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# FINANCIAL AND LOGISTIC COORDINATION IN THE CONTEXT OF PROVIDING SUSTAINABLE URBAN DEVELOPMENT IN TERMS OF DECENTRALIZATION IN UKRAINE

Abstract. The article considers the necessity of financial logistic coordination, which involves attracting financial resources in those subsystems of the territories that are most favorable for the rational use of socio-ecological and economic resources, their reproduction, achievement of socio-ecological and economic security and increase in logistics efficiency. It is determined that in order to solve territorial communities' functioning issues and to ensure their development there is a need to combine local, state and private finances, Effective financial coordination will make it possible to use the resources of the territories efficiently, reduce the use of territories' external resources sub-systems and maximize the provision of their functioning by internal resources. The main resources, revenues and expenditures that provide financial logistics of the territories in Ukraine are estimated. The first results from the implementation of decentralization reform revealed a number of issues: the dependence of Ukraine's local finances on public finances, the social orientation of expenditures etc.. The necessity of completing the process of inter-budgetary relations decentralization and coordination was singled out. The authors identified necessary changes on the state level in order to improve coordination of financial flows and development of the territories. Financial logistics coordination at the local level should solve a number of problems: filling of local budgets with their own financial resources; regulation of prices and tariffs for utilities; increase of communal enterprises and institutions financing; increase of capital expenditures in the spheres of local governments improvement and modernization; investment attraction; improve the use of local debt securities.

**Keywords:** financial logistic coordination, local finances, sustainable urban development, revenues, expenditures, local budgets.

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# ФІНАНСОВА ЛОГІСТИЧНА КООРДИНАЦІЯ В КОНТЕКСТІ ЗАБЕЗПЕЧЕНННЯ СТІЙКОГО РОЗВИТКУ ТЕРИТОРІЙ В УМОВАХ ДЕЦЕНТРАЛІЗАЦІЇ В УКРАЇНІ

Анотація. Розглянуто необхідність фінансової логістичної координації, яка передбачає залучення фінансових ресурсів у ті підсистеми територій, які найбільш сприятливі щодо раціонального використання соціо-еколого-економічних ресурсів, їхнього відтворення, досягнення стану соціо-еколого-економічної безпеки та підвищення рівня логістизації. Визначено, що з метою забезпечення розвитку територій варто поєднати місцеві, державні та приватні фінанси у вирішенні питань функціонування територіальних громад. Ефективна фінансова координація дасть можливість результативно використовувати ресурси територій, скоротити використання підсистемами територій зовнішніх ресурсів і максимально забезпечити їхнє функціонування внутрішніми ресурсами. Оцінено основні ресурси, доходи і видатки, що забезпечують фінансову логістику територій в Україні. Виявлено залежність місцевих фінансів України від державних фінансів, соціальну спрямованість видатків, необхідність реформи децентралізації та охарактеризовано перші результати від її реалізації. Визначено необхідні зміни на державному рівні для покращення координації фінансових потоків і розвитку територій. Виокремлено необхідність завершення процесу децентралізації та узгоджень міжбюджетних відносин. На місцевому рівні в Україні фінансова логістична координація повинна вирішити: наповнення власними фінансовими ресурсами місцеві бюджети; урегулювання цін та тарифів на комунальні послуги; збільшення фінансування комунальних підприємств та установ; зростання капітальних видатків для вдосконалення та модернізації у сферах відання місцевих органів управління; поліпшити залучення інвестицій; удосконалення використання місцевих боргових паперів.

**Ключові слова:** фінансова логістична координація, місцеві фінанси, стійкий розвиток територій, доходи, видатки, місцеві бюджети.

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# ФИНАНСОВАЯ ЛОГИСТИЧЕСКАЯ КООРДИНАЦИЯ В КОНТЕКСТЕ ОБЕСПЕЧЕНИЯ УСТОЙЧИВОГО РАЗВИТИЯ ТЕРИТОРИЙ В УСЛОВИЯХ ДЕЦЕНТРАЛИЗАЦИИ В УКРАИНЕ

**Аннотация.** Рассмотрена необходимость финансовой логистической координации для обеспечения развития теритоий, потребность сочетание местных, государственных и частных финансов в решении функционирования территориальных общин. Оценены основные ресурсы, доходы и расходы, обеспечивающие финансовую логистику. Определены необходимые изменения в Украине в условиях децентрализации.

**Ключевые слова:** финансовая логистическая координация, местные финансы, устойчивое развитие територий, доходы, расходы, местные бюджеты.

