

**Microeconomics**

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**GENESIS OF STATE ENTREPRENEURSHIP  
IN UKRAINE AND THE WORLD:  
FROM PRIVATIZATION  
TO INTERNATIONALIZATION**

**Abstract**

The study considers how the phenomenon of state entrepreneurship has been examined in theoretical works by world-famous researchers. It has been brought to light that a comparison of the performance of state-owned enterprises is rather difficult due to divergent views on their socio-economic and institutional framework in different countries. The characteristics of privatization processes that have taken place since the 1990s as well as their current trends are identified. The contribution of an entrepreneurial state in financing and stimulating innovations is analyzed. Bearing in mind the ever-growing role of state entrepreneurship in building business processes, it is noted that the current stage of the development of state entrepreneurship needs significant changes in the state system of economic governance. Taking into account shortcomings over the analyzed period, suggestions have been put forward on how to improve the effectiveness of state entrepreneurship seen as a tool of public administration.

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**Key words:**

State entrepreneurship, public sector, governance model of state property, state capitalism, privatization, innovation activity of the state, social utility.

**JEL:** G18; H10; H14; L1; O14.

**Introduction**

For a long while a significant part of managerial elite, scholars and business representatives have been sceptical to the role of state entrepreneurship in the economy due to the accumulated negative experience of state-owned enterprises' performance in the last century. Instead, there has been a history of successful establishment of private entrepreneurship, specifically a corporate sector. In response to these circumstances, the developed countries minimized the proportion of state-owned entities in the structure of the economy. By contrast, experts estimate that the developing countries have been still using them as a key element of implementing the strategy of economic breakthrough.

Regarding the fact that most research papers are focused upon criticism of state entrepreneurship, little attention is paid to its positive contribution to providing jobs for people, stimulating economic growth, protecting national security interests and addressing a range of other socio-economic issues. A controversial implication of this phenomenon requires a study of its genesis in a cross-section of countries and in the context of global economic changes, which have taken place since the 1990s of the 20<sup>th</sup> century. Another perspective should be taken into consideration of the development of theoretical approaches to target, functional and facility-level assignments of state entrepreneurship both within the national economy and global dimensions.

## **A phenomenon of state entrepreneurship in theoretical studies**

The pressure of the state capitalism policy, the ever-growing popularity of the alter-globalism movement, the existence of the conflict generated by confrontation between supporters of statism and anti-statism, which is embodied in the paradox of Jefferson's and Hamilton's views<sup>1</sup> (especially in the USA), and global economic instability have led to reconsideration of the state's importance in entrepreneurship activities. This was the main reason why most countries initiated reforms of property relations in the 1990s of the 20<sup>th</sup> century. The objective was to overcome inefficiency and corruption in state-owned enterprises (Professor H. Angang called that period the era of Thatcherism and Reaganism), whose losses were covered by the state budget, which undermined them and destabilized financially. The credibility of state entrepreneurship as a tool of public administration was eroded, and it automatically triggered the launching of privatization.

Explanations for the events of those times were put forward from theoretical and practical perspectives by H. Simon, a Nobel Prize laureate. The explanations were based on three hypotheses, namely: 1) efforts of enterprises to maximize profits on the market in order to achieve Pareto efficiency; 2) the desire of owners of company assets to increase the value of assets; 3) a set of conditions arranged by a competitive market for pursuing commercial purposes of entities (Roland, 2008). In the view of H. Simon, in the real world a lack of implementation of each of the listed assumptions predetermined transformation phenomena in the economy, particularly privatization.

It should be noted that the significance of state entrepreneurship as an institutional tool to ensure the further growth of the national economy has been considered for a long time. The role of the state in the economy and the impact of its tools on the progress of economic processes were among issues related to research interests of A. Smith (promoted the idea of «invisible hand» of the state), K. Arrow and G. Debreu (believed that government regulations had to remain within «the limits»). Such issues are also discussed in collaborative studies by J. Stiglitz with B. Greenwald (applied the factor of realistic information gaps and the problem of transaction costs, which negatively affect the market's ability to achieve Pareto efficiency) and with S. Grossman (noted that, when owners of enterprises pursue multi-faceted objectives, it causes the dispersion of capital) (Roland, 2008).

