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**International aspects of economic processes management**

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**MANAGEMENT OF FINANCIAL SOURCES FOR INNOVATIVE  
DEVELOPMENT: FOREIGN COUNTRIES EXPERIENCE**

**Dyba O. M.**

*Candidate of Economic Sciences, Associate Professor, Associate Professor of Investments Activity Department, State institution of higher education «The Kyiv National Economic University named after Vadym Hetman», Ukraine*

**Gernego Iu. O.**

*Candidate of Economic Sciences, Associate Professor of Investments Activity Department, State institution of higher education «The Kyiv National Economic University named after Vadym Hetman», Ukraine*

**Golub S. M.**

*Senior Lecture of Philology Department,  
Khmelnitsky University of Management and Law, Ukraine*

*Authors have analyzed and synthesized the main features of financial sources management for innovative development in development economies of foreign countries. The article describes the peculiarities of above mentioned type of management, using the examples of such countries as Germany, USA and Japan, which represent different kinds of economy and society. The main sources for innovative development financing are highlighted within the national economies conditions. The authors proposed the generalized models of financial sources management for innovative development. The information will be useful for Ukrainian model of financial sources management development.*

***Keywords:** innovation, financing, management, financial sources influence, foreign experience, national models.*

**Introduction.** The world's economy is instable and highly dynamic. At the same time, under the conditions of national economies efficient innovative development, the competition at the international level increases rapidly. Therefore, there is a great need of innovative activities intensification at the national level, which is greatly influenced by financial support and financial sources management.

Particularly, under these circumstances, the problem of financial sources for purposeful developing of entities rises. The innovative development of highly developed economies is more influenced by financial resources diversification. For instance, on the one hand, the state financial support is one of the main sources for fundamental researches. On the other hand, in development countries, under the influence of market forces, banks and no banking financial institution become more interested in new directions of their activity development, which means the possibility of applied researches within the entities current activity support. As the result, the additional financial resources create the push for activation of innovation entities, which resulted to strengthening of innovative development of national economy and its competitiveness at the international level.

**Analysis of recent researches and publications.** The investigation of the role of financial sources as an important factor for innovative development was initiated by foreign and domestic classics of economic and current researchers, including: J. Schumpeter [14], B. Twiss [20], B. Santo [13], D. Tidd, J. Bessant, K. Pavitt [19], P. Nevitt, F. Fabozzi [9], V. Zyanko [23; 24], T. Mayorova [7], S. Onyshko [10], L. Fedulova [3] and others [11]. The classics of political economy created the basics for financial sources diversification. Now principles for diagnostics of their practical implementation within different economies are developed. However, despite the high level and diversity of foreign and domestic studies, the possibilities and peculiarities of financial sources management are not generalized for different countries.

**Previously unsettled problem constituent.** Despite the number of researches conducted within this field of study, domestic investigations prove that some important aspects of financial sources management for innovative development require further researches. Especially, regarding the necessity of leading foreign experience adaptation within the national economy, the main financial sources compartments remain unexplored.

**Main purpose of the article.** The aim of this article is to assess the main features of financial sources division within highly developed innovative economies, which is followed by creation of patterns of main sources of innovative development financing in such countries as Germany, USA and Japan.

**Results and discussions.** Innovative way of national economy development financing is influenced by the national peculiarities and goals, as well as the results of foreign affective experience researches. Particularly, the positive experience of foreign developed economies may be suitable for further development of Ukrainian market economy and its innovative development.

One of the important factors of financial sources management for innovative development of country means the national economy and culture peculiarities, which depend on the level of economy development as well as on countries political, cultural and other peculiarities.