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**Introduction.** Financial logistical coordination plays an important role in terms of ensuring sustainable urban development. Financial logistic coordination involves attracting financial

resources in those subsystems of the city that are most conducive to the rational use of socio-ecological and economic resources, their reproduction, achievement of the state of socio-ecological and economic security and increase of the logistics level. At the same time, the purpose of financial coordination is to reduce the use of city's external resources sub-systems and maximize their functioning using internal resources.

Analysis of recent research, target setting. The problem of urban development was examined by the number of leading scientists among them: O. Boyko-Boychuk, I. Volokhova, O. Karyii, A. Mel'nyk, H. Monastyrs'kii. Foreign scientists are considering this problem as a "smart-city" (Komninos N. [1], Nowicka K. [2], Taniguchi E. [3]) and emphasize the impact of green finance on urban development (Górka A, Kościelniak H., Wang Y. Zhi Q.). However, the definition of financial logistics coordination and its provision becomes an urgent issue in terms of decentralization in Ukraine.

The aim of the research is to identify the role of financial logistic coordination in the context of sustainable urban development in terms of decentralization in Ukraine.

**Research results.** Logistic coordination is a key factor in ensuring sustainable urban development and, on a large scale, in the functioning of territorial communities. The main task here is to minimize expenses using the necessary resources.

The city as well as every territorial community has significant resources to ensure the effective functioning of the territories and the inhabitants. Efficient and effective use of these resources enables the sustainable development of cities and territories in general. Therefore, the availability of sufficient natural, human, financial resources, provision of the social sector, infrastructure, communications, transport, and energy are the most important factors in terms of effective territories functioning.

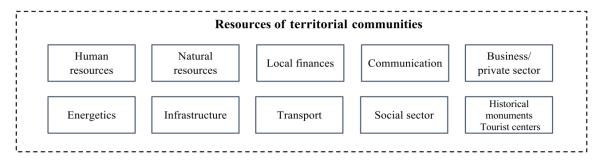


Fig. 1. The resources of the territorial communities

Source: drawn by the authors

The study of the logistics management's has shown that its concept consists of conscious influence on streams that interact as a set of flow processes through their synchronization on the basis of logistic principles and methods in order to provide streams of predefined orientation and obtain not only economic but also social and environmental results of business entities' activity [4].

All areas of the territories, as well as all of its resources rely on financial flows and their efficient use. financial logistical coordination becomes an actual area of consideration and change especially in the period of decentralization in Ukraine causing an active search for new resources for territorial communities and ways for resource savings.

In our opinion, the main tasks of financial logistic coordination are as follows:

- 1. Provision of financial resources necessary for the subsystems of the territories. This objective covers: determining the need for financial resources; choice of supplier of financial resources; preparation of a plan for financing strategic measures aimed at ensuring sustainable development of the territory.
- 2. Financial resources distribution involves the main directions of financial resources formation and use of the prospect of securing, establishing the eligibility of financial resources and the plan for financing strategic measures; achieving financial openness of investors, lenders.

3. Establishment of rational financial cooperation among the regional budget, banks, suppliers, consumers and other entities on the territories, which will allow to optimize the process of settling up among them by the finance department.

The local finances, in conjunction with public finances and private business, influence the development of territories on the basis of sustainability. State policy defines tax policy at the local level, investment funds for regional development, deductions to social insurance funds, etc.. State budget resolves the issues of financing education, healthcare, culture, social security, governance, and others spheres. Thus, financial logistical coordination in Ukraine largely depends on state policy, but the independent acquisition of resources by local governments make it possible to solve local issues and minimize the subsidies from the state budget.

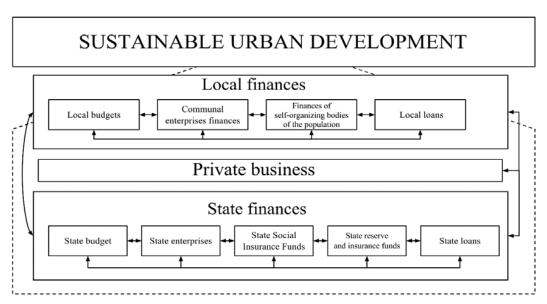


Fig. 2. Interconnections among local finances, public finances and private business and their impact on the development of territories on the basis of sustainability

Source: Formed by the authors

Financial logistic coordination in the context of ensuring sustainable urban development is determined by the revenues and expenditures of local budgets. The structure of local budget revenues is presented in Fig. 3, which reflects the dependence of local budgets on transfers (since 2011 more than half of expenditures are provided by transfers). Reducing the share of tax revenues shows the financial insecurity of local budgets.