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<sup>1</sup> The paradox of Jefferson's and Hamilton's views lies in the ideological confrontation of two national groups: Jefferson's supporters who favor the idea of minimizing the presence of the state in economic activity and Hamilton's supporters who conversely stand in defense of its proactive position.

J. Keynes, a famous economist, argued that capitalist markets need constant government regulations due to their inherent instability. That thought was later confirmed by H. Minsky, who pointed out at the financial fragility of capitalism because of recurrent crises in the financial sector. According to P. Nunnenkamp, the efficient functioning of the economy requires a precisely calculated ratio of state and private enterprises based on their contribution to the GDP and total investment (Nunnenkamp, 1986, p.188). In 1987, D. Sappington and J. Stiglitz developed a formula of successful privatization, the implication of which is as follows: it can be an effective way for the implementation of social objectives under the same conditions as a Pareto efficient market, where there are no market failures, information asymmetry and other managerial errors (Roland, 2008).

Considering functional assignments, a number of scholars emphasize the significance of state entrepreneurship in economic growth. Although it is known that the first model of growth was developed by R. Harrod and E. Domar, the Nobel Prize for the theory of growth was awarded to R. Solow, who described its key components: capital and human resources ( $Y = F(K, L)$ ), and then technological breakthrough ( $Y = A(t) F(K, L)$ ).

Nowadays, this subject matter is in the focus of research papers by N. Klein, K. Ohmae, T. Friedman, and F. Fukuyama, who emphasized a particular contribution of state entrepreneurship to the innovation component. M. Mazzukato, another respected modern scholar, argues that the entrepreneurial state does not simply correct market failures, but also creates future markets through innovation policies (Entrepreneurial statism, 2013, p. 11). For a long time such status has been awarded to the USA (Silicon Valley's success), where the government funds about 60% of fundamental research and supports potentially profitable scientific developments. Formerly, Japan and the USSR created different but slightly overlapping concepts of the entrepreneurial state, whose ideology lies not only in the existence of fully-functioning economy of innovation, but also in the understanding of the state's role as a catalyst for proactive, flexible, well-timed and decentralized actions of the government.

Thus, it has taken some time for economists to agree with J. Schumpeter's thought that the state is an ultimate innovator, since only the state possesses the vision of growth niches, develops and promotes strategies, providing network development.

An additional point is that today the problem of the state as an entrepreneur is viewed in a new perspective, specifically in relation to globalization and transnationalization. K. Ohmae, a Japanese scholar and the developer of the 3C's<sup>2</sup> model, announced the end of nation-states. N. Klein, a well-known journal-

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<sup>2</sup> The original version of the model includes three key components: the customer, the competitor, the corporation. The new version is based on the following three values: capability, consistency, cultivation.

ist and sociologist (the author of «No Logo»<sup>3</sup>), explained that by the fact that some corporations have budgets bigger than countries (The Economist, 2012). F. Fukuyama, another famous scholar and practitioner, described the current phase of economic development as democratic capitalism (The Economist, 2012). Meanwhile, I. Bremmer stressed that state and market interests overlap when the former has more management tools for making a decisive impact on the course of economic processes (The Economist, 2012).

Although state entrepreneurship face similar challenges and threats as private entrepreneurship, opportunities for overcoming them vary due to a difference in target, functional and facility-level assignments. The state works with long-term aims, whereas a private entrepreneur is not always ready to take a risk. With this in mind, state capitalism in all its variations is gaining popularity and becoming the trend of the modern global economy. This point is supported by professionals of PwC, who came to a conclusion that while the private service views the concept of «service» as a set of economic activities for profit-making, the public sector of economy views its essence in channelling resources to satisfy public needs rather than pursuing commercial gain (Jones, Meintyre, Stureson, 2015, p. 19).

To summarize, it is worth noting that the current positions of world-leading scholars are built on the idea that the state has the necessary capacity to ensure cooperation between state and private entrepreneurship, where new knowledge is being produced constantly and used to provide positive structural transformations as well as economic prosperity, despite differences in the interpretations of goals and ways of their implementation.

