states between 1978 and 2000, which showed that the success of using fiscal decentralization, inter-budget transfers and political autonomy in resolving territorial conflicts depends on income level in the region and its ethnic structure. Poorer and ethnically less diversified regions were more likely to resolve territorial disputes through fiscal decentralization (Bakke, Wibbels, 2006). Another work using a sample of 91 countries between 1960 and 2018 showed that the peacemaking response of fiscal federalism to military conflicts, in both developed OECD and developing countries, was fiscal decentralization (Sampedro et al., 2023).

The results obtained in groups of countries regarding preference for fiscal decentralization are not always confirmed in the country case studies. Moreover, fiscal centralization was most often used during territorial conflicts in specific cases considered in detail. The countries studied separately in this review can be combined into two groups. In the first, fiscal federalism successfully resolved conflicts, while in the second, conflict recurred.

The group of success stories includes Bosnia and Herzegovina, Indonesia, Nepal, Nigeria, Somalia and China. A small number of countries have used fiscal decentralization to successfully resolve territorial disputes, while most have used centralization.

The examples of Indonesia in 2003 and the Banaadir state in Somalia in 2011 show the possibility of fiscal decentralization to resolve territorial disputes. For instance, Indonesia's 2003 experience demonstrates that territorial conflicts caused by ethnic and political diversification were resolved through federal decentralization, when the number of regions in the country increased from 292 to 434. At the same time, the study notes not only political and ethnic but also financial and economic reasons for decentralization. For example, the principle of natural resource distribution among regions, and thus the related ability of regional authorities to obtain rents, played a peacemaking role in the case of Indonesia's decentralization (Fitriani et al., 2005).

The examples of Nigeria in the 1970s, Bosnia and Herzegovina in 1995, and Nepal in 2015 show that federalism has resolved territorial conflicts through centralization in order to limit the power of particular ethnic groups. For example, in Nigeria in the 1970s, ethnic domination of central power was a prerequisite for fiscal centralization and the establishment of a formula for tax distribution between the center and the regions in favor of the center. The territorial conflict in Nigeria in 1997 was resolved under fiscal centralization, but in the long

term it slowed down the economic development of the country, which led to criticism from proponents of fiscal decentralization (Adoyi, Ogbale, 2021).

China and Tibet represent a separate successful example of territorial conflict resolution through fiscal centralization since 1951. Research shows that due to the special status granted to Tibet and significant budget subsidies, China's central government has eliminated the conflict agenda. At the same time, the resolution of the territorial dispute has become important and fundamental to China. Even the regular change of leadership in China over the past 70 years has not affected the special treatment of Tibet. Moreover, if we compare Tibet with other relatively poor Chinese regions such as Gansu, Yunnan or Qinghai, the gap in central government subsidies in favor of Tibet has only widened between 2010 and 2019 (Tochkov, 2023). Modeling using autoregression and a distributed lag of annual data for Tibet in 1985–2021 for three independent variables (China's GDP, fiscal transfers and fixed investments) and Tibet's dependent GDP allowed to draw a number of conclusions (Tochkov, 2023):

- China's fiscal federalism in relation to Tibet is focused on centralization, when tax revenues go to the center and the power to distribute the resources received from the center is given to local authorities;

- the economic effect of central subsidies is positive: an increase in fiscal transfers by 1% increases Tibet's GDP by 0.35%;

- economic growth in Tibet has a positive correlation with China's economic growth only in the short term, and in the long term the growth of the region's economy is not related to the dynamics of the Chinese economy.

The group of less successful cases of using fiscal federalism to resolve territorial conflicts includes Iraq, Sudan and Ethiopia. For example, the ethno-religious conflict in Ethiopia in 1995 and Iraq in 2005 could not be institutionally resolved using the federal structure and fiscal instruments. These cases are sporadically described in the literature. The failure of territorial conflict resolution through fiscal federalism has been most thoroughly studied on the example of Sudan (Logan et al., 2021).