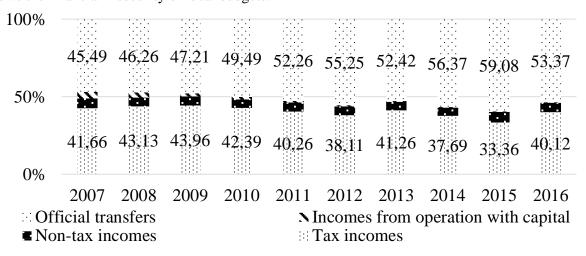


Fig. 3. Local budgets' of Ukraine incomes structure for 2007-2016, % Source: compiled based on [5]

We should note the changes which occurred in the structure of local budgets revenues almost every year. These changes reflect local finance formation instability, which worsens the ability of well-balanced local planning and require centralized management.

The changes generally concern the tax revenues (table 1) By 2015, personal income tax was the main source of budget revenues for local budgets of Ukraine and averaged 61% of revenues (excluding intergovernmental transfers) for 2007-2014. Instability in Ukraine's tax policy led to three significant changes over the 10 years studied: they changed their taxes, their names, rates, and privileges.

Table 1
The main budget-generating tax revenues in the general structure of revenues (excluding intergovernmental transfers) in local budgets of Ukraine for 2007-2016 %\*)

| intergo verification transfers in focul badgets of Oktaine for 2007 2010,70 |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|
| Years   | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Tax revenues  |      |      |      |      |      |      |      |      |      |      |
| Tax and collection  | 59,6 | 62,1 | 62,6 | 63,4 | 62,4 | 60,6 | 61,4 | 61,9 | 45,6 | 46,3 |
| on personal income  |      |      |      |      |      |      |      |      |      |      |
| Corporate income tax  | 0,8  | 0,5  | 0,7  | 0,5  | 0,4  | 0,4  | 0,6  | 0,3  | 3,6  | 3,4  |
| Rents and fees for  | 6,9  | 9,4  | 12,1 | 12,2 | 14,9 | 15,1 | 14,3 | 14,4 | 1,8  | 1,5  |
| the use of the other  |      |      |      |      |      |      |      |      |      |      |
| natural resources   |      |      |      |      |      |      |      |      |      |      |
| Local taxes   | 1,3  | 1,1  | 1,1  | 1,0  | 2,9  | 5,4  | 7,0  | 8,0  | 22,4 | 24,8 |
| Single tax  | 2,7  | 2,5  | 2,5  | 2,4  | 2,3  | 4,8  | 6,3  | 7,3  | 9,1  | 10,1 |

\*)Source: compiled based on [5]

Thus, in 2007-2011, local taxes and fees accounted for 1.5% of local budget revenues (excluding intergovernmental transfers), in 2012-2014 - 6.8%, in 2015-2016 - 23.6%.

The weight of local taxes and fees increased, reflecting the growing influence of local authorities on local budget revenues. However, local taxes and fees were the most dramatic changes in Ukraine's tax revenues. A stable source was only the fee for parking vehicles (the name changed). Since 2011, incomes from tourism have become an additional source of revenue, they have grown from UAH 27.7 billion. to 54.1 bln. in 2016. These funds have had a positive impact on the development of cities, regions, historical monuments, recreational areas.

We observed the growth of tax revenues on immovable property (other than land plots) from 22.5 million UAH in 2013 up to 1.4 billion UAH in 2016, in particular due to the expansion of the tax base for real estate and commercial (non-residential) property.

The main share of non-tax revenues comes from own receipts of budget institutions - an average of 73%. It is worth noting the low proportion of property and business income, especially in 2011-2015 - 3.5%. This is explained by the low rental rates for communal property and the unprofitableness of most communal enterprises.

Local budgets of Ukraine are dependent on intergovernmental transfers from the state budget, which together with the tax policy reflects the impact of public expenditures on financial logistical coordination at the local level. Fig. 4 reflects the tendency to increase their share in revenues of local budgets with a maximum level in 2015 - 59.1%.

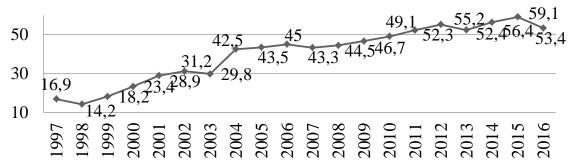
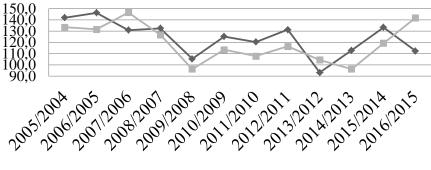


Fig. 4. Share of transfers from the State Budget of Ukraine in the structure of local budgets revenues for 1997-2016,% Source: compiled based on [5]

Assessing the growth of revenues and transfers in local budgets (Figure 5), we note that only in three years (during 2004-2016 period) the growth rate of income exceeded the growth of transfers. This again proves the dependence of local budgets on central government and allocation of resources from the "center".