### **Difficulties of categorial and conceptual framing of state entrepreneurship in international comparisons**

The role of state entrepreneurship has expanded, which allows it to be positioned as: an employer, a participant of business partnerships, a manufacturer and provider of public goods/services, a budget-holder and administrator of its own financial resources, a saver/borrower, an investor and a growth driver, etc. Its multifunctional nature is the reason why nowadays state-owned enterprises can be found in every country and in almost every sector of economy.

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<sup>3</sup> N. Klein's book in which she blames large corporations, imperialist powers, the International Monetary Fund, and the World Trade Organization for pushing global brands, which deprives an ordinary person of freedom of choice, and economically backward countries of the possibility to achieve a new stage of development.

The lack of adequate statistical information which could reflect the real picture of state-owned enterprises' performance, leads to insufficiency and inadequacy of the analysis undertaken. This is related to the fact that there is no common vision on definitions of «public sector», «state entrepreneurship», «state enterprise» as well as no international classification for business units that are based on state property and financed by budget funds.

Predominantly, there are three types of state-owned entities which occur in reports of the world's leading statistical and analytical services/organizations (OECD, PwC, IBRD, IDA, PB and others):

1) state-owned enterprises (SOE) which include: corporate entities that are completely owned by the state; joint-stock companies or other partnership entities where the state owns 50% of stock; corporations where the state has a decisive influence in making important decisions;

2) state-invested enterprises (SIE): the state is the sole beneficiary whose share is not less than 10% stock (a listed or unlisted company; a corporation established under the law (a statutory corporation operating in Austria, the UK, the USA, the Netherlands, India, Ireland));

3) partly state-owned enterprises (PSOE): corporate partnerships, which are partly owned by the state whose share is at least 10% but does not exceed 50% of the statutory fund.

According to the Fortune Global 500, state-owned enterprises are based on state ownership (over 50%) (Fortune Global 500, 2015). In the OECD countries, these include public entities with centralized management, namely: joint-stock companies with the state's share in the statutory fund more than 50% which have gone through or are still under listing procedure; joint-stock listed companies with the state's share less than 50%; enterprises established under the statute solely by the state or together with other shareholders, quasi-corporations (OECD, 2015).

In foreign books state-owned enterprises go under various names: state corporations; state commercial enterprises; state-related enterprises; semi-state enterprises; public corporations with state capital; state-sponsored enterprises; statutory corporations, etc. The existence of these naming units can be explained by applying various criteria. Among them are the following (Jones, Meintyre, Sturesson, 2015, p. 19; Pathirane; Blades., n. d., The Forfas, 2010, p. 7):

- the level of enterprise ownership (central / federal, national / regional / local). For example, in Sweden there are 74% of state-owned enterprises (cover 30% of workforce and bring in 40% of income). In Germany, there are 82% of business entities of the specified legal form (produce 62% of income) are governed by municipal administrations;
- the way of establishing an enterprise;

- the position in the hierarchy of state / public governance;
- the purpose of state-owned enterprise's activities;
- the transition status of a state-owned enterprise under privatization processes.

Other varieties of state-owned enterprises depend on the size of equity stake held by the state in a business unit. The criterion assumed is the division into companies which have gone/have not gone through or are still under listing procedure. The state may vest some business entities with special privileges and use them as an alternative to state-owned enterprises.

The way governments interpret and understand the function of ownership is crucial. Today, the most widespread are: the dual model<sup>4</sup> (that is a double one, because the responsibility for property management rests with one of the central ministries and sectoral departments), decentralized<sup>5</sup> (or sectoral in which management responsibilities are distributed among many relevant authorities) and centralized<sup>6</sup> (in which the state property is controlled by one ministry or a holding company/agency) (Armstrong, 2015).

Over the last years it has become fairly widespread in the developed countries that the state owns a share in the statutory funds of business partnership through public pension funds, public financial funds, asset management funds, corporations for restructuring and creditors for development. Another modern trend is that the state funds and state-owned enterprises are entering the international market, which turns them into macro-level management tools.

The variety of institutional and legal forms of state-owned enterprises and approaches to their governance add complexity to ownership policy formulation; make it less transparent and inappropriate to be regulated by the existing legislation. Harmonization of the legal status of state-owned enterprises is still ongoing (an important achievement in this context is the development of the International Public Sector Accounting Standards).