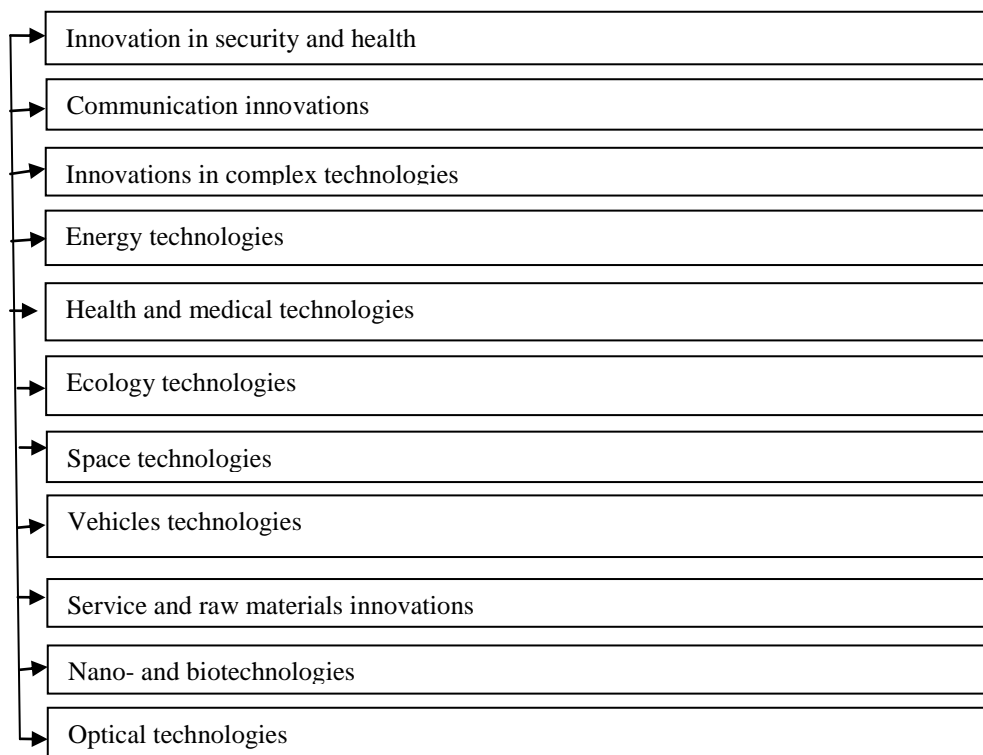
Ukrainian scholar D. Stechenko highlighted three groups of national economy development management models. The first model is appropriate for those countries, which are oriented on science, development of large targeted projects, which cover all stages of research and production cycle. As the rule, the main part of scientific and information potential is located within the defense sector. For instance, USA is one of such countries. The countries with the second management model are focused on the innovation widespread, favorable innovative environment creation, the whole economy's structure optimization. Germany is an example of above mentioned model. The third model is appropriate for such countries as Japan. The innovative development is considerably connected with innovative environment, which is highly adapted to the international scientific and technological progress. The main scientific and technology sectors are developed within the national innovative system [16].

Based on the results of above mentioned researches and main geographic principles, the American (USA), European (Germany) and Asian (Japan) experiences are highlighted within our paper.

The experience of highly developed European countries shows the feasibility of such strategies use, which define priorities and main opportunities to encourage innovation. For instance, the economy of Germany takes the first place among the countries with the highest expenditures for innovative development. The total expenditures are approximately 49 billion USD. Particularly, more than 30 % of state expenditures are made for industry development. The main part of industrial expenditures is those for vehicle industry development [1]. Therefore, the main strategic directions of innovative development are defined by the government.

The Ministry of Education and Research and the Ministry of Economics and Technology are the head authorities' representatives, which coordinate the implementation of innovative strategy at the federal level and play the main role in the governmental support of innovations. There are also some particular programs, which are held direct within the main innovative developed branches and areas. They are mainly managed by branch ministries and departments. In addition, innovative development strategies and programs to support research and innovation financing is managed by local governments at the federal level [4].

Furthermore, innovative German companies, which represent the strategically important branches for the national economy, are provided with tax incentives and direct public funding. For example, the national strategy of innovative development in Germany was created for the period to 2020. The main priorities include health and nutrition, climate and energy, communications security. The attention is also paid to development of steel, vehicles and chemical industries. The main priorities for innovative development financing management are shown in Fig. 1.