- → Transfers' growth rates
- Incomes growth rates (not including interbudgetary transfers)

Fig. 5. The growth rate of transfers and revenues of local budgets of Ukraine Source: compiled based on [4]

Therefore, in 2014, the Cabinet of Ministers of Ukraine approved the Concept of Local Self-Government and Territorial Organization of Governance Reform , and in 2015 issued an order to approve prospect plans for the formation of territorial communities in each of the regions. Thus, a list of capable territorial communities was defined and a decentralization reform started.

As of November 11, 2017, 665 United Territorial Communities have been created in Ukraine (299 were created in 2017), which is 27,8% of the number comparing to 2015 and 13.4% of the total population. At the same time, only 366 united territorial communities function properly. Others are still in the process of creation, elections. According to the rating the decentralization leaders are Khmelnytsky, Zhytomyr, Chernihiv, Volyn, Dnipropetrovsk regions. According to [6], the investment resources of local budgets have increased. The strengthening of the communities is also provided with a subvention for infrastructure development: in 2016 it was 1 billion UAH, in 2017 - 1.5 billion UAH. The State Fund for Regional Development provides funding for projects. Thus, in 2016 more than 800 projects of regional development worth of 3 bln UAH were funded, in 2017 the number reached 3.5 bln UAH.

Consequently, we conclude that some problems concerning the decentralization reform remain unresolved. Among them the finalization of the decentralization, organization of the voluntary association process, and provision of the sufficient financial resources for the local communities. In case of ineffective coordination of voluntary association, the Government's decision on perspective plans for the formation of territorial communities will be implemented. The Cabinet of Ministers of Ukraine plans to move from subsidizing communities to providing financial security. It can take more than ten years. Manuela Troshke at the international scientific and practical conference "The Experience of the Territorial Communities Association in the East of Ukraine: Economic and Legal Aspects" (September 2017, Institute of Economic and Legal Studies of the National Academy of Sciences of Ukraine) noted that the reform of fiscal decentralization in Germany still lasts from the 70's years of the twentieth century, and continues to emphasize the interconnection between decentralization and corruption. Therefore, topical remain the following problems: centralized methods of financial logistics coordination management; shadow sector economy; preparation for gradual permanent changes in community life.

In 2015, Ukraine has adopted a new system of horizontal budget alignment: according to revenues, not expenditures. Such a European equalization system, of course, is more progressive and aims to foster the interest of local authorities in attracting additional revenues and expanding the existing tax base.

When comparing volumes of base and reverse subsidies in Ukraine, we noted the changes that led to a reduction of the basic dotation in 2015-2016 from 60,48 mln UAH in 2014 to 5,26 mln UAH in 2015 and 4,74 mln UAH in 2016. These changes have also reinforced the responsibility of the relevant ministries for implementing the state policy in the specific sectors (education and health). If, by 2015, expenditures on these areas had come at a leveling subsidy and could be redeployed locally, now educational and medical subventions are separate financial flows that can be more clearly planned, support the implementation of appropriate reforms, monitor and evaluate the quality of public services. It simplifies the recalculation of funds, monitoring the scope of their use.

If by 2014 the leveling dotation in the structure of intergovernmental transfers of local budgets in Ukraine amounted to an average of 47.7%, then in 2015-2016, the share of the basic grant was an average of 2.7%.

The subvention for social protection of the population (37.8% on average for the studied years) has a stable high share, which confirms the social orientation of Ukraine and reflects a significant level of expenditures on social protection and social security (23.07% on average for the period under study, with growth shares in 2016 to 30.35%). 54% of them were spent on social protection of family, children and youth.

The main share of the local budgets expenditures is the salary (41,5 average) According to the functional classification (fig. 6) in the structure of local budgets' the main share of expenditures is spent on education - an average of 30.74% for 2007-2016.

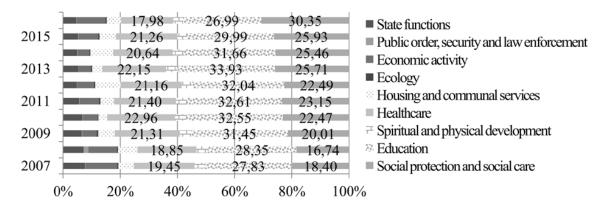


Fig. 6. Local budgets' of Ukraine expenditures structure for 2007-2016, % Source: compiled based on [5]

60% of these expenditures goes to general secondary education, and 20% to the maintenance of pre-school education. The urgent issues of financing vocational education remain.