In the System of National Accounts (SNA), the concept of «public sector» is used, which includes: the general government, public non-financial and quasi-

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<sup>4</sup> The dual model is the most widespread and is found in Turkey, Italy, Switzerland, Greece, Mexico, and South Korea. Additionally, it serves as a «temporary area» for countries in transition to a centralized model of property management, as is the case with Austria, Australia, France and Great Britain.

<sup>5</sup> The decentralized governance model of state property, inherited from the command-administrative economy and remained in some countries (post-socialist, including Ukraine), has a number of shortcomings, although a positive effect is also possible, particularly in the case of Germany.

<sup>6</sup> According to experts of OECD, the centralized model is a reference model, which is evidenced by the practice of Denmark, Poland, Belgium, Norway, Sweden, the Netherlands, and Spain.

corporations, public financial institutions (Pathirane, Blades, n. d.). The Manual on Public Sector Statistics considers it as a set of enterprises based on the state property and controlled by the state (regularly or occasionally), particularly in respect to issues of high importance for the country (employment of population and stimulation of innovation) (Pathirane, Blades, n. d.).

In accordance with the National State Registry of Enterprises and Organizations of Ukraine, the State Statistics Service of Ukraine includes the following types of enterprises and organizations regarded as part of the public sector: state-owned enterprises, treasury enterprises, joint-stock companies (with the state's share in the statutory fund more than 50%), state organizations (National State Registry of Enterprises and Organizations of Ukraine). The classification is based on «the concept of ownership» and institutional and legal forms of business activities.

The review of international practice has indicated that the most typical criteria for defining market entities as state-owned enterprises are the following:

- the type of ownership as a key characteristic for including in a certain sector, particularly in Finland, Panama, Malawi, Ukraine. In the UK and Australia, state-owned enterprises, whose property will be transferred, do not belong to the public sector;
- the market share, which is taken into account in France, where the public sector includes primarily natural monopolies and quasi-corporations;
- the level of government under whose jurisdiction a state-owned enterprise falls. For example, in Egypt and Canada the public sector does not include enterprises governed by local authorities or municipal governments;
- the size of an enterprise or the number of employed, which is a basic characteristic, for example, in India, where the number of employed determines the sectoral affiliation of enterprises, especially those governed by local authorities. In most cases, large enterprises are state-owned.

The difference between the above-mentioned classification characteristics does not permit to clearly identify the boundaries of the public sector, its correlation with the concept of «state entrepreneurship» and functional orientation of the latter; thus, an adequate assessment of the efficiency of state-owned enterprises seen as a tool of public administration of economy becomes virtually impossible.

It is important to distinguish between the meanings of «state entrepreneurship» and «public sector». In economic literature and regulative and legislative framework (including Ukrainian), state entrepreneurship is regarded as versatile business activities of the state for producing goods and providing services/work



for agents of the economic system (for private enterprises and the general public) (National economy learning guide, 2011, p. 238). A state-owned enterprise acts as an institutional and legal form of activities, to which it is necessary to apply a wide range of governance practices (the state can establish new business units, liquidate or reorganize them, sell some assets, etc). With this in mind, the transformation of state entrepreneurship should be considered in the light of privatization and re-privatization.

### **A review of privatization reforms throughout the world in the 1990s and their progress under the current circumstances**

Privatization was a logical part of transformation processes that unfolded in the 1990s of the 20<sup>th</sup> century. Shortly before, in 1989, Portugal, Spain, and the Netherlands declared denationalization of state property items. As early as 1993, Italy, Portugal, and Turkey reported on completing the first stage of optimization of the boundaries of the public sector (Nunnenkamp, 1986, p. 187). At that time, Belgium, Greece, Ireland, and Ukraine were only about to start the development of privatization policy, taking into account the experience gained so far from the above-mentioned countries.

The impetus to review ownership relations in lots of countries was provided by the International Monetary Fund and the World Bank that made privatization and transition from the command economy one of the explicit conditions of financial aid (these principles are embedded in the Washington Consensus, whose conditions are considered irrelevant and outdated). Even profitable enterprises were sold, as in the case of steel production enterprises in Korea or electric power industry in Europe. Generally, the privatization doctrine of that time is reduced to the following point: being ineffective it still contributed to high-speed generation of significant financial resources.