In 2005, following the signing of the peace agreement with South Sudan, the central government used fiscal centralization, both budgetary and tax. Transfers to the region were increased, largely due to the country's rising oil revenues (Logan et al., 2021). As a result, the share of inter-budget transfers in federal budget expenditures increased from 3% in the 1990s to 45% in 2005. In order to justify and distribute budget subsidies among the regions, the National Income Fund was established. As part of tax centralization, the federal government collected major taxes such as customs duties, income tax, profits tax, VAT, as well as payments related to oil production. The rest of the taxes: real estate tax, sales tax, agricultural tax, natural tax – were collected by regional authorities. However, this model of fiscal federalism did not resolve the conflict. Disputes arose over the transparency of the National Income Fund and the dependence of inter-budget transfers on oil exports. Due to the economic environment of world oil prices, tax revenues to GDP peaked at 18% in 2008 and fell to 6% by 2020. A new wave of conflict in Sudan ended in 2020 with the signing of another peace agreement. A National Incomes Commission was established to develop clear criteria for inter-budget transfers and to oversee the work of the National Income Fund. It was also agreed that Sudan's southern region, Darfur, would receive \$750 million annually from the central government, while other eastern regions affected by the conflict would receive \$348 million. These amounts have already become regular, regardless of market conditions.

So, the review of studies has shown that the successful anti-crisis role of fiscal federalism in resolving territorial conflicts is usually associated with centralization. There are three conditions for the peacemaking role of fiscal federalism. The first is long-term stability of inter-

budget transfers, regardless of the dynamics of the country's economic growth, budgetary capacity and export price environment. The second is transparency and fairness of decision-making on inter-budget transfers. The third is provision of fiscal opportunities for conflict regions to obtain rent from the natural resources available on their territory. The paradox of the anti-crisis role of fiscal federalism in overcoming territorial conflicts is that, on the one hand, it can resolve the conflict both through centralization and decentralization, on the other hand, it can "freeze", nurture and postpone it to the future. There are both contemporary and historical examples that support each side. Thus, on the one hand, there are a number of successful historical examples when federalism emerged as a means against conflict or civil war, e.g. in Belgium, Canada, USA or Switzerland, and fiscal decentralization served to ensure it. On the other hand, ethnic diversification of regions and relative fiscal decentralization have also been prerequisites for territorial separatism, with the USSR, Czechoslovakia and Yugoslavia as relevant examples.

CONCLUSIONS

The analytical review of studies on fiscal federalism and its anti-crisis role in times of economic, environmental, epidemiological challenges and territorial conflicts between 1950 and 2024 reveals several paradoxes.

The first and main paradox of the anti-crisis role of fiscal federalism is that theoretical reasoning and empirical calculations recommend fiscal decentralization to overcome various challenges and conflicts. But when crises arise in practice, as exemplified by the economic downturns, pandemics and territorial conflicts discussed here, there is little or no demand for decentralization. Moreover, centralization is most often preferred. And the more acute the crisis in terms of outreach, risks, and victims, the more often fiscal centralization is observed as an anti-crisis mechanism. This paradox can only be explained intuitively: by psychological factors of management during a crisis, e.g. a sense of responsibility or a sense of control. There are no special studies of this paradox, or they can be attributed to recommendations.

The second paradox of the anti-crisis role of fiscal federalism is that, despite the direct scientific preferences of fiscal decentralization, its effects are nonlinear. For example, fiscal decentralization as an anti-crisis mechanism has positive effects on economic growth, natural resources consumption and greenhouse gas emissions, while improving the quality of public administration. In addition, a number of nonlinear effects of fiscal decentralization have been identified separately for economic and environmental challenges. The study of the found and the search for new nonlinear effects of fiscal decentralization continues. Scientists use in this process a complex mathematical apparatus, which, based on the sampling of a large number of countries and regions over long time series, expands scientific knowledge about this paradox.

The third paradox of the anti-crisis role of fiscal federalism is the sharp decline in methodological understanding of epidemiological challenges. In-depth econometric studies of fiscal federalism in the context of economic and environmental challenges have gained a high scientific reputation. But when the COVID-19 pandemic emerged, fiscal federalism was critically questioned and there was an urgent practical need for scientific advice, the research suddenly took on a publicistic character, widely understood but insufficiently substantiated. Mathematical apparatus was rarely used in the works, and preference was given to the cases of individual countries. This paradox may encourage further research on the epidemiological effects of fiscal federalism in order to overcome these shortcomings.