Education, health care, social protection of the population are the directions of financing by the state, therefore they are provided with transfers from the State Budget of Ukraine. Spending on spiritual and physical development has always been funded by the principle of residual funds (3.7%).

The industries described occupy 78.24% of all local budgets' expenditures and reflect the social role of local budgets and their dependence on financing from the State Budget of Ukraine.

Local expenditures on economic activity, housing and communal services are also important. These industries are financed to a greater extent only at the expense of local budgets. Expenditures on economic activity amounted 6.69% in the period under research, with the growth of the share to 9.92% in 2016 (an increase of 81.8% by 2015). In the structure of these expenditures, the highest share is on transport expenditures - 35.08%, among which the largest part is the cost of road management - an average of 24.4% of all expenditures on economic activity.

The expenditures on housing and communal services amounted to 5.47% in local budget expenditures, with a tendency to reduce the share to around 5% in 2016. Among them average 49.4% are the expenditures on communal services. It is worth noting that a significant depreciation

of communal services (up to 70%) remains the problem for Ukraine. However, in recent years, the number of energy-saving projects has increased.

Expenditures on environmental protection are not priorities in local budgets of Ukraine and amount to averagely 0.45%, which adversely affects the level of sustainable urban development. Yakymchuk A. Y. notes that given the catastrophic decline of species, deterioration of the environment, instability of the climate, financing is insufficient. The high socio-ecological and economic value of the natural ecosystems functioning indicate the expediency of increasing the amount of funding. The development of a system for obtaining grants from international organizations is necessary for this purpose in Ukraine. [9; 10, 14, 29]

As for the expenditures for state functions, averagely 90% of them are spent on management, 8.4% - to service the debt. Although the issue of local self-governance spending reduction has been discussed repeatedly, in 2016, expenditures increased by 35% comparing to 2015.

While assessing the directions of local budgets' spending we observed capital expenditure growth in 2015-2016. It should also be noted that for the first time, since 2008 these expenditures exceed 10%. During these years the reform of decentralization, allowed to increase expenditures on the construction and overhaul of schools, kindergartens, as well as the expenditures for school buses and for the reconstruction of infrastructure damaged in connection with the military conflict in the East of Ukraine due to.

The upgrade of financial and logistical coordination will assist the resolution of the number of issues in Ukraine. In particular, coordination at the state level should affect: stabilization of tax revenues and reducing the shadow economy; improvement of social services financing; distribution of responsibility and funding between the state and local government; completion of the decentralization process and coordination of intergovernmental fiscal relations.

Coordination at the local level should solve: filling of local budgets with their own financial resources; regulation of prices and tariffs for utilities; increase of communal enterprises and institutions financing; increase of capital expenditures for the spheres of local governments improvement and modernization; improve investment attraction; improve the use of local debt securities.

**Conclusions** Fiscal logistical coordination is needed to ensure sustainable urban development and to coordinate the interaction between the state and local levels of governance. The main tasks in this aspect are to provide local authorities with adequate own resources and to improve financial management. Coordination gains particular importance in the conditions of decentralization which provides gradual transfer of financial rights and responsibilities to the local level.

Assessing financial logistical coordination in Ukraine, we note the centralization of financial resources in the area of local communities issues solving, which translates responsibility from the local level to the state and reduces interest in the field in development, funds saving and finding. Thus, the local budgets of Ukraine are dependent on intergovernmental transfers, constantly changing state tax policy and on changes in social institutions and social security institutions financing. Expenditures on economic activity, housing and communal services are important for the development of territories and insufficiently financially secured ones. Since these expenditures to a greater extent are financed only from local budgets, this determines the actual directions of changes in the financial logistical coordination of the territories of Ukraine.

The decentralization reform in Ukraine leads to positive developments reflected in the lowering of the basic grant and increase in capital expenditures. However, the coordination at the state level is still needed in terms of number of issues: the of tax revenues stabilization and the reduction of the shadow economy; Improvement of social services financing; completion of the decentralization process. At the local level, coordination should ensure that: local budget issues are addressed with their own financial resources; budget expenditures are efficiently used, and utilities' and institutions' receive increased funding and tend to profitability; investment attraction measures are planned and fulfiled, etc..

Further research will be related to the detailed analysis of the territorial subsystems which depend on efficient financial and logistic coordination.

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