The active phase of privatization took place in 1990–2003, when 120 countries completed 7,860 transactions valued at \$ 410 billion which accounted for 0.5% of the GDP over the stated period (Roland, 2008). Due to the financial crisis in the East Asian countries (in 1997) and then in Russia and Brazil (in 1998), it slowed down considerably. Despite the decline of the number of completed privatization projects, the proceeds from them were relatively high, resulting from denationalization of strategically important companies (Italy (ENI, petroleum); Switzerland (Swisscom, tlc); Spain (ENDESA, electric utility); France (France Telecom, tlc)). Consequently, until 2002, privatization of such types of enterprises generated 68% of privatization revenues in European countries, which accounted for 38% of the world's revenues (in the UK and Spain, state-

owned enterprises of energy, telecommunication, and transport branches were ultimately transferred into private ownership) (Roland, 2008).

According to statistics provided by the World Bank, in most countries privatization reached its peak in 1997, when the revenues from the sales of state-owned enterprises amounted to \$ 70 billion (Roland, 2008). The largest contribution to the amount was made by Argentina, Brazil, Mexico, Kazakhstan, Russia, Hungary, Poland, the Czech Republic, Slovakia, and China. Over the subsequent years, privatization slowed down again and caused a decrease in overall level of income: in 2000 by 34%, and in 2002 by 50%, reaching a record low (Kikeri, Kolo, p.7). Moreover, privatization processes shifted geographically.

In 2000-2001, Turkey and Brazil faced the crisis, and therefore, the initiative was seized by China, Poland and the Czech Republic, which together completed 60% of all the privatization transactions from 2000 onwards (Kikeri, Kolo, p. 8). Over the 1990s, some countries took the lead in terms of intensity of denationalization processes, namely Brazil, China, India, Poland, and Russia that accomplished 41.3% of all the privatization procedures.

In the OECD countries the active phase of privatization lasted from 2000 to 2004, and it revived again in 2005-2008 after a short interruption. The peak of the world's privatization income was reached in 2009-2010 due to the economic policies of China, Brazil, and Malaysia. Even at that time, a number of countries (Argentina, Kenya, Mexico, Pakistan, Peru and post-socialist countries) privatized a lot of enterprises. However, Iran, Syria, India, Vietnam, Saudi Arabia and several Gulf States just launched small-scale privatization campaigns, which were driven by the economic crisis.

During the period of intensive reforms of property relations (1989–2000), a number of enterprises were handed over to new owners, namely: energy sector – 15%; primary sector – 3%; competitive sector – 19%; financial sector – 13%; infrastructure – 50% (Kikeri, Kolo, p.11). In some countries, the share of state revenues from state-owned enterprises over the survey period were as follows: Turkey – 6%; the Czech Republic – 2%; Hungary – 3%; Poland – 4%; Slovenia – 5%; Slovakia – 3%; China – 7% (Kikeri, Kolo, p. 11). The largest decrease of the share of state-owned enterprises' contribution to GDP was seen in China, where it accounted for 80% of GDP in the early 1990s and only 17% of GDP in 2003. Based on the above information, it can be concluded that privatization revenues were higher than the amount of revenues from ordinary activities of state-owned enterprises, which explains budgetary and financial reasons behind privatization.

Nowadays, there is no visible privatization activity in the world's developed countries (the most notable withdrawal of state ownership in the OECD countries was recorded in 1998–2008). Conversely, in countries with transition economies it has still been maintaining its momentum: after 2000–2003, then a new wave of privatization started in 2009–2010 and finally in 2012–2015.

According to data reported by the Privatization Barometer, in 2014–2015 a number of countries took the leading positions in terms of the amount of privatization revenues, namely China (\$206.9 billion), the UK (\$31.8 billion), Greece (\$13 billion), Australia (\$12.6 billion), Spain (\$10.7 billion), and therefore today these countries are dictating new trends in privatization. In 2014–2015, India, Spain, Turkey, the USA, Saudi Arabia, and Italy made a series of lucrative deals on transferring ownership of state property, which brought in revenues of \$430.2 billion or 6.7% of total revenues (1989–2015 – \$3258.9 billion, from 1989 onwards) (The PB Report 2014/2015, 2016).

