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*As a manuscript*

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**Intergovernmental fiscal relations in the Russian Federation: the problem of the relation of "hard" and "soft" budget constraints for authorities in Russian regions**

PhD Dissertation Summary

for the purpose of obtaining an academic  
degree Doctor of Philosophy in Public  
Administration

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## INTRODUCTION

### Research rationale

In recent decades, the reform of intergovernmental fiscal relations in terms of the development of a decentralized budget system has been one of the most pressing issues in the field of public financial management<sup>1</sup>. The importance of fiscal decentralization is noted in a number of international documents, including the European Charter of Local Self-Government<sup>2</sup>, the Maastricht<sup>3</sup> and Lisbon<sup>4</sup> treaties. The first large-scale recognition of the ideas of decentralization of intergovernmental fiscal relations in the context of the theory of public administration was received in the 1980s. within the concept of "New Public Management" (NPM), and later the advantages of a decentralized system of interbudgetary relations were described in many works, where its economic and administrative-political effects were highlighted<sup>5</sup>.

At the same time, if in the early stages of the development of theories concerning interbudgetary relations, budgetary decentralization was considered only from the positive side, then in the latest scientific concepts it is noted that it can lead to certain problems in the system of interbudgetary relations. These problems stem from the fact that subnational governments may not always have economic incentives to take advantage of fiscal decentralization. In this case, economic incentives are understood as the interest of regional and local authorities in pursuing a policy aimed at developing the local economy and increasing revenues to their own budgets as a result of expanding the tax base. In other words, these problems are related to the possible lack of interest in pursuing an effective economic policy on the ground. In the work of W. Oates<sup>6</sup>, one of the most famous experts in the field of interbudgetary relations, it is noted that the task of the new theory is to identify institutions that would allow realizing the economic benefits of fiscal federalism and decentralization, while avoiding the negative effects resulting from the problem of

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<sup>1</sup> See, for example, Bahl, R., & Bird, R. M. Fiscal Decentralization and Local Finance in Developing Countries / Edward Elgar Publishing. – 2018. – 512 pp.

<sup>2</sup> European Charter of Local Self-Government [Electronic source]. – URL: <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/122> (Access date: 01.03.2021)

<sup>3</sup> Treaty on European Union, signed at Maastricht on 7 February 1992 [Electronic source]. – URL: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:1992:191:FULL&from=EN> (Access date: 01.03.2021).

<sup>4</sup> Subsidiarity: from Maastricht to Lisbon [Electronic source]. – URL: <https://portal.cor.europa.eu/subsidiarity/whatis/Pages/SubsidiarityfromMaastrichttoLisbon.aspx> (Access date: 01.03.2021).

<sup>5</sup> See, for example, Alexeev, M., Habodaszova, L., 2012. Decentralization, corruption, and the shadow economy. Public Finance and Management. – 2012. – № 12. – P. 74–99; Amagoh, F., Amin A. A. An examination of the impacts of fiscal decentralization on economic growth // International Journal of Business Administration. – 2012. – Vol. 3. – No. 6; Bird R. M., Smart M. Intergovernmental fiscal transfers: International lessons for developing countries // World Development. – 2002. – Vol. 30. – №. 6. – P. 899-912

<sup>6</sup> Oates, W. E. Toward a second-generation theory of fiscal federalism // International tax and public finance. – 2005. – Vol. 12. – №. 4. – P. 349-373.

"soft" budget restrictions. The "softness" of budget constraints can be expressed in various elements of interbudgetary relations, but most often this problem is seen through the peculiarities of income decentralization (in the form of tax deductions or interbudgetary transfers) to the lower budget level, as a result of which local authorities lose economic incentives. As a result of the presence of the negative effects of "soft" budget constraints, the studies note the importance of not budget decentralization itself, but its form<sup>7</sup>, the need for the absence of subjective factors in the distribution of interbudgetary transfers is indicated<sup>8</sup>.

In reality, the system of intergovernmental fiscal relations of a particular country may not always be designed in such a way as to encourage subnational authorities to take measures to improve the quality of regional and municipal economic policy, including the development of small and medium-sized businesses (SMEs) and increasing their own budget revenues. Recently, studies have begun to appear showing the ambiguity of the results of such decentralization, and even signs of some countries moving away from federalism, including the Russian Federation<sup>9</sup>. It is noted that the impact of intergovernmental fiscal relations and fiscal decentralization can be reduced to ineffective public policy decisions in case of their erroneous institutional design<sup>10</sup>, and the economic benefits of decentralization itself directly depend on the quality of its implementation<sup>11</sup>. Despite the declaration of the development of federalism in the Russian Federation, the domestic system of inter-budgetary relations has certain problems, therefore, international regulations, scientifically developed principles and practices in the field of decentralization and inter-budgetary relations can be very useful for the country.

Meanwhile, in the Russian Federation, intergovernmental relations are of strategic importance in terms of economic incentives for authorities in the constituent entities of the Russian Federation, which is associated both with the high importance of the redistributive function of the state and with the priorities of state policy. In particular, in the Concept for improving the efficiency of budget expenditures in 2019-2024<sup>12</sup> and the state program "Development of federal

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<sup>7</sup> Rodden, J. The dilemma of fiscal federalism: Grants and fiscal performance around the world // *American Journal of Political Science*. – 2002. – P. 670-687.

<sup>8</sup> Bird R. M., Smart M. Intergovernmental fiscal transfers: International lessons for developing countries // *World Development*. – 2002. – Vol. 30. – №. 6. – P. 899-912

<sup>9</sup> Zulkarnay, I. Why Russia Has Again Been Sliding from Federalism to Unitarianism // *Public Administration Issues, Special Issue*. – 2018. – P. 116–132.

<sup>10</sup> Lavrov A. M. Logika i perspektivy byudzhetyx reform v Rossii: v poiskax "optimal'noj decentralizacii". *Cikl publikacij i dokumentov (1998–2019 gg.)* [The logic and prospects of budget reforms in Russia: in search of "optimal decentralization". Cycle of publications and papers (1998–2019)] / A. M. Lavrov. – M.: Ed. Higher School of Economics. - 2019. - 832 p. (in Russian)

<sup>11</sup> Blöchliger, H., Akgun O. Fiscal decentralisation and economic growth, in Kim, J. and S. Dougherty (eds.), *Fiscal Decentralisation and Inclusive Growth*, OECD Publishing, Paris.– 2018. [Electronic source]. – URL: <https://doi.org/10.1787/9789264302488-4-en>. (Access date: 01.03.2020).

<sup>12</sup> Decree of the Government of the Russian Federation No. 117-r of 31.01.2019 "Ob utverzhdenii Kontseptsii povysheniya ehffektivnosti byudzhetykh raskhodov v 2019-2024 gg" ["On Approval of the Concept for Increasing the Efficiency of Budget Expenditures in 2019-2024"] [Electronic source]. – URL:

relations and creation of conditions for effective and responsible management of regional and municipal finances”<sup>13</sup>, it is noted that in order to further improve intergovernmental relations, key attention should be paid to the development of mechanisms to stimulate the economic development of territories.

One of the latest theoretical ideas, which is considered in modern research as a mechanism for overcoming the problem of "soft" budget constraints, is the concept of "hard" budget constraints. This concept can be similarly formalized in terms of various elements of intergovernmental relations, while being part of the ideas of B. Weingast in the context of the “Market-preserving federalism” model<sup>14</sup>. That is, the totality of issues of economic incentives for subnational authorities within the framework of intergovernmental fiscal relations is reduced to the ratio of "soft" and "hard" budget constraints, which manifest themselves as a result of budgetary decentralization. It is this ratio that is considered in this paper as a key problem of intergovernmental fiscal relations, which requires formalization and verification in domestic practice.

### **Literature overview**

"Soft" and "hard" budget constraints in interbudgetary relations from the standpoint of incentives for subnational authorities are considered in existing studies from various angles, while the often conducted empirical analysis is tied, on the one hand, to certain parameters of budget decentralization, including the peculiarities of the distribution of own revenues, expenditures, intergovernmental transfers, and on the other hand, on the level of economic development, fiscal discipline and the quality of services provided. It should be noted that in studies, as a rule, the parameters of economic development and economic incentives are identical, since it is understood that development occurs under the influence of appropriate incentives.

A significant number of works confirm the presence of positive incentives for subnational governments in the case of a decentralized system of intergovernmental fiscal relations. Some studies on the example of Russia confirm the existence of a positive relationship between decentralization of expenditures and regional economic growth<sup>15</sup>, as well as the low efficiency of

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<http://publication.pravo.gov.ru/Document/View/0001201902040007> (in Russian) (Access date: 01.12.2020).

<sup>13</sup> Decree of the Government of the Russian Federation of May 18, 2016 No. 445 of 18.05.2016 "Ob utverzhdenii gosudarstvennoy programmy Rossiyskoy Federatsii «Razvitiye federativnykh otnosheniy i sozdaniye usloviy dlya effektivnogo i otvetstvennogo upravleniya regionalnymi i munitsipalnymi finansami" ["On Approval of the State Program of the Russian Federation “Development of Federal Relations and Creation of Conditions for Effective and Responsible Management of Regional and Municipal Finances [Electronic resource]. – Access mode: <https://base.garant.ru/71405474/> (Date of access: 01/12/2020).

<sup>14</sup> Weingast, B. R. Second generation fiscal federalism: The implications of fiscal incentives //Journal of Urban Economics. – 2009. – Vol. 65. – №. 3. – P. 279-293.

<sup>15</sup> Alexeev, M. Fiscal Incentives in Federations: Russia and the US Compared // Comp Econ Stud. 2016. No. 58. P. 485–506.

local budgetary decentralization when financing expenditures mainly through intergovernmental transfers, and not through own tax revenues<sup>16</sup>. It is noted that a significant amount of authority at the local level, combined with the flexibility of management, contributes to the growth of investment activity in the territory<sup>17</sup>. In foreign studies, there are also results that: indicate a decrease in the deficit of subnational budgets in the event of their high tax autonomy<sup>18</sup>, indicate an improvement in the efficiency of local authorities in the event of endowing revenue autonomy through tax sources of income<sup>19</sup>, lead to better budget results if there is a reduction in the share of subnational spending financed by transfers and loans<sup>20</sup>.

Some studies find the impact of fiscal decentralization on incentives for local authorities ambiguous. It is noted that the decentralization of spending improves the fiscal discipline of the government, and the decentralization of income has the opposite effect<sup>21</sup>. There are assumptions about the existence of an inverted U-shaped dependence of investments on fiscal decentralization, and about the superiority of revenue decentralization over spending in terms of impact on economic development<sup>22</sup>. There are results that show an ambiguous relationship between fiscal decentralization and the ability to mobilize revenues, which can be explained by the specifics of the structure of intergovernmental fiscal relations<sup>23</sup>. Some works show that the positive impact of tax decentralization on the economic incentives of the authorities can be achieved only in combination with administrative and political autonomy<sup>24</sup>. In general, it is also indicated that the results of studies on assessing the impact of intergovernmental fiscal relations and fiscal decentralization significantly depend on the initial data and selected models, while a unified approach to measuring fiscal decentralization has not yet been proposed<sup>25</sup>.