The fourth paradox of the anti-crisis role of fiscal federalism is that it can both overcome the territorial conflict and create preconditions for its resumption in the future. "Freezing" of the territorial conflict is achieved through the transparency and stability of inter-budget

transfers, their independence from the economic capabilities of the center, as well as fairness of regions' access to their natural resources. The relevance of further research on the peacemaking role of fiscal federalism remains, and works on the example of groups of countries to identify common rules and patterns are becoming in demand.

References

1. Adoyi W.E., Ogbole F.E. (2021). Fiscal Federalism in Nigeria: An Analysis of Issues and Challenges. *International Journal of Peace and Conflict Studies*, 2 (1). 37–45.
2. Aray H., Pedauga L. (2024). The Relationship between Decentralization and Economic Growth across Regimes. *The Annals of Regional Science*, 72. 1–25. <https://doi.org/10.1007/s00168-022-01187-x>.
3. Bakke K., Wibbels E. (2006). Diversity, Disparity, and Civil Conflict in Federal States. *World Politics*, 59 (1). 1–50.
4. Bui M., Le T. et al. (2023). Impacts of Fiscal Decentralization on Local Development in Vietnam: A Disaggregated Analysis. *Economics of Transition and Institutional Change*, 31 (1), 3–31. <https://doi.org/10.1111/ecot.12323>.
5. Bujanova M.Je., Dmitrieva L.V. (2012). The Evaluation of the Efficiency to Create Regional Innovation Cluster. *Vestnik Volgogradskogo gosudarstvennogo universiteta – Bulletin of Volgograd State University*, 3 (2), 54–62 (In Russ.).
6. Cao H., Qi Y. et al. (2021). Incentive and Coordination: Ecological Fiscal Transfers' Effects on Eco-environmental Quality. *Environmental Impact Assessment Review*, 87. 106518. <https://doi.org/10.1016/j.eiar.2020.106518>.
7. Carroll B., Brummel L. et al. (2023). Multilevel Governance and Responses to the COVID-19 Pandemic: A Systematic Literature Review. *Regional & Federal Studies*, 12. 1–22. <https://doi.org/10.1080/13597566.2023.2292997>.
8. Choutagunta A., Manish G. et al. (2021). Battling COVID-19 with Dysfunctional Federalism: Lessons from India. *Southern Economic Journal*, 87 (4). 1267–1299. <https://doi.org/10.1002/soej.12501>.
9. Du J., Sun Y. (2021). The Nonlinear Impact of Fiscal Decentralization on Carbon Emissions: from the Perspective of Biased Technological Progress. *Environmental Science and Pollution Research Res*, 28. 29890–29899. <https://doi.org/10.1007/s11356-021-12833>.
10. Elheddad M., Djellouli N. et al. (2020). The Relationship between Energy Consumption and Fiscal Decentralization and the Importance of Urbanization: Evidence from Chinese Provinces. *Journal of Environmental Management*, 264, 110474. <https://doi.org/10.1016/j.jenvman.2020.110474>.
11. Fitriani F., Hofman B. et al. (2005). Unity in diversity? The Creation of New Local Governments in a Decentralizing Indonesia. *Bulletin of Indonesian Economic Studies*, 41 (1). 57–79. <https://doi.org/10.1080/00074910500072690>.
12. Gurvich E.T., Krasnoopeeva N.A. (2024). The Formation of Regional Budget's Expenditures Structure. *Voprosy Ekonomiki*, 1. 5–32 (In Russ.). <https://doi.org/10.32609/0042-8736-2024-1-5-32>.
13. Haas J., D'Erman V. et al. (2021). Economic and Fiscal Policy Coordination after the Crisis: Is the European Semester Promoting More or Less State Intervention? In *Economic and Monetary Union at Twenty*. Routledge. 40–57.
14. Hanif I., Wallace S. et al. (2020). Economic Growth by Means of Fiscal Decentralization: An Empirical Study for Federal Developing Countries. *SAGE Open*, 10 (4). <https://doi.org/10.1177/2158244020968088>.
15. Hegele Y, Schnabel J. (2021). Federalism and the Management of the COVID-19 Crisis: Centralization, Decentralization and (Non-)coordination, *West European Politics*, 44 (5–6). 1052–1076, <https://doi.org/10.1080/01402382.2021.1873529>.
16. Jin H. (2023). Effects of Decentralization on Firm Performance: Evidence from Chinese County-level Quasi-experiments. *Economic Modelling*, 119. 106116. <https://doi.org/10.1016/j.econmod.2022.106116>.
17. Jin H., Jakovljevic M. (2023). Fiscal Decentralization and the Human Development Index: A Cross-Border Empirical Study. *Sustainability*, 15 (11). 8784. <https://doi.org/10.3390/su15118784>.
18. Jin Y., Rider M. (2022). Does Fiscal Decentralization Promote Economic Growth? An Empirical Approach to the Study of China and India. *Journal of Public Budgeting, Accounting & Financial Management*, 34 (6). 146–167.
19. Kassouri Y. (2022). Fiscal Decentralization and Public Budgets for Energy RD&D: A Race to the Bottom? *Energy Policy*, 161. 112761. <https://doi.org/10.1016/j.enpol.2021.112761>.
20. Kuhlmann S., Franzke J. (2022). Multi-level responses to COVID-19: Crisis Coordination in Germany from an Intergovernmental Perspective. *Local Government Studies*, 48 (2). 312–334. <https://doi.org/10.1080/03003930.2021.1904398>.
21. Logan S., Nyembo A. et al. (2021). Fiscal Federalism in Sudan. State Fragility Initiative. International Growth Center. Working paper.
22. López-Santana M., Rocco P. (2021). Fiscal Federalism and Economic Crises in the United States: Lessons from the COVID-19 Pandemic and Great Recession. *Publius: The Journal of Federalism*, 51 (3). 365–395, <https://doi.org/10.1093/publius/pjab015>.