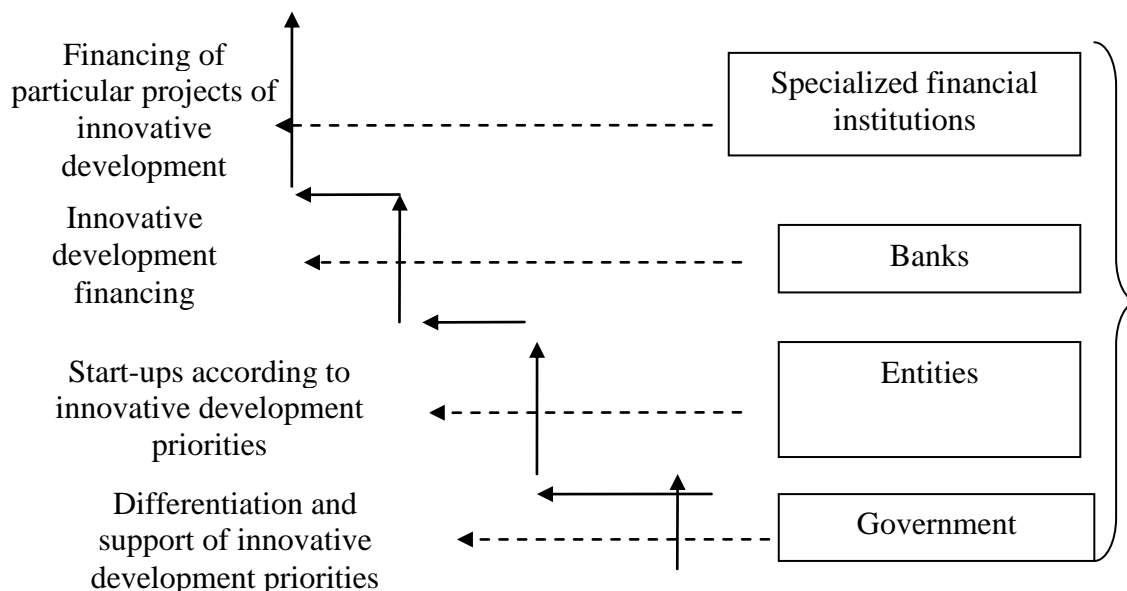
**Fig. 1. Priorities for innovative development financing management in Germany**  
Source: developed on the basis of [2]

This means, that the government use the direct management instruments as well as indirect to manage the direction of innovative activity and its financing.

However, along with significant governmental influences on the priorities of innovation development in Germany, we considered the tendencies of innovative development, which are also influenced by other participates of innovative activity. In particular, instead of the national funding model, banks are also playing an important role in innovative development financing management. For instance, according to the fact, that Germany banks are among the most reliable and profitable banks in the world, they assist the innovative development of entities, which are such of strategic importance to the national economy [17]. Along with all-purposed banks, which are certainly determined to support and further improvement of innovative development priorities, there are a number of specialized financial institutions, which are engaged in innovative projects in specific areas management. For instance, Umwelt Bank AG is focused on the environmental innovation project financing management [21].

The loan programs of Landwirtschaftliche Rentenbank are aimed at stimulating the development of innovative enterprises in agricultural sector [6].

On our point of view, successful experience in innovative development financing management in Germany is based on the priorities, which are identified by the governmental innovative development strategy. Furthermore, the government supports banks and no banking financial institutions to participate at innovative development financing strategy management. The model of innovative development financing management in Germany is represented in the Fig. 2.



**Fig. 2. The model of innovative development financing management in Germany**  
 Source: authoring

One of the most competitive for European developed economies is innovative economy of USA, which is the leader in numerous areas of possible innovative activity. Such results are achieved through science, engineering education and mathematics improvement as well as its sufficient financing and management. The achievement of the most important long term priorities is possible with support of basic and fundamental researches as well as technology transfers within

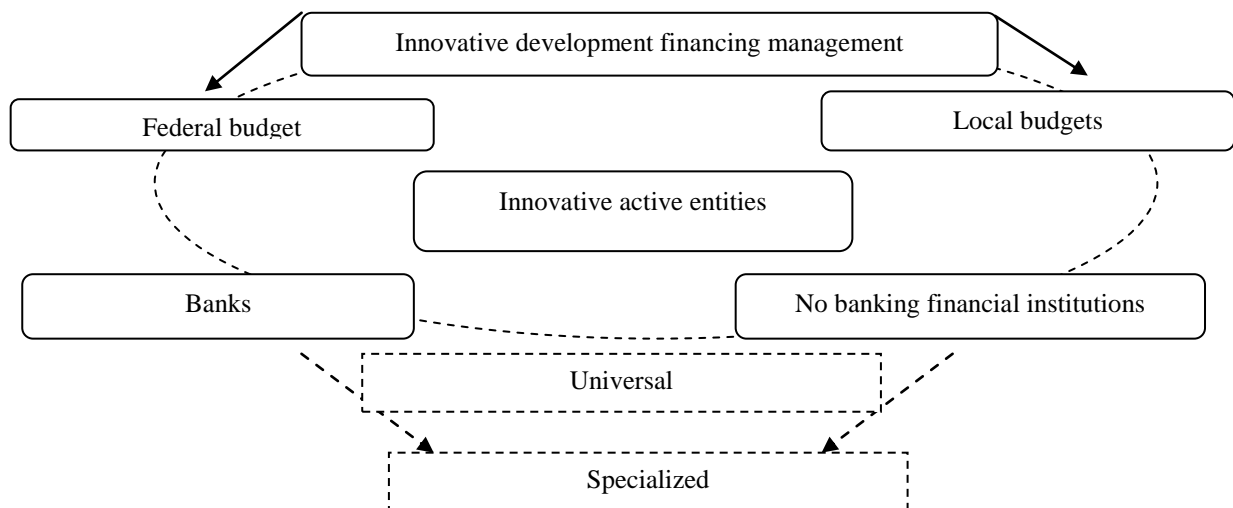
particular scientific and technical programs, which are developed in different areas of service and production.