<sup>16</sup> Timushev, E.N. Federal'nye mezhbyudzhetye transferty i uroven' vnutriregional'noj byudzhetnoj detsentralizatsii v Rossii [Federal Intergovernmental Transfers and the Level of Intraregional Fiscal Decentralization in Russia] // Financial Journal. – 2019. – No. 6. – P. 27–42 (in Russian).

<sup>17</sup> Deryugin, A. N., Alekseev M. V., Mamedov A. A. et al. Vliyanie osnovnykh kharakteristik mezhbyudzhetykh otnoshenij na pokazateli ehkonomicheskogo razvitiya sub"ektov Rossijskoj Federatsii [Influence of the main characteristics of interbudgetary relations on the indicators of economic development of the constituent entities of the Russian Federation] / M.: RANEP. – 2017 [Electronic source]. – URL: <https://socionet.ru/~cycritec/rnp-pdf/wpaper/031717.pdf> (in Russian) (Access date: 01.03.2020).

<sup>18</sup> Foremny, D. Sub-national deficits in European countries: The impact of fiscal rules and tax autonomy // European Journal of Political Economy. – 2014. – №. 34. – P. 86–110.

<sup>19</sup> Jia, J., Ding S., Liu Y. Decentralization, incentives, and local tax enforcement // Journal of Urban Economics. – 2020. – Vol. 115.

<sup>20</sup> Eyraud, L., Lusinyan L. Vertical Fiscal Imbalances and Fiscal Performance in Advanced Economies // Journal of Monetary Economics. – 2013. – Vol. 60. – No. 5. – P. 571–587.

<sup>21</sup> Escolano, M.J., Eyraud L., Badia M.M., Sarnes M.J., Tuladhar M.A. Fiscal performance, institutional design and decentralization in European Union countries // International Monetary Fund. – 2012. – No. 45. – 32 pp.

<sup>22</sup> Timushev, E. N. Byudzhetye polnomochiya municipalitetov resursoobespechenny`x regionov Rossii i vnebyudzhetye investicii [Budgetary powers of municipalities of resource-rich regions of Russia and extra-budgetary investments] // Economic issues. – 2020. – No. 4. – P. 129–146 (in Russian).

<sup>23</sup> Li, Q. Fiscal decentralization and tax incentives in the developing world // Review of international political economy. – 2016. – Vol. 23. – №. 2. – P. 232–260.

<sup>24</sup> Filippetti, A., Sacchi A. Decentralization and economic growth reconsidered: The role of regional authority // Environment and Planning C: Government and Policy. – 2016. – Vol 34. – № 8. – P. 1793–1824.

<sup>25</sup> Baskaran, T., Feld L. P., Schnellenbach J. Fiscal federalism, decentralization, and economic growth: A meta-

A limited number of studies look at the impact of fiscal decentralization on local government incentives in a negative way. A negative relationship is found between the decentralization of spending and economic growth in the case of an excess of subnational spending over income<sup>26</sup>. There are negative effects of budgetary decentralization in case of excessive transfer of costs to a lower level of government<sup>27</sup>, which is also reflected in Russian practice: government spending in the regions is excessively decentralized, which is associated with a slowdown in regional economic growth<sup>28</sup>.

"Soft" and "hard" budget constraints are considered in a number of studies as important characteristics of interbudgetary relations that form incentives for local authorities.

There is a predominantly positive impact for "hard" and negative - for "soft" budget constraints. It was revealed that the dependence of municipal budgets on transfers from the regional government leads to an increase in the deficit of the consolidated regional budget, supporting the logic of "soft" budget constraints<sup>29</sup>. Using the practice of the Russian Federation in the late 1990s, it was demonstrated how any changes in the local government's own revenues are almost completely offset by changes in general revenues, and this leads to excessive government regulation of private business and the easing of budget constraints.<sup>30</sup> There is evidence that subnational financial stability is improving against the backdrop of fixed and transparent rules for the distribution of intergovernmental transfers, which is an element of "hard" budget constraints<sup>31</sup>.

Less often there are works with opposite results for "soft" and "hard" budget constraints. In the work of Smith, H., Park S. and Liu L., on the basis of a system-logical method, it was found that in some situations "soft" budget constraints may be better than "hard" ones<sup>32</sup>. For example, with "hard" budget constraints, some important projects may not be launched, which will lead to negative socio-economic consequences.

It should be noted that the results of studies for individual countries may not always correspond to the realities of the Russian Federation. For example, in a study by V. V. Klimanov

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analysis. *Economic Inquiry*. – 2016. – Vol. 54. – No. 3. – P. 1445–1463.

<sup>26</sup> Gemmel N., Kneller R., Sanz I. Fiscal decentralization and economic growth: Spending versus revenue decentralization // *Economic Inquiry*. – 2013. – Vol. 51. – No. 4. – P. 1915–1931.

<sup>27</sup> Yang, Z. Tax reform, fiscal decentralization, and regional economic growth: New evidence from China // *Economic Modelling*. – 2016. – Vol. 59. – P. 520–528.

<sup>28</sup> Yushkov, A. O. Byudzhnaya decentralizatsiya i regional'nyj ekonomicheskij rost: teoriya, empirika, Rossijskij opyt [Budgetary decentralization and regional economic growth: theory, empiricism, Russian experience] // *Economic issues*. – 2016. – No. 2. – P. 94–110 (in Russian).

<sup>29</sup> Alexeev, M., Avxentyev N., Mamedov A., Sinelnikov-Murylev S.G. Fiscal decentralization, budget discipline, and local finance reform in Russia's regions // *Public Finance Review*. – 2019. – Vol. 47. – No. 4. – P. 679–717.

<sup>30</sup> Zhuravskaya E. V. Incentives to provide local public goods: fiscal federalism, Russian style // *Journal of public economics*. – 2000. – Vol. 76. – No. 3. – P. 337–368.

<sup>31</sup> Smith, H.J., Park S., Liu L. Hardening Budget Constraints: A Cross-National Study of Fiscal Sustainability and Subnational Debt // *International Journal of Public Administration*. – 2019. – Vol. 42. – No. 12. – P. 1055–1067.

<sup>32</sup> Besfamille, M., Lockwood B. Bailouts in federations: is a hard budget constraint always best? // *International Economic Review*. – 2008. – Vol. 49. – No. 2. – P. 577–593.

and A. A. Mikhailova, it is noted that budget decentralization, understood as a positive process in the countries of the world, has significant limitations for further development in the Russian Federation, which is associated with high regional differentiation and other factors<sup>33</sup>.

Nevertheless, interbudgetary regulation in domestic and foreign practice definitely faces similar problems. So, in the works of Levina V.V., based on an analysis of the more modern practice of interbudgetary regulation in the Russian Federation, it is noted that in conditions of financial instability, the actualization of the problems of “soft” budget constraints becomes inevitable<sup>34</sup>, while adjusting interbudgetary regulation should take into account their negative consequences<sup>35</sup>. Based on the analysis of trends in the development of interbudgetary relations in the Russian Federation, some papers conclude that it is important to move to a rigid consolidation of regional and municipal powers for the long term and rigid budgetary restrictions on financial management<sup>36</sup>. In a study by A. N. Deryugin and I. A. Sokolov, in relation to the recently introduced principle of the “model budget” when distributing subsidies to the constituent entities of the Russian Federation, a conclusion was drawn about its negative consequences in the future, which at first will be expressed in a decrease in incentives for regional authorities to develop a profitable base territories, and then lead to a decrease in economic growth in the country<sup>37</sup>. In the work of M. A. Pechenskaya-Polishchuk, based on an analysis of the practice of providing regions with resources from the federal budget on a gratuitous basis, it was concluded that the further improvement of current practice should be based on the approach of stimulating the growth of budget potential, which will lead to the economic development of territories<sup>38</sup>. In the fundamental work of A. Lavrov, prepared on the basis of a combination of his articles in the field of interbudgetary relations, a key conclusion is made about the need to move from “soft” (the ability and interest of the “regulator” to withdraw the resources of “administrators” with informal provision of financial support) to “hard” (Protection of “administrators” from such actions of the

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<sup>33</sup> Klimanov V.V., Mikhailova A.A. Byudzhetskaya detsentralizatsiya v pandemiyu i postpandemiynyykh usloviyakh [Fiscal decentralization in pandemic and post-pandemic times] // Journal Of The New Economic Association. – 2021. – No. 3. – P. 218-226.

<sup>34</sup> Levina V.V. Osobennosti upravleniya sbalansirovannostyu mestnykh byudzhetrov v usloviyakh finansovoy nestabilnosti [Peculiarities of managing the balance of local budgets in conditions of financial instability] // Upravlenets. - 2015. - Vol. 55. - No. 3. – P. 12-17.

<sup>35</sup> Levina V. V. Local budgets in the crisis of 2020 [Local budgets in the conditions of the crisis of 2020] // Municipal property: economics, law, management. – 2021. – No. 2. - P. 3-9.

<sup>36</sup> Klimanov, V. V., Deryugin, A. N., Mikhailova, A. A., Yagovkina, V. A. Byudzhetnyy federalizm: finansovoye uchastiye regionov v dostizhenii natsionalnykh tseley razvitiya [Budget federalism: financial participation of regions in achieving national development goals] // M.: Delo Publishing House. RANEP. – 2019. – 32 pp.

<sup>37</sup> Deryugin A. N., Sokolov I. A. Perspektivy ispolzovaniya v Rossii "modelnogo byudzheta" pri raspredelenii vyvavnivayushchikh dotatsiy [Prospects for the use of the "model budget" in Russia in the distribution of equalizing subsidies] // Issues of Economics. – 2019. – No. 4. – P. 21-38.

<sup>38</sup> Pechenskaya-Polishchuk M. A. Celi i formy predostavleniya byudzhetnykh resursov regionam iz federal'nogo centra na bezvozmezdnoj osnove [Goals and forms of providing budgetary resources to regions from the federal center on a gratuitous basis] // Issues of Economics. – 2021. – No. 11. – P. 108-126.

"regulator" with their full responsibility for their financial condition) budgetary restrictions<sup>39</sup>.

The works of Zubarevich N. V., Klimanov V. V., Kuznetsova O. V., Kurlandskaya G.V., Nazarov V. S. also made a significant contribution to the scientific development of the affected issues in relation to the Russian Federation.

Based on the results of the analysis of the research literature, it can be noted that the papers mainly consider the impact of interbudgetary relations on the economic incentives of the regional authorities, while the incentives of local authorities remain poorly understood. In particular, a certain gap remains in the understanding of the economic incentives of local authorities in the case of decentralization of their own tax sources. Studies with elements of "soft" and "hard" budget constraints are often carried out without a clear formalization of these concepts, while aggregated indicators such as gross regional product (GRP) per capita are used to formalize economic policy or economic development. At the same time, it is obvious that a significant part of GRP is created regardless of the economic policy of the regional or local level.

### **Research aim and objectives**

The research aim of the dissertation is to assess intergovernmental fiscal relation in the Russian Federation from the position of "hard" and "soft" budget restrictions for authorities in the subjects of the Russian Federation.

The dissertation addresses the following research questions:

- What are the theoretical prerequisites of "hard" and "soft" budget constraints in the system of intergovernmental fiscal relation exist in modern research?
- How does the Russian system of intergovernmental fiscal relation correlate with international experience from the position of "hard" and "soft" budget restrictions for subnational authorities?
- Are the theoretical and scientific-practical concepts of "hard" and "soft" budget restrictions for subnational authorities in the Russian Federation being fulfilled?