23. Nelson M. (2021). The Timing and Aggressiveness of Early Government Response to COVID-19: Political Systems, Societal Culture, and More. *World Development*, 146. <https://doi.org/10.1016/j.worlddev.2021.105550>.
24. Pinskaja M.R. (2013). Innovative Methods to Raise Financial Independence of the Territories. *Finansy i kredit – Finance and Credit*, 34 (562). 26–32 (In Russ.).
25. Safi A., Wang Q. et al. (2022). Revisiting the Nexus between Fiscal Decentralization and Environment: Evidence from Fiscally Decentralized Economies. *Environmental Science and Pollution Research*, 29 (38). 58053–58064. <https://doi.org/10.1007/s11356-022-19860-1>.
26. Sampedro M., Alcalde A. et al. (2023). Extreme Events and the Resilience of Decentralized Governance. International Center for Public Policy. Andrew Young School of Policy Studies. Atlanta: Georgia State University.
27. Shan S., Ahmad M. et al. (2021). The Role of Energy Prices and Non-linear Fiscal Decentralization in Limiting Carbon Emissions: Tracking Environmental Sustainability. *Energy*, 234. 121243. <https://doi.org/10.1016/j.energy.2021.121243>.
28. Shao S., Razzaq A. (2022). Does Composite Fiscal Decentralization Reduce Trade-adjusted Resource Consumption through Institutional Governance, Human Capital, and Infrastructure Development? *Resources Policy*, 79. 103034. <https://doi.org/10.1016/j.resourpol.2022.103034>.
29. Sun Y., Gao P. et al. (2023). How Does Fiscal Decentralization Lead to Renewable Energy Transition and a Sustainable Environment? Evidence from Highly Decentralized Economies. *Renewable Energy*, 206. 1064–1074. <https://doi.org/10.1016/j.renene.2023.02.069>.
30. Tatarkin A.I., Kotljarova S.N. (2013). Regional Development Institutes as the Factors of Economic Growth. *Ekonomika regiona – Economy of Region*, 3 (35). 9–18 (In Russ.).
31. Thanh S.D., Canh N.P. (2020). Fiscal Decentralization and Economic Growth of Vietnamese Provinces: The Role of Local Public Governance. *Annals of Public and Cooperative Economics*, 91 (1), 119–149. <https://doi.org/10.1111/apce.12255>.
32. Tochkov K. (2023). China vs India in the Himalayas: Comparing economic development in Tibet and Ladakh. *Asia and the Global Economy*, 3 (2). 100073. <https://doi.org/10.1016/j.aglobe.2023.100073>.
33. Toshkov D., Carroll B. et al. (2022). Government capacity, Societal Trust or Party Preferences: What Accounts for the Variety of National Policy Responses to the COVID-19 Pandemic in Europe? *Journal of European Public Policy*, 29 (7). 1009–1028. <https://doi.org/10.1080/13501763.2021.1928270>.
34. Zubarevich N.V. (2021). Pandemic Effects on Social-economic Development and Budgets of the Regions. *Voprosy teoreticheskoy ekonomiki – Issues of Theoretical Economy*, 1. 48–60 (In Russ.).