Based on the analysis of the ongoing transformation processes in the public sector, the experts of the World Bank determined the following correlation: when the amount of foreign direct investments decreases, the amount of privatization revenues increases. This has been particularly notable since 2000 (Kikeri, Kolo, p. 21). The fact is obvious, that private enterprises, unlike state-owned ones, face considerable difficulties in attracting investments. That is why privatization should alternatively be seen as an attempt of the government to make the private sector serve public interests. In addition, an important conclusion can be drawn: even if a state-owned enterprise which is transformed into a private entity is profitable, it does not necessarily prove its efficiency.

In Latin America, as well as in a number of post-socialist countries shady schemes were employed to change institutional and legal forms of state-owned enterprises, which negatively affected the living standards of people (according to the Gini coefficient) and did not lead to the expected improvement of the economic situation. There were even more controversies regarding privatization reforms due to transferring assets of natural monopolies and quasi-corporations to new owners precisely at the times when antimonopoly and regulatory policies were being developed.

It was under those circumstances that the reform of ownership relations was established in Ukraine in 1992. However, the qualitative changes made by the reform became visible only in the 2000s of the 21<sup>st</sup> century. In spite of some disadvantages, in 1992–2014 the privatization covered 28,601 state-owned entities (predominantly enterprises of wholesale and retail trade, catering industry and personal service), which contributed \$63,669.1 million of privatization revenues to the state budget and facilitated the establishment of a substantial private sector (Reports of the State Property Fund of Ukraine, n. d.).

China, South Africa and Russia have developed their own concepts of state capitalism, which allow them to make qualitative changes in the system of state management; yet, these changes do not apply to the public sector, given the chronic nature of reforms, poor management and corrupt practices of disposition of state property.

Summarizing the findings of research on the optimization of the share of state in privatization processes, it should be noted that Irish experts of Forfas

(based on the Ireland National Development Plan 2007–2013) identified constraining factors which require the involvement of the state in commercial activities: the existence of natural monopolies and their price policy; market failures and instability of the private sector in times of financial and economic crises; externalities and their negative impact; lack of equal opportunities for all economic agents (The Forfas, 2010, p. 35). This group of factors should be taken into account by governments, including Ukraine, when launching a privatization campaign in the future.

### **Current tendencies of the development of state entrepreneurship at the international level**

State-owned enterprises have established themselves as an integral part of the economic landscape and laid claim to the role of the most influential economic units in the world in the near future. For some countries, they have become an opportunity to enter the global market and an impulse for economic growth in a competitive environment. As a result of increased competition over attracting financial resources, skilled labour workforce and other resources, state entrepreneurship is rapidly regaining pre-privatization levels on the global stage.

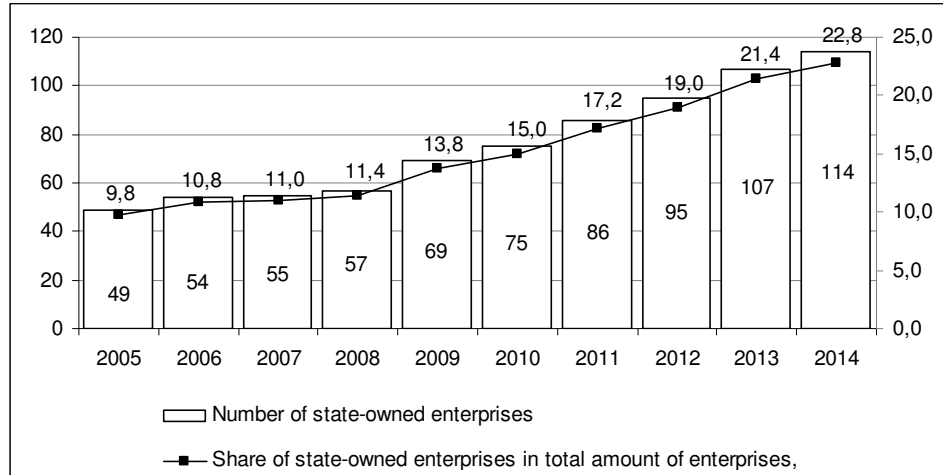
On a global scale, state entrepreneurship is characterized by the following data: 20% of global investments; 5% of total employment; 5% of the OECD economies; 50% of the entire GDP of the Middle East and North Africa; 15% of the GDP of Africa; 8% of the GDP of Latin America; 6% of the GDP of Asian countries (Armstrong, n.d.). In fact, the share of state-owned enterprises in 42 countries represented in the Fortune Global 500 increased from 9.8% (49 units) in 2005 to 22.8% (114 units) in 2014 (Figure 1).