To achieve the mentioned goal and answer the research questions, the following tasks are solved:

1. Generalization of the theoretical principles of the system intergovernmental fiscal relation in the context of budgetary decentralization and federalism, highlighting the key mechanisms and problems associated with the ratio of "hard" and "soft" budget

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<sup>39</sup> Lavrov A. M. Logika i perspektivy` byudzhety`x reform v Rossii: v poiskax "optimal`noj decentralizacii". Cikl publikacij i dokumentov (1998–2019 gg.) [The logic and prospects of budget reforms in Russia: in search of "optimal decentralization". Cycle of publications and papers (1998–2019)] / A. M. Lavrov. – M.: Ed. Higher School of Economics. - 2019. - 832 p. (in Russian).



constraints that affect the economic incentives of subnational authorities;

2. Carrying out a comparative analysis of the structural elements of interbudgetary relations in the Russian Federation and OECD countries from the standpoint of the "hardness" of budget constraints and the availability of economic incentives for subnational authorities.;

3. Formalization of the "hardness" of interbudgetary relations on the example of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation and assessment of the latter from the standpoint of incentives for regional authorities;

4. Formalization of the "hardness" of intraregional interbudgetary relations on the example of the standard of tax deductions to local budgets and assessment of its impact on the economic incentives of local authorities;

5. Formation of recommendations for improving the system of interbudgetary relations in the Russian Federation from the standpoint of economic incentives and reducing the problem of "soft" budget constraints;

### **The object and subject of the research**

The object of the research is the system of interbudgetary relations in the Russian Federation and its constituent elements. In the empirical part of this work, emphasis is placed on the study of the distribution of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation and the decentralization of tax sources of income within the constituent entities of the Russian Federation.

The subject of the study is the influence of "hard" and "soft" budgetary restrictions of interbudgetary relations on the economic incentives of the authorities in the constituent entities of the Russian Federation<sup>40</sup>. This influence is considered from the standpoint of the ratio of "hard" and "soft" budget constraints that the budgets of the constituent entities of the Russian Federation face in the event of the distribution of interbudgetary transfers from the federal budget and the budgets of municipalities in the case of decentralization of tax sources in the constituent entities of the Russian Federation.

### **Research methodology**

To achieve the first objective, we analyzed scientific publications mainly using Web of Science, Scopus database tools and domestic peer-reviewed publications. We distinguish the main groups of theoretical concepts with their semantic content, and form the main elements of

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<sup>40</sup> In the relationship between the Federation and the subjects of the Federation, incentives for regional authorities are considered, and in the relationship between the subjects of the Federation and municipalities, incentives for local authorities

intergovernmental fiscal relations that are important for the dissertation. The review of actual empirical studies of the influence of inter-budgetary relations on the economic incentives of subnational authorities is done.

To achieve the second objective, we conduct a comparative analysis of statistical data and practices of OECD countries and the Russian Federation on the elements of intergovernmental fiscal relations that are important in terms of incentives for subnational authorities: features of decentralization of income and delimitation of expenditures, organization of a system of intergovernmental transfers and subnational debt policy.

To achieve the third objective the dynamics of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation and its correlation with the dynamics of tax and non-tax revenues are considered. Special attention is paid to a sharp increase in financial support for the constituent entities of the Russian Federation during the crisis period of 2020, which, using regression analysis, is examined for signs of "soft" budget constraints (subjective factors in the distribution of interbudgetary transfers).

To achieve the fourth problem, assessments of the stability and size of norms for deductions to local budgets from federal and regional taxes are used as criteria for the "hardness" of budget constraints, and the development of entrepreneurship, the promotion of which is their important authority in the economic sphere, is used as an indicator of economic incentives for local authorities. The impact is assessed using a hybrid model based on panel data in the pre-crisis period (2010-2018).

### **The scientific novelty**

The scientific novelty of the dissertation research consists in:

- theoretically shows the need to reduce the use of "soft" budget constraints and expand the regime of "hard" budget constraints in the system of interbudgetary relations to strengthen incentives for subnational authorities;
- it is shown that for each of the elements of the system of interbudgetary relations there may be factors for mitigating budgetary constraints (an appropriate classification is proposed);
- an assessment of the elements of interbudgetary relations of the Russian Federation is given from the standpoint of the "hardness" of budget constraints and the availability of economic incentives for subnational authorities based on a comparative analysis of domestic and foreign practice;
- proposed and tested approaches to assessing the "hardness" of budgetary constraints on the example of the distribution of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation;

- for the first time, an approach was proposed and tested to formalize the "hardness" of budget constraints on the example of the stability and size of the norms for deductions to local budgets from federal and regional taxes, and an assessment of their impact on the economic incentives of local authorities was carried out.

### **The theoretical and practical output of the research**

The theoretical output of the dissertation is determined by the acquisition of new knowledge in the context of "hard" and "soft" budget constraints in relation to interbudgetary relations. The factors shaping the nature of budget constraints are systematized, new options for formalizing "hard" and "soft" budget constraints are proposed.

The practical output of the dissertation is determined by the fact that it offers recommendations for improving inter-budgetary relations of the Russian Federation in terms of the transition to more "rigid" budget restrictions, which can be implemented in the relevant articles of the Budget and Tax Codes of the Russian Federation, as well as specialized regulatory legal acts concerning the methods of distribution of inter-budgetary transfers.

### **Practical application**

The key findings and conclusions of the research were presented and discussed at the following scientific and practical events, where they received positive feedback:

1. The 2020 NISPAcee On-line Conference for PhD Students, 2020. Report titled "Fiscal decentralization and local incentives: evidence from Russia".
2. The Fourth Russian Economic Congress (REC-2020), Moscow, 2020. Report titled "Public Administration and Decentralization: Opportunities, Limitations and Development Trends".
3. XXVII International Scientific Conference of Students, Postgraduates and Young Scientists "Lomonosov", Moscow, 2020. Report titled "The role of intergovernmental fiscal relations in shaping the economic and fiscal policy of subnational authorities in the Russian Federation".
4. 29th NISPAcee Annual Conference, Ljubljana, 2021. Report titled "Fiscal Decentralization and Incentives of Local Authorities in the Russian Federation".
5. RANEPa International Scientific and Practical Conference "Regional Development Before and After the Pandemic", Moscow, 2021. Report titled "Fiscal Decentralization and Incentives of Local Authorities in the Russian Federation".
6. XXIII Yasin International Academic Conference on Economic and Social Development, Moscow, 2022. Report titled "The Impact of Covid-19 on Municipal Finance".

## **The dissertation structure and volume**

The dissertation structure and volume reflect the general logic of the study. The dissertation consists of an introduction, three chapters, a conclusion, a list of references. The list of references contains 220 sources, 60 of which include domestic sources, 160 - foreign sources. The dissertation contains 15 tables and 18 figures. The total amount of dissertation is 169 pages.

## **KEY SCIENTIFIC FINDINGS AND CONCLUSIONS SUBMITTED FOR DEFENSE**

1. It has been determined that the concept of "hard" budget constraints should be the main and necessary element of intergovernmental fiscal relations, within which subnational authorities have incentives to pursue an effective economic policy. A classification of factors that form the nature of budget constraints in the system of interbudgetary relations is proposed.

An analysis of the theoretical literature showed that the key problem for economic incentives for subnational authorities in the context of intergovernmental fiscal relations is "soft" budget constraints. The problem of "soft" budget constraints is described in many studies where attempts are made to systematize the prerequisites for its appearance<sup>41</sup>, identify the factors of its development<sup>42</sup>, determine its integral elements<sup>43</sup>. The most complete definition of this problem can be found in the work of A. M. Lavrov, where where "soft" budget constraints are understood as "the ability and interest of "regulators" ("principals")<sup>44</sup>, on the one hand, to withdraw in their favor the financial results of activities, for example, additional income or cost savings of formally or actually "subordinate" "administrators" ("agents")<sup>45</sup>, and on the other hand to provide them with non-formalized and non-transparent financial support in case of their inefficient activities"<sup>46</sup>. That is, "soft" budget constraints are the rules of interbudgetary relations under which regional or municipal authorities (depending on the level of interbudgetary relations) lose interest (have low

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<sup>41</sup> Sinel'nikov-Mury'lev S. G., Kadochnikov, P. A., Trunin, P., Chetverikov, S., Vin'ov, M. Problema myagkix byudzhety'x ogranichenij rossijskix regional'ny'x vlastej [The problem of soft budget constraints of the Russian regional authorities] / Consortium for Applied Economic Research. – M.: IOTE. – 2006. – 300 p. (in Russian).

<sup>42</sup> Akdemir, T., Karakurt B. Revenue Decentralization and the Soft Budget Constraint Problem in Intergovernmental Fiscal Relations: The Case of Turkey //Public Financial Management Reforms in Turkey: Progress and Challenges, Volume 2. Springer. Singapore. – 2020. – P. 121-147

<sup>43</sup> Bordignon, M. Fiscal decentralization: how to harden the budget constraint //Fiscal Policy Surveillance in Europe. – 2006. – P. 109-136.

<sup>44</sup> "Regulators" ("principals") are federal authorities in the case of interbudgetary relations "Federation - subjects of the Federation" and authorities of the subjects of the Federation in the case of interbudgetary relations "subjects of the Federation - municipalities".

<sup>45</sup> "Administrators" ("agents") are the authorities of the subjects of the Federation in the case of interbudgetary relations "Federation - subjects of the Federation" and local authorities in the case of interbudgetary relations "subjects of the Federation - municipalities".

<sup>46</sup> Lavrov A. M. Logika i perspektivy' byudzhety'x reform v Rossii: v poiskax "optimal'noj decentralizacii". Cikl publikacij i dokumentov (1998–2019 gg.) [The logic and prospects of budget reforms in Russia: in search of "optimal decentralization". Cycle of publications and papers (1998–2019)] / A. M. Lavrov. – M.: Ed. Higher School of Economics. – 2019. – 832 p. (in Russian).

incentives) in pursuing policies aimed at developing the local economy and increasing their own tax revenues.

The solution to the problems of "soft" budget constraints and low economic incentives is "hard" budget constraints - the rules of interbudgetary relations, in which the "regulators" ("principals") do not have the above opportunities and interest. Proponents of the concept of "federalism that preserves the market" pay key attention to "hard" budget constraints, which involve fixing mandatory financial rules and regulations in national legislation<sup>47</sup>. This also implies that "the federal center should not create illusions among the regions that, in the event of their ill-conceived financial policy, they are guaranteed assistance from the federal budget. At the federal level, restrictions are being placed on subnational borrowing and/or a bankruptcy procedure for regional authorities is being developed"<sup>48</sup>. It is pointed out that the concept of "hard" budget constraints can also be considered as a universal criterion for all levels of "optimality" (de)centralization of public finance management, according to which the existing mechanisms will limit the ability and interest of subnational authorities in undermining financial discipline<sup>49</sup>.