Information about the authors

Alena F. Kireyeva, Doctor of Economic Sciences, Professor, Associate Director, Institute for Research of Social and Economic Changes and Financial Policy, Financial University under the Government of the Russian Federation, Moscow

Kiryl V. Rudy, Doctor of Economic Sciences, Professor of the World Economy Department, Belarussian State Economic University, Minsk

The article submitted April 2, 2024

Approved after reviewing May 20, 2024

Accepted for publication June 6, 2024

<https://doi.org/10.31107/2075-1990-2024-3-86-97>

Парадоксы антикризисной роли фискального федерализма: аналитический обзор исследований

Елена Федоровна Киреева, доктор экономических наук, заместитель директора Института исследований социально-экономической трансформации и финансовой политики Финансового университета при Правительстве Российской Федерации, г. Москва, Российская Федерация
E-mail: EFKireeva@fa.ru, <https://orcid.org/0000-0003-2917-7347>

Кирилл Валентинович Рудый, доктор экономических наук, профессор кафедры мировой экономики Белорусского государственного экономического университета, г. Минск, Республика Беларусь
E-mail: kv Rudy@bseu.by, <https://orcid.org/0000-0001-8630-2330>

Аннотация

Аналитический обзор около 200 исследований антикризисной роли фискального федерализма в условиях экономических, экологических, эпидемиологических вызовов и территориальных конфликтов за 1950–2024 гг. позволил выявить четыре парадокса. Первый заключается в научном обосновании позитивных антикризисных эффектов фискальной децентрализации, но при возникновении кризисов на практике децентрализация оказывается невостребованной, а предпочтения отдаются централизации. Второй парадокс — в нелинейных позитивных эффектах фискальной децентрализации на экономический рост, потребление природных ресурсов и выбросы парниковых газов, например, в достижении позитивных результатов децентрализации при улучшении институциональной среды. Третий парадокс — в относительно низком уровне методологического изучения фискального федерализма в условиях эпидемиологических вызовов, хотя это имело наибольшую практическую востребованность по сравнению с более глубокими эконометрическими исследованиями экономических и экологических вызовов. Четвертый парадокс заключается в том, что фискальный федерализм может как урегулировать межтерриториальный конфликт на основе прозрачности и стабильности межбюджетных трансферов, обеспечения доступа конфликтующего региона к своим природным ресурсам, так и создать предпосылки для возобновления конфликта в будущем при нарушении этих условий.

Ключевые слова: фискальный федерализм, государственные финансы, экономические кризисы, устойчивое развитие, пандемия, конфликты

JEL: H12, H71, H77, R11, R58

Финансирование: статья подготовлена по результатам исследований, выполненных за счет бюджетных средств по государственному заданию Финансового университета при Правительстве Российской Федерации.

Для цитирования: Kireyeva A.F., Rudy K.V. (2024). Paradoxes of the Anti-crisis Role of Fiscal Federalism: Analytical Review of Studies. *Financial Journal*, 16 (3), 86–97. <https://doi.org/10.31107/2075-1990-2024-3-86-97>.

© Киреева Е. Ф., Рудый К. В., 2024

Статья поступила в редакцию 02.04.2024
Одобрена после рецензирования 20.05.2024
Принята к публикации 06.06.2024