The innovative development financing management is divided into three main levels, namely: the governmental level, private companies and organizations and financial institutions. Thus, the largest share of funds belongs to private companies. It makes approximately 60% of all financial resources, which support innovative development. The second place goes to the federal budget, which makes the share of 35% of the funds. Finally, 5% of funds go from the state and local governments [8].

The innovative development financing is managed by federal budget as well as by the local governments. For instance, more than half of innovative companies are managed by the local governments in their early stages. Moreover, the local venture capital funds are created at the local level, which accumulate from 5 million to several hundred million USD.

The USA banks manage the innovative development with special SBA (Small Business Administration) warranties, which are developed specifically for the needs of innovative active entities and create the real possibility to gather additional financial resources for innovative development. Moreover, there are no banking financial institutions, which provide Small Business Loans, which are designed entirely for USA small businesses representatives [15].

Therefore, we separate the main peculiarities of innovative development financing management model in USA. We represent such models as participation of USA government as well as the local ones, which, at the same time, support the creation of venture funds and specialized financial institutions at the local levels (Fig. 3).



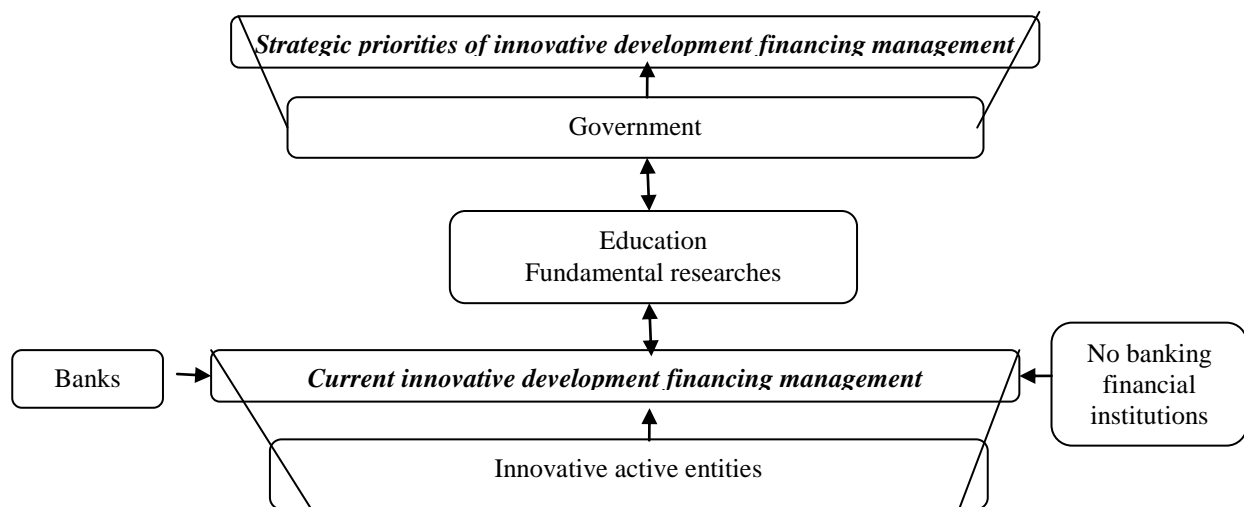
**Fig. 3. The model of innovative development financing management in USA**  
 Source: authoring

According to the current globalization trends and the innovative development of Eastern civilizations nowadays, the study of main innovative development financing management models should include the Japanese one. The country is the first among other countries, which main share of gross domestic expenditure goes for innovative development. Moreover, Japan occupies the ninth place in the overall rank of global competitiveness. The country is fifth with its aggregate index of innovation [18]. The share of expenditure on experimental development and high-tech is 10% from the total budget expenditures [12].