An analysis of a set of existing studies in relation to the "hardness" and "softness" of budget constraints allows us to conclude that the prerequisites for their formation can be extended to all elements of interbudgetary relations: tax and tax revenues, interbudgetary transfers, debt policy and spending obligations. For example, interest in economic development (increasing one's own income) at the subnational level may decrease in the following cases:

- if the regulation of tax bases and interest rates on them is very limited, then this does not allow adjusting the revenue side to compare with the growth of expenditure obligations, as a result of which additional financial assistance is required<sup>50</sup>;
- if the bulk of expenditures are financed by interbudgetary transfers, then local authorities will have an interest in acting opportunistically and shifting their expenditure obligations to higher levels by overspending budgetary funds and corresponding requests for additional funding<sup>51</sup>;
- if the distribution of expenditure obligations between levels of government is not clear,

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<sup>47</sup> Weingast, B. R. Second generation fiscal federalism: The implications of fiscal incentives // *Journal of Urban Economics*. – 2009. – Vol. 65. – №. 3. – P. 279-293.

<sup>48</sup> Nazarov V. E`volyuciya modelej federalizma – rossijskij i zarubezhny`j opy`t [The evolution of models of federalism - Russian and foreign experience] // *Economic policy*. - 2007. - No. 1. - P. 121-134.

<sup>49</sup> Lavrov A. M. Logika i perspektivy` byudzhety`x reform v Rossii: v poiskax "optimal`noj decentralizacii". *Cikl publikacij i dokumentov (1998–2019 gg.)* [The logic and prospects of budget reforms in Russia: in search of "optimal decentralization". Cycle of publications and papers (1998–2019)] / A. M. Lavrov. – M.: Ed. Higher School of Economics. - 2019. - 832 p. (in Russian).

<sup>50</sup> Akdemir, T., Karakurt B. Revenue Decentralization and the Soft Budget Constraint Problem in Intergovernmental Fiscal Relations: The Case of Turkey // *Public Financial Management Reforms in Turkey: Progress and Challenges*, Volume 2. Springer. Singapore. – 2020. – P. 121-147

<sup>51</sup> Ben-Bassat A., Dahan M., Klor E. F. Is centralization a solution to the soft budget constraint problem? // *European Journal of Political Economy*. – 2016. – No. 45. – P. 57–75.

which can lead to duplication, overspending to the detriment of their budgetary discipline, which is then restored at the expense of interbudgetary revenues from a higher budgetary level<sup>52</sup>;

- if there is unlimited access to borrowing, including access to loans from a higher budget, then there may be a steady increase in the debts of local authorities, as a result of which interest payments reach high levels and already replace the financing of some local services or projects. This substitution can cause, for example, delays in the provision of services and subsequent unrest among the population of regions or municipalities. As a result of such risks, subnational authorities are waiting for financial assistance, which contributes to the relaxation of budgetary constraints<sup>53</sup>.

An analysis of the set of existing studies in relation to the "hardness" or "softness" of budget constraints allows us to conclude that these criteria can be extended to all elements of inter-budgetary relations arising in the process of budgetary decentralization (Figure 1). Moreover, the favorability of the results of budgetary decentralization (its effects) is largely determined by the nature of budget constraints in the system of inter-budgetary relations. As a rule, the papers consider exclusively positive outcomes for "hard" budget constraints and negative ones for "soft" ones. At the same time, it cannot be argued that the exceptional "hardness" of budget restrictions is the solution to all problems. In crisis situations, the easing of budget constraints is almost inevitable, which is associated with the emergence of previously unknown and unpredictable problems that, from the point of view of a higher level of government, it is more expedient to solve "manually". However, this "manual" management should be minimal in crisis periods and practically excluded in stable conditions, since the negative consequences of "soft" budget constraints have a long-term character. In addition, unnecessarily "tight" budget constraints may lead to the fact that local authorities will be afraid to take risks and implement new projects, since as a result of failures they will not be supported by higher authorities.

The classification of factors that determine the nature of budgetary constraints in interbudgetary relations that arise in the process of budgetary decentralization is proposed in Table 1.

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<sup>52</sup> O'Connell S., Wetzel D. Systemic Soft Budget Constraints in Ukraine / in Fiscal decentralization and the challenge of hard budget constraints // The MIT Press Cambridge, Massachusetts London, England – 2003. – P.353-393

<sup>53</sup> Weingast, B. R. Second generation fiscal federalism: The implications of fiscal incentives // Journal of Urban Economics. – 2009. – Vol. 65. – No. 3. – P. 279–293

Table 1 – Factors that shape the nature of budget constraints in the system of interbudgetary relations

Element of the system of interbudgetary relations	Drivers of Soft Budget Constraints and Negative Incentives	Drivers of “hard” budget constraints and positive incentives
Decentralization through tax revenues	<p>Low share of revenues to subnational budgets;</p> <p>Low degree of autonomy in setting the tax rate and determining the tax base;</p> <p>Decentralization of income according to differentiated standards on an unstable basis;</p> <p>Decentralization of inappropriate types of tax revenues.</p>	<p>High share of revenues to subnational budgets;</p> <p>A high degree of autonomy in setting the tax rate and determining the tax base;</p> <p>Decentralization of revenues according to uniform standards on a stable basis;</p> <p>Decentralization of suitable types of tax revenues.</p>
Decentralization through intergovernmental transfers	<p>High share of interbudgetary transfers in budget revenues;</p> <p>Lack of a stable formalized distribution mechanism;</p> <p>Predominance of targeted transfers in the structure of interbudgetary transfers;</p> <p>Destimulating dynamics of interbudgetary transfers relative to the dynamics of tax and non-tax revenues;</p> <p>Availability of discretionary solutions in crisis conditions.</p>	<p>Low share of interbudgetary transfers in budget revenues;</p> <p>Availability of a formalized and reasonable distribution mechanism;</p> <p>The predominance of non-targeted transfers in the structure of the Office;</p> <p>The stimulating dynamics of the Office in relation to the dynamics of tax and non-tax revenues;</p> <p>Lack of discretionary decisions in crisis conditions.</p>
Долговая политика	<p>Absence of market borrowing mechanisms and restrictions;</p> <p>Non-formalized mechanisms for the distribution of loans from a higher budget level;</p> <p>Lack of bankruptcy mechanisms;</p> <p>Formal restrictions on debt and budget deficit by a higher level of government or their complete absence;</p>	<p>Availability of market borrowing mechanisms and restrictions;</p> <p>Formalized mechanisms for the distribution of loans from a higher budget level;</p> <p>Availability of bankruptcy mechanisms;</p> <p>Strict restrictions on debt and deficits from a higher level of government.</p>
Delimitation of expenditure obligations	<p>Excessive regulation of the exercise of powers;</p> <p>Availability of unfunded mandates;</p> <p>No clear delineation of obligations.</p>	<p>Moderate regulation of the exercise of powers;</p> <p>No unfunded mandates;</p> <p>Clear delineation of obligations.</p>

*Source: compiled by the author*

As a rule, only positive outcomes for “hard” budget constraints and negative outcomes for “soft” ones are considered in the works. “Hard” budget constraints make it possible to maximize the positive effects of interbudgetary relations that arise in the process of budget decentralization (Figure 1), but it cannot be argued that exceptional “hardness” of budget constraints is the solution to all problems. In crisis situations, the easing of budget constraints is almost inevitable, which is associated with the emergence of previously unknown and unpredictable problems that, from the

point of view of a higher level of power, are more expedient to solve “manually”. However, this "manual" management should be minimal in times of crisis and practically excluded in stable conditions, since the negative consequences of "soft" budget constraints are also long-term.

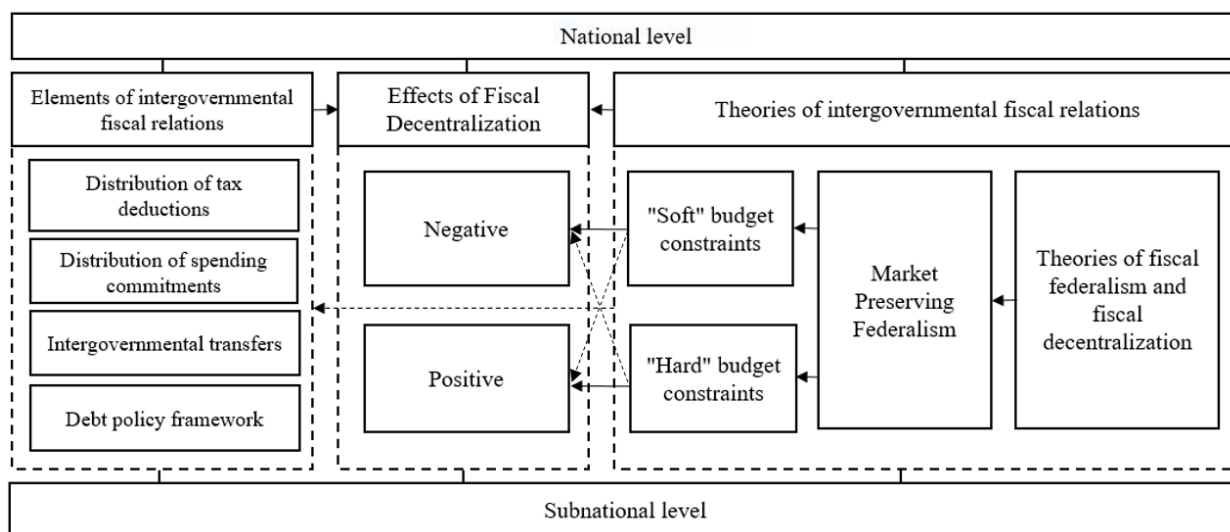


Figure 1 - The effects of intergovernmental fiscal relations from the standpoint of theories.

*Source: compiled by the author*

2. A comparative analysis of domestic and foreign experience on the elements of the system of interbudgetary relations has made it possible to identify a number of factors in the emergence of "soft" budget constraints in the Russian Federation.

2.1. The Russian Federation is characterized by reduced budgetary autonomy at the subnational level (especially local budgets), and there are signs of a lack of stability in tax decentralization at the intraregional level.

The share of the subnational budget level in the tax revenues of the consolidated budget of the Russian Federation in 2018 was 44.1%, which is higher than the average level of the OECD countries. At the same time, according to individual studies, the share of tax revenues, the rate and base of which was fully or partially regulated at the subnational level, in the country is about 50.8%<sup>54</sup>, which is much lower than the average indicator of autonomy at the regional level (79.7%) and local (74.9%) levels of government in OECD countries. This allows us to conclude that, in fact, tax decentralization in the Russian Federation is a type of federal transfers without real management autonomy. This logic of inference is also used in a study by H. Blöchliger and J. Kim<sup>55</sup>, who argue that without subnational autonomy in determining the tax base, rates, or any tax incentives, tax revenues are functionally equivalent to intergovernmental transfers from a higher

<sup>54</sup> Lavrov A.M., Dombrovsky E.A. Decentralizaciya byudzhety`x dohodov: mezhdunarodny`e sravneniya i rossijskie perspektivy` [Decentralization of budget revenues: international comparisons and Russian perspectives] // Finance. - 2016. - No. 5. - P. 16–27.

<sup>55</sup> Blöchliger H., Kim J. Fiscal Federalism 2016: Making Decentralisation Work. OECD Publishing, Paris. 2016. [Electronic source]. – URL: <https://doi.org/10.1787/9789264254053-en> (Access date: 07.09.2020).



government.

At the same time, such a high “formal” tax decentralization is typical in the Russian Federation rather for the regional budget level. Local budgets in the Russian Federation account for only 5.8% of state tax revenues, which is somewhat inferior to both the average level of OECD countries with a federal structure (7.7%) and the level of OECD countries with a unitary structure (10.9%). The reduced autonomy of local authorities limits their budgetary possibilities and economic incentives.

Moreover, there is a trend towards a decrease in the autonomy of subnational budgets, which was more typical for local budgets, whose share in pre-crisis 2019 was more than two times lower than the crisis level of 2009 and 30% lower than the pre-crisis level of 2007.

The Russian Federation is characterized by significant withdrawals of budgetary resources from the territories, especially in the case of local budgets: the share of revenues received by the regional and federal budgets varies from 99% (KhMAO, YNAO and NAO) to 70% in underdeveloped territories (for example, the Republic of Tuva or Altai). Such a withdrawal may have a negative impact on the economic incentives of local authorities, especially for developed and highly urbanized areas where the main economic activity takes place. Meanwhile, with unstable and insignificant autonomy of municipal districts, the share of own revenues in the budgets of urban districts for the period 2010-2018. only decreased, while the number of constituent entities of the Russian Federation, for which this indicator exceeded 50%, decreased from 55 to 11. At the same time, we note that in the Russian Federation there is a category of federal cities (Moscow, St. to the level of subjects of the Russian Federation, but at the same time there are 13 million-plus cities for which budgetary opportunities are equated to ordinary urban districts.

2.2. In the Russian Federation, there are signs of subnational budgets being overloaded with expenditure powers, as well as their high overregulation by the higher budgetary level.

According to comparative assessments in OECD studies, the Russian Federation has good results in terms of the Spending Power Index (SPI) of subnational budgets for certain types of obligations: among the group of countries studied by the OECD, the SPI indicator is higher only in seven countries. Foreign indicators also show that the share of joint responsibilities between governments of different levels, which also affects the effectiveness of interbudgetary relations, is relatively low in the Russian Federation. On the other hand, there are domestic assessments of the spending autonomy of subnational authorities in the Russian Federation, which indicate a high overregulation of powers on the part of a higher level of government: 77% of the own powers of the constituent entities of the Russian Federation, previously enshrined in the Federal Law “On General Principles for Organizing Legislative (Representative) and Executive bodies of state

power of the constituent entities of the Russian Federation"<sup>56</sup>, were additionally regulated by 280 regulatory legal acts of the Russian Federation<sup>57</sup>. It is noted that the powers of local self-government are still characterized by vagueness of wording and congestion with state functions, explicit and hidden federal and regional "unsecured" mandates<sup>58</sup>. Moreover, such congestion is poorly correlated with sources of funding: with a relatively stable share of subnational budgets in the budget system of the Russian Federation, the number of powers of subjects of the Russian Federation has grown from 41 in 2004 to 83 in 2021 (or more than 100, if we take into account the subparagraphs of powers), and the number of city district powers has grown from 27 in 2003 to 43 in 2021<sup>59</sup>.

2.3. The Russian Federation is characterized by a moderate dependence of budget revenues on interbudgetary transfers in the case of constituent entities of the Russian Federation and a high dependence in the case of municipalities. There is a deterioration in the quality of the structure of interbudgetary transfers, as well as a lack of stability in the methods of their distribution.

In the Russian Federation, the share of intergovernmental transfers in regional budgets in 2019 was 20.5%, below the OECD average and roughly comparable to Canada or Switzerland. This fact is a partial refutation of the widespread view that Russian regions as a whole are overly dependent on federal transfers, however, for almost every fifth subject of the Russian Federation, the share of interbudgetary transfers in budget revenues exceeds 50%, for every third - more than 30% and for 60 out of 85 subjects of the Russian Federation, this share exceeded 20% in the pre-crisis period. This is also due to the higher differentiation of Russian regions. In the case of municipalities, there is a higher budgetary dependence on intergovernmental transfers, the share of which is more than 65% (higher in only four OECD countries).

In general, over the recent period in the Russian Federation, there have been trends towards a deterioration in the quality of the structure of interbudgetary transfers: the share of non-targeted

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<sup>56</sup> Federal Law of the Russian Federation No 184 of 06.10.1999 "Ob obshhix principax organizacii zakonodatel'ny`x (predstavitel'ny`x) i ispolnitel'ny`x organov gosudarstvennoj vlasti sub`ektov Rossijskoj Federacii" [On the General Principles of Organization of Legislative (Representative) and Executive Bodies of State Power of the Subjects of the Russian Federation] [Electronic source]. – URL: <https://base.garant.ru/12117177/> (in Russian) (Access date: 19.11.2020).

<sup>57</sup> Order of the Government of the Russian Federation No 117-p of 31.01.2019 "Ob utverzhdenii Konceptii povыsheniya e`ffektivnosti byudzhety`x rasxodov v 2019-2024 gg." [On approval of the Concept for improving the efficiency of budget expenditures in 2019-2024] [Electronic source]. – URL: <http://publication.pravo.gov.ru/Document/View/0001201902040007> (in Russian) (Access date: 01.12.2020).

<sup>58</sup> Lavrov A. M. Logika i perspektivy` byudzhety`x reform v Rossii: v poiskax "optimal'noj decentralizacii". Cikl publikacij i dokumentov (1998–2019 gg.) [The logic and prospects of budget reforms in Russia: in search of "optimal decentralization". Cycle of publications and papers (1998–2019)] / A. M. Lavrov. – M.: Ed. Higher School of Economics. - 2019. - 832 p. (in Russian).

<sup>59</sup> Federal Law of the Russian Federation No 184 of 06.10.1999 "Ob obshhix principax organizacii zakonodatel'ny`x (predstavitel'ny`x) i ispolnitel'ny`x organov gosudarstvennoj vlasti sub`ektov Rossijskoj Federacii" [On the General Principles of Organization of Legislative (Representative) and Executive Bodies of State Power of the Subjects of the Russian Federation] [Electronic source]. – URL: <https://base.garant.ru/12117177/> (in Russian) (Access date: 19.11.2020).

formalized interbudgetary transfers, which correlate with higher economic incentives (subsidies to equalize budgetary security), in the period 2001-2019. almost halved, while the total share of targeted transfers reached more than 62% by 2019, which may have a negative impact on subnational budgetary autonomy.

If the methods of distribution of interbudgetary transfers in OECD countries contain the principle of stability in the distribution of financial assistance, which allows regional and municipal entities to independently predict for themselves the main volume of financial support received in the medium term (the permissible frequency of changes in methods in Australia and Austria is 5 years, in Germany, Italy and a number of other countries - less than once every 5 years), then in the case of the Russian Federation, there are fairly frequent changes to the rules for the distribution of transfers. So, for example, when calculating subsidies for equalization in 2008, a transition was made from determining the tax potential on the basis of GRP to its calculation according to tax statistics, later the principle of "preserving the rank" was excluded from the methodology (subject of the Russian Federation, which had a higher budget security before the distribution of subsidies, should have a higher security after the distribution of subsidies, which creates incentives to increase their own income), and one of the latest changes was the calculation of the part of the subsidy based on the "model" budget, that is, on the basis of cost standards for each type spending powers.

2.4. With a relatively low debt burden on average for the constituent entities of the Russian Federation, non-market borrowings (budget loans) are of high importance in the debt structure, there are signs of debt accumulation due to subjective factors.

The ratio of subnational debt (regional and municipal debt) to gross regional product for the Russian Federation in 2018 was 2.6%, below the level of most OECD countries, where the average was 12.8%. At the same time, the ratio of debt to tax and non-tax revenues of the budgets of the constituent entities of the Russian Federation in 2018 averaged more than 25%, while in half of the constituent entities of the Russian Federation the debt burden exceeded 50%.

Meanwhile, in the structure of loans of subnational authorities in the OECD countries, commercial borrowings predominate, while in the Russian Federation the main creditor is the higher budget, and its importance has only increased in recent years. The predominance of a lender in the form of a higher budget level indicates more comfortable borrowing conditions (preferential credit rate, longer repayment horizon), however, the very distribution of budget loans without formalized procedures is a place to mitigate budget constraints, which creates an interest in lobbying for such loans, and not in the development of their own income.

There is empirical evidence that the relative growth (decrease) in the debt burden of the constituent entities of the Russian Federation in the intervals of 2010-2012 and 2012 - 2016 was

not accompanied by a relative increase (decrease) in the budgetary security of the constituent entities of the Russian Federation<sup>60</sup>. This serves as a reason to assume that politically conditioned (subjective) factors will increase the influence on the debt policy of the constituent entities of the Russian Federation. Such a remark may indicate the presence in the Russian Federation of an insufficiently effective system of institutions aimed at controlling subnational debt.

3. Estimates of the distribution system of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation indicate its low "hardness" and the corresponding predominance of negative incentives. In the context of a sharp increase in the volume of interbudgetary transfers to the budgets of the constituent entities of the Russian Federation during the crisis period of 2020, there were signs of "soft" budget restrictions.

In the general case, the cumulative effect of the "hardness" of the mechanisms for distributing interbudgetary transfers (without taking into account the impact of population dynamics) should manifest itself in the fact that the growth of own (tax and non-tax) income should not lead to a relative reduction in interbudgetary transfers/subsidies, and a drop in income growth of interbudgetary transfers/subsidies. At the same time, since own incomes and interbudgetary transfers/subsidies for equalization change at different rates, over long time horizons it is advisable to compare the change not in absolute values, but in the shares of subjects of the Russian Federation in their own incomes and in interbudgetary transfers in the total volume of own incomes and transfers/subsidies for all subjects of the Russian Federation. The formalization of low and high incentives in this case is presented in Table 2. The distribution of subjects of the Russian Federation by category of incentives, including the division by subsidization and dependence on the MBT, is presented in Table 3.

Table 2 – Formalization of incentives in assessing the ratio of the dynamics of own revenues of the budgets of the constituent entities of the Russian Federation and subsidies for equalization / MBT.

High incentives	low incentives
Growing share in own income (above 1.1) and decreasing share in total subsidies/all transfers (less than 0.9)	Growth in share in own income and in total subsidies/all transfers (above 1.1)
Stable share in own income (from 0.9 to 1.1) and decreasing share in total subsidies/all transfers (less than 0.9)	Growing share in own income (above 1.1) and stable (from 0.9 to 1.1) share in total subsidies/all transfers
Stable share in own income (from 0.9 to 1.1) and growing share in total subsidies/all transfers (more than 1.1)	Decreased share in own income and in total subsidies/all transfers (less than 0.9)
Decrease in share in own income (less than 0.9) and increase in share in total subsidies/all transfers (more than 1.1)	Decreased share in own income (less than 0.9) and stable share in total subsidies/all transfers (from 0.9 to 1.1)

*Source: compiled by the author*

<sup>60</sup> Bukharsky V.V., Vetrova E.Y., Lavrov A. M. Correlation Analysis of the Debt Burden on the Budgets of the Russian Federation Subjects in 2005–2016 // Financial Journal. – 2017. – No. 4. – P. 9–25.