The strategy of innovative development is created at the national level for the period to 2020, including the following goals: creation and management of world's leading universities and research institutions; full-time academic staff support, small and medium-sized enterprises intellectual property increase [22]. The Japanese government manages innovative projects, which deal with solving scientific and engineering problems. Moreover, the particular funds are created at the state level to finance and manage the most risk projects [5].

At the micro level, the large innovative firms act according to the principles of close cooperation between science and production. They managers support the implementation of theoretical and applied researches results into the production and its appropriate financing. Overall, the innovative development support is approximately divided between government and private sector as 20% to 80%.

Thus, we propose the model of innovative development financing management in Japan, which means a combination of national strategic priorities and capabilities of enterprises to implement innovations and cooperate with research institutions. The fundamental researches are highly connected with the production. Therefore, the management means the generalized system, which increases the researches affectivity as well as the innovative development of national entities (Fig. 4).



**Fig. 4. The model of innovative development financing management in Japan**

Source: authoring

**Conclusions and further researches directions.** The experience of foreign countries proves, that innovative development financing management need to combine capabilities of the state and financial institutions as well as innovative entities. However, the ratio of financial resources mobilized from variable sources is different, due to the peculiarities and stage of the national economy development. The results of current research can be used as a methodical assistance for Ukrainian model of innovative development financing management. The research enables to apply results in order to generalize the foreign experience of innovative development financing management both on the micro- and macro- levels. This will result in neutralize of negative factors influence and increase of positive factors influence within the development of Ukrainian national model. Further research should focus on the peculiarities of economic and social environments in Ukraine, which are important during progressive foreign experience of innovative development financing management adaptation in our country.

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**УПРАВЛІННЯ ФІНАНСОВИМИ РЕСУРСАМИ ІННОВАЦІЙНОГО РОЗВИТКУ:  
ДОСВІД ЗАРУБІЖНИХ КРАЇН**

**Дяба О. М.**

*кандидат економічних наук, доцент, доцент кафедри інвестиційної діяльності,  
ДВНЗ “КНЕУ ім. Вадима Гетьмана”, Україна*

**Гернего Ю. О.**

*кандидат економічних наук, доцент кафедри інвестиційної діяльності,  
ДВНЗ “КНЕУ ім. Вадима Гетьмана”, Україна*

**Голуб С. М.**

*старший викладач кафедри філології,*

*Хмельницький університет управління та права, Україна*

*Автори проаналізували та систематизували основні особливості управління фінансовими джерелами інноваційного розвитку в економіці розвинених зарубіжних країн. У статті розглянуті особливості зазначеного вище типу управління на прикладі таких країн, як Німеччина, США та Японії, які репрезентують різні групи національних економіки і суспільства. З огляду на особливі умови національних економік, виокремлені основні джерела фінансування інноваційного розвитку. Автори запропонували узагальнені моделі управління фінансовими джерелами інноваційного розвитку. Інформація буде корисною для розвитку української моделі управління фінансовими ресурсами.*

***Ключові слова:** інновація, фінансування, менеджмент, вплив фінансових ресурсів, зарубіжний досвід, національні моделі.*

**УПРАВЛЕНИЕ ФИНАНСОВЫМИ РЕСУРСАМИ ИННОВАЦИОННОГО РАЗВИТИЯ:  
ОПЫТ ЗАРУБЕЖНЫХ СТРАН**

**Дыба А. М.**

*кандидат экономических наук, доцент, доцент кафедры инвестиционной деятельности,  
ГВУЗ “КНЕУ им. Вадима Гетьмана”, Украина*

**Гернего Ю. А.**

*кандидат экономических наук, доцент кафедры инвестиционной деятельности,  
ГВУЗ “КНЕУ им. Вадима Гетьмана”, Украина*

**Голуб С. М.**

*старший преподаватель кафедры филологии,*

*Хмельницкий университет управления и права, Украина*

*Автори проаналізували та систематизували основні особливості управління фінансовими джерелами інноваційного розвитку в економіці розвинених зарубіжних країн. У статті розглянуті особливості зазначеного вище типу управління на прикладі таких країн, як Німеччина, США та Японія, які репрезентують різні групи національних економіки і суспільства. З огляду на особливі умови національних економік, виокремлені основні джерела фінансування інноваційного розвитку. Автори запропонували узагальнені моделі управління фінансовими джерелами інноваційного розвитку. Інформація буде корисною для розвитку української моделі управління фінансовими ресурсами.*

***Ключевые слова:** инновация, финансирование, менеджмент, влияние финансовых ресурсов, зарубежный опыт, национальные модели.*