Table 3 – The share of subjects of the Russian Federation in the total number of subjects of the Russian Federation of the corresponding group, %

Group of subjects of the Russian Federation	Period	Equalization grants		All intergovernmental transfers	
		High incentives	low incentives	High incentives	low incentives
Total	2000-2005	40,3	48,6	32,5	57,8
	2005-2010	41,7	55,6	27,7	68,7
	2010-2015	27,0	62,2	31,3	50,6
	2015-2019	17,1	64,3	20,5	54,2
	mean	31,5	57,7	28,0	57,8
Subjects of the Russian Federation with a share of transfers (subsidies) in incomes of less than 15 (5)%	2000-2005	57,1	35,6	25,0	66,7
	2005-2010	14,3	85,7	20,0	66,7
	2010-2015	14,8	74,0	30,8	69,2
	2015-2019	17,6	70,6	16,7	72,2
	mean	26,0	66,5	23,1	68,7
Subjects of the Russian Federation with a share of transfers (subsidies) in income from 15 (5) to 30 (25)%	2000-2005	29,7	59,5	32,3	58,1
	2005-2010	51,4	45,7	32,4	67,6
	2010-2015	33,3	58,3	25,0	55,6
	2015-2019	7,9	68,4	17,6	50,0
	mean	30,6	58,0	26,8	57,8
Subjects of the Russian Federation with a share of transfers in income over 30 (25)%	2000-2005	47,6	38,1	39,3	50,0
	2005-2010	56,3	37,5	26,5	70,6
	2010-2015	36,4	45,5	39,4	39,4
	2015-2019	40,0	46,7	25,8	48,4
	mean	45,1	42,0	32,8	52,1

*Source: compiled by the author*

On the whole, the obtained data testify to the predominance of the dynamics of own incomes and subsidies, which are characteristic of low rather than high incentives to increase own incomes. At the same time, by the end of the period under review, the predominance of low incentives increased significantly. Characteristically, since 2005 the tendencies pointing to low incentives for the growth of own incomes turned out to be the most pronounced for low-subsidized subjects of the Russian Federation, and the least pronounced for highly subsidized subjects of the Russian Federation.

In the group of low-subsidized subjects of the Russian Federation in 2000–2005 subjects with high incentives for the growth of their own incomes prevailed, however, from 2005–2015. subjects with low incentives dominated. In the group of moderately subsidized constituent entities of the Russian Federation at the beginning and end of the period under review, tendencies characteristic of low incentives also prevailed in 2005–2010. high incentives increased somewhat, but then they gradually weakened. Highly subsidized constituent entities of the Russian Federation throughout the entire period had approximately equal ratios of trends characteristic of high and low incentives, with an average higher proportion of constituent entities of the Russian Federation with high incentives compared to other groups. The effect of incentive mechanisms throughout the entire period was more pronounced for highly subsidized regions.

In the case of the analysis of interbudgetary transfers as a whole, a clear predominance of

the dynamics of own incomes and the office, which is characteristic of low incentives to increase own incomes, was also revealed. At the same time, in 2000–2010. The “anti-stimulating” effect of the total amount of MBT was expressed to a greater extent, and in 2010–2015. and 2015–2019 - to a lesser extent compared to subsidies. This may indicate a decrease in the incentive effect of subsidies, or some improvement in the quality of methods for distributing targeted transfers, or a combination of these two trends. To the greatest extent, low incentives for increasing their own incomes are expressed for subjects of the Russian Federation with an insignificant share of the Office in incomes. For subjects of the Russian Federation with a high dependence on the MBT, on the contrary, the ratio of the dynamics of their own income and the MBT indicates a more pronounced stimulating effect.

Thus, on the basis of the above analysis, we can conclude that the distribution of interbudgetary transfers to the constituent entities of the Russian Federation in the pre-crisis period (until 2020) was highly "soft", which can be judged, among other things, by the predominance of low incentives over high ones.

In the crisis year of 2020, there was a sharp increase in financial assistance to the budgets of the constituent entities of the Russian Federation, as a result of which the volume of interbudgetary budget transfers increased 1.5 times compared to 2019, while the largest increase was observed in poorly formalized types of interbudgetary transfers - subsidies for balance (the volume increased 6 times compared to 2019) and other intergovernmental transfers (+48.5%). This situation allows us to consider hypotheses from the theoretical literature on the easing of budget constraints in times of crisis on the example of Russian practice (Table 4). The main features of "soft" budget constraints in this case is the distribution of interbudgetary transfers based on discretionary decisions, that is, the provision of preferences to a separate group of regions.

Table 4 – Situations of "soft" budget constraints and research hypotheses

Situations of "soft" budget constraints	Description	Research hypothesis
«too-weak-to fail»	Regions with low potential income opportunities receive support on a stable basis, so the likelihood of receiving additional financial assistance is quite high <sup>61</sup> .	The low income potential of the subject of the Russian Federation contributed to the receipt of large volumes of interbudgetary transfers (subsidies for balance and / or other interbudgetary transfers) <sup>62</sup> .
«too-big-to-fail»	As the size of the region grows, the likelihood of its rescue in a crisis situation increases, since the negative externalities from a subnational default will affect too many people <sup>63</sup> .	The size of a subject of the Russian Federation had a positive effect on the amount of interbudgetary transfers distributed to it from the federal budget (subsidies for balance and /

<sup>61</sup> Ahrend, R., Curto-Grau, M., Vammalle, C. Passing the Buck? Central and Sub-national Governments in Times of Fiscal Stress. OECD Regional Development Working Papers, 2013/05, OECD Publishing. [Electronic source]. – Режим доступа: <http://dx.doi.org/10.1787/5k49df1kr95l-en> (Access date: 01.03.2020)

<sup>62</sup> It is measured as the estimated budgetary security of the constituent entities of the Russian Federation in 2019.

<sup>63</sup> Wildasin, D. E. Externalities and bailouts: Hard and soft budget constraints in intergovernmental fiscal relations.

Situations of “soft” budget constraints	Description	Research hypothesis
		or other interbudgetary transfers) <sup>64</sup> .
«too-sensitive-to-fail»	With an increase in the share of funding for such politically and socially important sectors as healthcare and education, the likelihood of saving the region increases <sup>65</sup> .	A higher share of social expenditures in the budget expenditures of the constituent entities of the Russian Federation had a positive effect on the volume of interbudgetary transfers distributed from the federal budget (subsidies for balancing and / or other interbudgetary transfers) <sup>66</sup> .
«political clout of sub-central governments»	Regions with increased political or national influence may lobby for increased financial aid <sup>67</sup> .	The higher political significance of certain regional authorities contributed to the faster growth of interbudgetary transfers from the federal budget (subsidies for balancing and / or other interbudgetary transfers) <sup>68</sup> .

*Source: compiled by the author*

The econometric analysis used regression analysis, the results of which are presented in Table 5.

Table 5 - Evaluation of the mitigation of budgetary restrictions in the distribution of interbudgetary transfers to the constituent entities of the Russian Federation in 2020<sup>69</sup>.

	Transfers_balance	Transfers_other	Transfers_all
const	3666,3***	4968,9***	17986***
	(505,99)	(1714,3)	(2467,3)
Tax_non_tax	-0,19534**	-0,31067**	-0,48298***
	(0,056880)	(0,14425)	(0,16650)
Budget_prov	-3046,2***	-5529,4**	-12973***
	(592,11)	(2637,6)	(3107,5)
Population	0,00037***		
	(0,00011)		
Sharesoc			
RaitingPol		6578,4	11581**
		(4719,9)	(4552,8)
n	85	85	85
R <sup>2</sup>	0,28397	0,16948	0,31168
Исрп. R <sup>2</sup>	0,25745	0,13833	0,28586

Note:

1. Transfers\_balance - change in the volume of subsidies to support measures to ensure the balance of budgets per capita, taking into account the IDB in 2020 to 2019 (rubles); Transfers\_other - change in other interbudgetary transfers to the budgets of the constituent entities of the Russian Federation per capita, taking into account the IDB in 2020 by 2019 (rub.) Transfers\_all - change in the volume of intergovernmental transfers to the budgets of the constituent entities of the Russian Federation per capita, taking into account the index of budget expenditures (IBF) in 2020 by 2019 (rubles). Tax\_non\_tax is a control variable, the change in the volume of tax and non-tax revenues of a constituent

Policy research working paper No. 1843. Washington, DC: World Bank.

<sup>64</sup> Measured as the average annual population in 2019 (persons).

<sup>65</sup> Bordignon, M., Turati G. Bailing out expectations and public health expenditure //Journal of Health Economics. – 2009. – Vol. 28. – №. 2. – P. 305-321.

<sup>66</sup> Measured as the share of expenditures on healthcare, education and social policy in the expenditures of the consolidated budgets of the constituent entities of the Russian Federation in 2019.

<sup>67</sup> Rodden, J. Comparative federalism and decentralization: On meaning and measurement //Comparative politics. – 2004. – P. 481-500.

<sup>68</sup> For measurement, we used expert assessments of the Petersburg Politics Foundation on “balancing the current heads of regions between obtaining preferences and avoiding repression in relations with the federal Center.”

<sup>69</sup> Test variables not included in the given specifications were not significant in other specifications, and when they were included, the quality parameters of the models deteriorated, as a result of which they were excluded.

entity of the Russian Federation per capita, taking into account the IDB in 2020 to 2019 (rubles). Budget\_prov is the estimated budget sufficiency of the constituent entities of the Russian Federation in 2019; Population - the size of the subject of the Russian Federation, the average annual population in 2019 (persons); ShareSoc is the share of expenditures on healthcare, education and social policy in the expenditures of the consolidated budgets of the constituent entities of the Russian Federation in 2019; RatingPol - the normalized value of the rating of the subject of the Russian Federation by political significance

2. Robust standard errors are given in brackets.

3. Significance levels of coefficients: \* —  $p < 0.1$ , \*\* —  $p < 0.05$ , \*\*\* —  $p < 0.01$ .

*Source: compiled by the author*

The results of the analysis indicate the following.

In the case of subsidies for balance (Transfers\_balance), in all specifications, the control variable of the dynamics of tax and non-tax revenues (Tax\_non\_tax) turned out to be significant with a negative sign, which indicates that the decline in own income was indeed taken into account when distributing the transfer.

The level of estimated budget sufficiency (Budget\_prov) also turned out to be a consistently significant factor with a negative sign. This indicates that support was provided to a greater extent to highly subsidized regions. In general, highly subsidized regions have a small margin of safety to overcome crisis situations, however, in this crisis, the most subsidized regions showed practically no negative dynamics, which does not allow us to fully justify the indicated support from the federation.

The size of the region (Population) in terms of population turned out to be a significant factor with a positive sign, which indicates support for large regions. This can be explained by the fact that the 2020 crisis affected the largest cities to a greater extent, where a number of economic sectors were affected, including a relatively developed service sector.

The significance of social spending (Sharesoc) and political factors (RatingPol) in the distribution of subsidies for balance remains unconfirmed.

In the case of other interbudgetary transfers (Transfers\_other), only the level of estimated budgetary security (with a negative sign) turned out to be significant, while the dynamics of own income also mattered. Nevertheless, the generally low  $R^2$ , typical for specifications with other interbudgetary transfers, indicates the possible presence of many other factors in the distribution of this type of transfer. This generally corresponds to the idea of other interbudgetary transfers that aggregate a set of transfers that have quite different specific purposes.

The results on the dynamics of the total volume of interbudgetary transfers (Transfers\_all) also confirm the significance of the dynamics of tax and non-tax revenues, as well as the estimated budgetary security. However, in this case, the political factor also becomes significant. Apparently, the growth of targeted transfers, which occupy the main share in the structure of transfers, fell to a greater extent precisely on regions of political significance.

The above analysis testifies to a certain "softness" of the mechanisms for distributing



transfers to the constituent entities of the Russian Federation during the crisis period of 2020, and the point is not only in the very fact of providing financial support, but in the presence of factors other than the direct dynamics of one's own income. Apparently, during the crisis period, the lower level of budgetary security also became the most important support factor, which can be seen from the results of the analysis of poorly formalized transfers and interbudgetary transfers in general. The size of the region was of additional importance in the distribution of subsidies for balance. In the case of analysis of the distribution of all interbudgetary transfers, the political factor turned out to be significant.

4. Estimates of the "hardness" of intra-regional budgetary decentralization, using the example of norms for deductions to local budgets, indicate that more stable and higher norms correspond to a higher level of entrepreneurship development in the constituent entities of the Russian Federation, that is, they have a positive impact on the economic incentives of local authorities.

The norms for deductions to local budgets from regional and federal taxes are a full-fledged instrument of interbudgetary regulation and can be considered as an indicator of the "hardness" of interbudgetary relations or budgetary decentralization within the region. In this case, more "hardness" corresponds to more stable deduction standards: the stability of the standards may indicate the absence of withdrawal of additional income and create incentives for local authorities to further develop their own economy, while the size of the standard itself cannot be ignored either, since, in accordance with the theory of decentralization tax revenue should also have a positive impact on economic incentives.

At the same time, the estimated values of the norms for contributions to local budgets<sup>70</sup> for the period 2010-2018. show their overall decline. Thus, the average rate of deductions to local budgets in the regions for personal income tax decreased from 41.7% to 31.5% over the period 2010-2018. There was also a reduction in corporate income tax (-1.5 percentage points), corporate property tax (-2.7 percentage points) and transport tax (-22.4 percentage points). The share of income transferred under special regimes generally decreased, but the tax rate levied in connection with the application of the simplified taxation system showed a positive trend (+3.5 percentage points). Despite the consolidation of paragraph 1.1 of Art. 58 of the RF BC of certain requirements for the stability of the norms for contributions to local budgets, the data in the table indicate the presence of volatility. In the regional context, there is not only volatility, but also certain differences in the size of the standards transferred to the local level as a whole (Figure 2), which

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<sup>70</sup> The aggregate amount of one or another tax standard transferred by the region to the local budget level was calculated as the ratio of the difference between the revenues to the consolidated and own budget of the subject of the Russian Federation to the volume of revenues to the consolidated budget of the subject of the Russian Federation.

also indicates a variety of approaches to the decentralization of tax revenues.

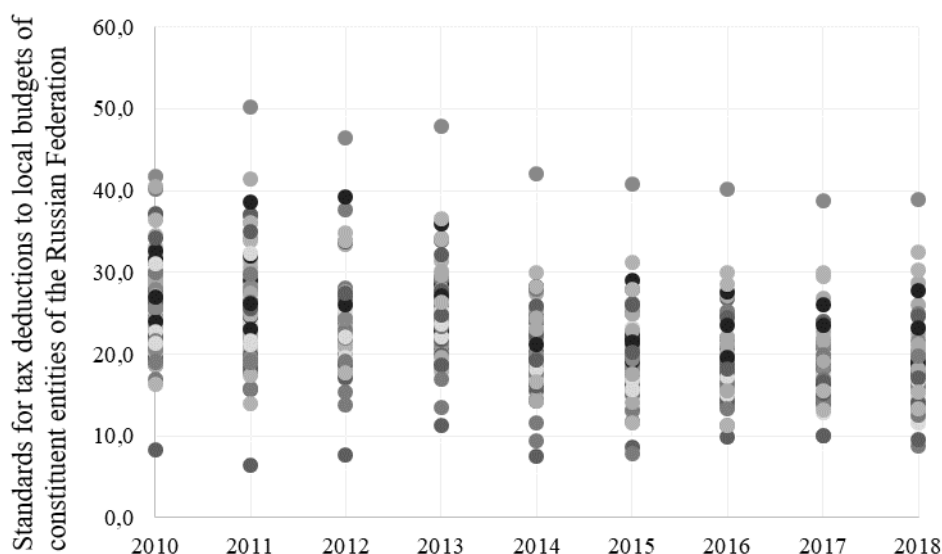


Figure 2 - Scatter of constituent entities of the Russian Federation by the size of the standards for contributions to local budgets in 2010-2018

*Source: compiled by the author according to the data of the Russian Treasury*

An analysis of the standards for deductions using the example of deductions to the budgets of urban districts shows that, in general, for the constituent entities of the Russian Federation for the period 2010-2018. 312 changes were made, of which 178 (57%) were changes to reduce or eliminate tax regulations, reflecting the low stability and weak “hardness” of budget constraints, which can undermine the incentives of local authorities to engage in economic development.

It should be noted that local authorities in general have little ability to influence the economic growth of the territory in indicators such as GRP, while there are studies confirming a positive impact on the development of entrepreneurship<sup>71</sup>. This is due to the fact that in most countries of the world, the creation of conditions for the development of small and medium-sized businesses is mainly within the competence of local authorities<sup>72</sup>. In the relevant legislation of the Russian Federation, which regulates the competence of local authorities, the development of small and medium-sized businesses is also a key authority in the field of economic policy. In fact, local authorities are able to influence the development of entrepreneurship through the implementation of a number of activities, including, among other things: conducting information work and training programs, leasing municipal property, providing soft loans and subsidies, announcing measures to support entrepreneurship, implementing accompanying and consulting work, the formation of a

<sup>71</sup> Escaleras, M., Chiang E. P. Fiscal decentralization and institutional quality on the business environment // Economics Letters. – 2017. – No. 159. – P. 161–163.

<sup>72</sup> Clark G., Huxley J., Mountford D. Organising Local Economic Development: The Role of Development Agencies and Companies. Local Economic and Employment Development (LEED). OECD Publishing, Paris. – 2010

list of promising business ideas and some others<sup>73</sup>. In this regard, to study the economic incentives of local authorities, it is advisable to use the level of entrepreneurship development.

A schematic version of the formalization of "hard" budget constraints on the example of the norms for deductions to local budgets from federal and regional taxes and their impact on the economic incentives of local authorities in the form of entrepreneurship development is shown in Figure 3.

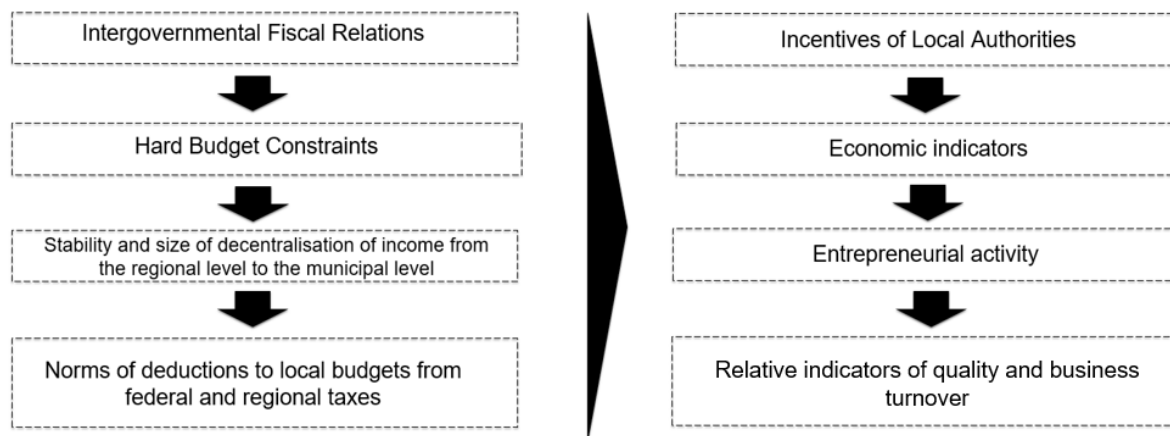


Figure 3 - A variant of formalization of the concept of "hard" budget constraints.

*Source: compiled by the author*

The proposed formalization corresponds to the following research hypotheses:

- Transferring the norms of tax revenue deductions to the local budget level on a more stable basis has a positive effect on the level of entrepreneurship development;
- Higher average rates for the period of deductions of tax revenues transferred to the local level have a positive impact on the level of entrepreneurship development.

To test these hypotheses, panel data on the constituent entities of the Russian Federation for 2010-2018 were used. The dependencies were assessed using a hybrid model, which is a random effects model that combines elements of a fixed effects model and an intergroup assessment model. The hybrid model includes period average variables as well as yearly deviations from the average. By adding a variable that characterizes the overall volatility of the standards for the period (standard deviation for the standards for the period 2010-2018), this model allows you to test both hypotheses put forward. Since, in addition to the studied variables, there may be other objective reasons for the development of entrepreneurship, the factors of entrepreneurship development common in the studies were also included as control variables. A description of the

<sup>73</sup> Guidelines for the executive authorities of the constituent entities of the Russian Federation and local governments, contributing to an increase in the revenue base of the budgets of the constituent entities of the Russian Federation and municipalities. [Electronic source]. – URL: [https://minfin.gov.ru/ru/document/?id\\_4=124941-metodicheskie\\_rekomendatsii\\_organam\\_ispolnitelnoi\\_vlasti\\_subektov\\_rossiiskoi\\_federatsii\\_i\\_organam\\_mestnogo\\_samoupravleniya\\_sposobstvuyushchie\\_uvelicheniyu\\_dokhodnoi\\_bazy\\_byud](https://minfin.gov.ru/ru/document/?id_4=124941-metodicheskie_rekomendatsii_organam_ispolnitelnoi_vlasti_subektov_rossiiskoi_federatsii_i_organam_mestnogo_samoupravleniya_sposobstvuyushchie_uvelicheniyu_dokhodnoi_bazy_byud). (Access date: 01.04.2020).

econometric analysis variables is presented in Table 6. The results of the econometric analysis are presented in Table 7.

Table 6 - Description of variables of econometric analysis

Factor	Variable	Description
Dependent variable		
The level of entrepreneurship development	EA_amount	Number of small (including micro) enterprises per 1,000 economically active population (labor force)
	EA_turnover	Turnover of small (including micro) enterprises per 1,000 economically active population (labor force) in 2010 prices, taking into account the cost of a fixed set of consumer goods and services.
Control variables		
Level of economic development	GRP	GRP per capita (taking into account the interregional price index) in 2010 prices, rub./person
Availability of human capital	Unempl	Unemployment rate according to the methodology of the International Labor Organization (ILO) on average per year, %
Agglomeration effects	POPdensity	Population density, people per 1 km <sup>2</sup>
	Urban	Share of urban population in total population, %
Features of the structure of the economy	ExtractIND	Share of extractive industry in GRP, %
Dependence of regional budgets on interbudgetary transfers	Share_transfers	The share of interbudgetary transfers in the budget revenues of the constituent entities of the Russian Federation, %
Dependence of local budgets on interbudgetary transfers	Share_transfers_mun	The share of interbudgetary transfers in the revenues of the budgets of urban districts and municipal districts, %
Test variables		
Norms of tax deductions to local budgets	Tax	The size of the norm of tax deductions to local budgets (for the totality of taxes)
Volatility of tax payments to local budgets	TaxSD	Standard deviation according to the norms of tax deductions to local budgets for 2010-2018

*Source: compiled by the author*

Table 7 - Estimation of the impact of the size of tax standards for deductions to local budgets and their volatility on the level of entrepreneurial activity in the constituent entities of the Russian Federation.

Model	(1)	(2)	(3)	(4)
Variables	EA_amount	EA_amount	EA_turnover	EA_turnover
const	-4,93 (12,5)	-4,88 (11,2)	166 (113)	135 (86,8)
GRP_mean	0,000322** (0,000148)	0,000323** (0,000155)	0,000310*** (0,000112)	0,000302*** (0,000112)
GRP_dev	-0,00000396 (0,00000578)	-0,00000527 (0,00000599)	0,000196* (0,000118)	0,000190 (0,000116)
Unempl_mean	0,110 (0,231)	0,109 (0,224)	-1,68 (1,97)	-1,60 (1,95)
Unempl_dev	-0,200 (0,159)	-0,137 (0,174)	-2,90 (2,17)	-2,62 (2,18)
ExtractIND_mean	-0,300* (0,158)	-0,299* (0,153)	-4,11*** (1,19)	-4,15*** (1,15)
ExtractIND_dev	0,0258 (0,0162)	0,0308** (0,0148)	-0,0942 (0,177)	-0,0715 (0,177)
POPdensity_mean	-0,0408 (0,0290)	-0,0411 (0,0301)	0,186 (0,353)	0,205 (0,353)
POPdensity_dev	0,182 (0,223)	0,0885 (0,266)	-2,36 (1,71)	-2,78 (1,80)
Urban_mean	0,255** (0,0989)	0,254** (0,103)	1,46* (0,806)	1,53* (0,809)
Urban_dev	-0,336	-0,318	-1,84	-1,76

Model	(1)	(2)	(3)	(4)
Variables	EA_amount	EA_amount	EA_turnover	EA_turnover
	(0,254)	(0,261)	(1,60)	(1,65)
Share_transfers_mean	-0,194* (0,112)	-0,191** (0,0944)	-2,08** (1,01)	-2,24*** (0,830)
Share_transfers_dev	0,0285 (0,0758)	0,0478 (0,0650)	-0,171 (0,696)	-0,0845 (0,632)
Share_transfers_mun_mean	0,00538 (0,146)		-0,405 (1,20)	
Share_transfers_mun_dev	0,117 (0,0783)		0,528 (0,629)	
Tax_mean	0,579* (0,331)	0,576* (0,343)	0,958 (2,62)	1,16 (2,54)
Tax_dev	0,116 (0,0981)	0,0429 (0,0736)	0,754 (0,942)	0,427 (0,869)
TaxSD	-1,28*** (0,492)	-1,28*** (0,489)	-7,80 (4,91)	-7,85 (4,85)
Number of observations	693	693	693	693
Number of subjects of the Russian Federation	77	77	77	77

Note:

1. Fixed effects of the year are included in the estimate.
2. Robust standard errors are given in brackets.
3. Significance levels of coefficients: \* —  $p < 0.1$ , \*\* —  $p < 0.05$ , \*\*\* —  $p < 0.01$ .
4. \_mean is used for mean values of variables, \_dev is used for deviations from mean values of variables.

*Source: compiled by the author*

While the significance of individual control variables was stable, the significance of the tested variables was less certain. In the case of business turnover, an insignificant positive coefficient with a variable of the average level of standards for deductions to local budgets does not allow us to confirm the research hypothesis, as well as an insignificant negative coefficient with a variable characterizing the volatility of standards. However, in the case of determining the level of entrepreneurship development through the number of organizations per capita of the economically active population, the coefficients for the considered variables turned out to be significant, while the signs of the coefficients correspond to those obtained in the above case. That is, the results obtained to a certain extent confirm the hypotheses of the study, namely, that higher average tax rates for deductions to local budgets and their stability contribute to a higher level of entrepreneurship development in the region. The co-directionality of the signs of the coefficients of the studied variables in the two versions of the model, in the absence of significance in the case of the dependent variable characterizing the turnover of entrepreneurship, suggests (but does not assert) that even with incentives, local authorities have more opportunities to promote the creation of a business, while further influence on its turnover is very limited, the size of which may also depend on other factors. This issue requires a separate study, including the search for other variables of entrepreneurship development.

5. Recommendations are proposed to increase the "hardness" of budgetary restrictions in the system of interbudgetary relations of the Russian Federation, which are aimed at formalizing and increasing the stability of the distribution of interbudgetary transfers, expanding the

decentralization of tax revenues on a stable basis.

The conducted research reflects signs that the system of interbudgetary relations that has developed in the Russian Federation satisfies the rules of "soft" rather than "hard" budget constraints. In this regard, a number of recommendations can be formulated to improve the system of interbudgetary relations in the Russian Federation from the standpoint of economic incentives and eliminate the problems of "soft" budget constraints.

To strengthen the "hardness" of interbudgetary relations at the federal level in terms of interbudgetary transfers, the following recommendations can be considered:

a) fixing the limitation on the frequency of making changes to the rules for distributing subsidies to equalize the budgetary security of the budgets of the constituent entities of the Russian Federation for a period of 5 years after taking into account the remaining recommendations. This will allow the constituent entities of the Russian Federation to better predict their own budget revenues and will create a higher interest in increasing them. This consolidation in the future will make it possible to translate the requirements of stability in relation to the distribution of interbudgetary transfers to the budgets of municipalities.

b) formalization of the mechanism for distributing subsidies to support measures to ensure the balance of regional budgets, tying their size on a formula basis to the dynamics of regional budgets' own revenues and setting requirements for incomplete compensation of shortfalls in revenues in crisis situations. In this case, the regional authorities will not be in conditions of a complete lack of interest in pursuing their own effective budgetary and economic policy. This approach is also expedient in the case of interbudgetary relations "subject of the Federation – municipalities".

c) reduction of the practice of using other interbudgetary transfers and their transfer to more transparent and formalized ways of providing interbudgetary transfers.

d) fixing the level of co-financing in the case of granting subsidies to regional budgets with the division of subjects of the Russian Federation into several groups according to the level of budgetary security.

Due to the limited "hardness" of the provision of interbudgetary transfers in general and subsidies for equalizing budgetary security in particular, it is necessary to consider the possibility of reducing the overall level of subsidization of the constituent entities of the Russian Federation while maintaining the existing balance of income. To this end, the transfer of corporate income tax to the regional budgets in full, with the exception of the corporate income tax of the financial sector and export industries, the proceeds of which should be divided between the federal and regional budgets, can be considered. The receipt of these revenues by subsidized subjects of the Russian Federation will reduce the amount of transfers transferred to them and increase the share

of tax revenues in their budget revenues, which corresponds to greater "hardness".

For further intra-regional tax decentralization, it is advisable to increase the rates of contributions to local budgets for taxes related to SMEs, corporate property tax, and personal income tax, while this increase should be carried out to the level of non-subsidization of urban districts in the constituent entity of the Russian Federation. That is, the expansion of the practice of using the substitution mechanism for subsidies to equalize the budgetary provision of municipalities with additional standards for contributions to local budgets from personal income tax will contribute to higher economic incentives for local authorities. After reaching the specified level, its stability should be adhered to by imposing restrictions on changing standards (for example, setting limits on reducing the standards for contributions to local budgets for up to 5 years). The unity of norms must be observed within a certain type of municipalities. It should be noted that it is still expedient to leave some part of the tax standards at the level of the constituent entities of the Russian Federation, so that the regional authorities are also interested in the development of an appropriate tax base. Given the stability of equalization transfers from the federal budget at the level of a subject of the Russian Federation, further actions can be taken aimed at creating a "hardness" in equalizing the budgetary provision of municipalities.

A number of problems related to "soft" budget constraints and noted in the framework of a comparative analysis of foreign and domestic experience can be considered in detail in further studies, while attention should be paid to:

- development of mechanisms for increasing the tax autonomy of regional and local authorities;
- approaches to reduce the overregulation of spending powers of regional and local authorities;
- creating conditions for conducting a responsible debt policy at the subnational level and formalizing the distribution of budget credits.

The presence of "hard" budget constraints in the system of interbudgetary relations is a key condition for their effectiveness and the formation of economic incentives for subnational authorities. The problem of "soft" budget constraints, leading to a reduction in such incentives, is related both to the interaction "Federation – subjects of the Federation" and to the interaction "subject of the Federation – municipalities", while it can be considered in terms of various elements of interbudgetary regulation. In the relationship between "hard" and "soft" budget constraints in interbudgetary relations, exceptional priority should be given to the first, as evidenced by the theory and which is confirmed by the empirical assessments of the study on the example of individual elements of interbudgetary relations. The problem is that, in practice, the exceptional and constant "hardness" of interbudgetary relations in some cases can be violated out

of necessity, which leads to the easing of budget constraints. Crisis situations are such an example, in which support for regional and local budgets is almost inevitable, but such assistance should be provided on the basis of objective factors and to a limited extent, which in this case is an element of "hardness".

## **KEY PUBLICATOINS OF THE AUTHOR RELATED TO THE TOPIC OF THE DISSERTATION**

The most significant research results are described in 6 scientific articles, 2 of which were published in Scopus-indexed journals, 3 in a journal from the Higher School of Economics' list D. The total volume of the publications by the author reached 12.81 printer's sheets, while the author's personal contribution amounted to 9.38 printer's sheets.

### **Publications in Scopus-indexed journals:**

1. Bukharsky, V.V. Intergovernmental Relations and Public Administration: Opportunities and Limitations of Decentralization / V. V. Bukharsky, A. M. Lavrov // Public Administration Issues. – 2021. – No. 2. – P. 126–153. – 3,42 printer's sheets (author's contribution – 2,40 printer's sheets) (Q4, 2020, SJR<sup>74</sup>).
2. Bukharskiy, V.V. Hard Budget Constraints: Theoretical Foundations and Problems of Russian Cities / V. V. Bukharsky, A. M. Lavrov // Public Administration Issues. – 2020. – No. 1. – P. 7–40. – 4.16 printer's sheets (author's contribution – 3,0 printer's sheets) (Q4, 2020, SJR<sup>75</sup>).

### **Publications in journals from the Higher School of Economics' list D:**

3. Bukharsky, V.V. Fiscal Decentralization and Incentives of Local Authorities in the Russian Federation // Financial Journal. – 2021. – Vol. 13. – No. 2. – P. 114–129. – 1,43 printer's sheets
4. Bukharsky, V.V. Correlation Analysis of the Debt Burden on the Budgets of the Russian Federation Subjects in 2005–2016 / V.V. Bukharsky, E.Y. Vetrova, A. M. Lavrov // Financial Journal. – 2017. – No. 4. – P. 9–25. – 1.35 printer's sheets (author's contribution – 0,65 printer's sheets).
5. Bukharsky, V.V. Impact Evaluation of the Equalizing and Stimulating Effects of Intergovernmental Transfers to the Subjects of the Russian Federation / V.V. Bukharsky, A. M. Lavrov // Financial Journal. – 2017. – No. 1. – P. 9–21. – 1,10

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<sup>74</sup> URL: <https://www.scimagojr.com/journalsearch.php?q=21100778766&tip=sid&clean=0> (Access date: 01.02.2022).

<sup>75</sup> The same.



printer's sheets (author's contribution – 0,55 printer's sheets).

**Other publications related to the topic of the dissertation:**

6. Bukharskiy, V.V. Debt Policies in Russian Regions: Institutional Framework and Best Practices // International Journal Of Management Theory And Practice. – 2019. – No. 12. – P. 6-12. – 1,35 printer's sheets.