Among 500 most powerful countries, an absolute leader in terms of the number of enterprises with the state's share in the statutory fund was China (Table 1).

In 2010, there was a turning point, when the share of Chinese state-owned enterprises (7%) on the Fortune Global 500 list amounted to the share of state-owned enterprises in the rest of the countries. Since then, China has become an absolute leader by the number of enterprises with state investments in this respected ranking. In general, in 2005-2014 the growth of share of Chinese state-owned enterprises was 12%. Another important fact that proves the success of China as an entrepreneurial state was that 3 state-owned enterprises belonged to the top 10 world's biggest enterprises (by revenues) in 2014.

Figure 1

**Quantitative characteristics of the growth of state-owned enterprises on the Fortune Global 500 list, in 2005–2014**



Note: Created by the authors on the basis of data from [6; 16, p. 1742].

Table 1

**Dynamics of share of state-owned enterprises on the Fortune Global 500 list in capital formation, %<sup>7</sup>**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Share of state-owned enterprises in China	3	3	4	5	6	7	10	12	14	15
Share of state-owned enterprises in the rest of the countries	6	5	6	6	7	7	7	7	7	8

Source: Based on data from [16, p. 1743].

<sup>7</sup> State-owned enterprises are defined as those having public ownership of more than 50%.

In 2014, state-owned enterprises on the Fortune Global Top 25 list were from countries seen as potential competitors of China (8 units) by number: France (3 units), Germany (3 units), Russia (2 units), and Italy (2 units) (Table 2).

Table 2

**The list of enterprises with the state's share in the statutory fund on the Fortune Global Top 25, in 2014**

No	Company name	Economic sector	Home country	Market value, \$ billion	Revenues, \$ billion	Value of assets, \$ billion
3	PetroChina	Gas and oil supply	China	202.0	328.5	386.9
9	Volkswagen	Machine building	Germany	119.0	261.5	446.9
11	Gazprom	Gas and oil supply	Russia	88.8	164.6	397.2
16	China Mobile	Telecommunications	China	184.6	102.5	192.8
17	Sincpec-China Petroleum	Gas and oil supply	China	94.7	445.3	228.4
18	Petrobras	Gas and oil supply	Brazil	86.8	141.2	319.2
21	Rosneft	Gas and oil supply	Russia	70.0	142.6	229.4
25	ENI	Gas and oil supply	Italy	90.9	152.7	186.6
32	EDF	Electric power	France	75.8	100.4	353.9
33	Statoil	Gas and oil supply	Norway	89.2	105.2	146.0
38	NTT	Telecommunications	Japan	61.0	110.7	189.3
43	Enel	Electric power	Italy	53.2	106.3	226.2
61	Saudi Basic Industries	Chemical production	Saudi Arabia	94.4	50.4	90.4
64	CNOOC	Gas and oil supply	China	67.2	43.0	102.7
74	China Shenhua Energy	Mining	China	57.6	42.8	80.4

No	Company name	Economic sector	Home country	Market value, \$ billion	Revenues, \$ billion	Value of assets, \$ billion
77	Ecopetrol	Gas and oil supply	Colombia	83.6	37.7	68.5
78	EADSA	Airspace and border security	France	56.9	78.7	128.6
87	France Telecom	Telecommunications	France	39.0	54.4	118.3
88	Deutsche Telecom	Telecommunications	Germany	71.2	79.8	162.8
92	China Telecom	Telecommunications	China	37.4	52.3	89.7
102	Deutsche Post	Aviation	Germany	45.4	73.1	48.9
111	SAIC Motor	Machine building	China	24.7	88.3	56.4
112	Oil&Natural Gas	Gas and oil supply	India	46.4	29.6	53.8
116	PTT PCL	Gas and oil supply	Thailand	26.7	92.5	54.8
124	China Unicom	Telecommunications	China	31.6	48.0	87.5

Source: Based on data from (OECD, 2015).

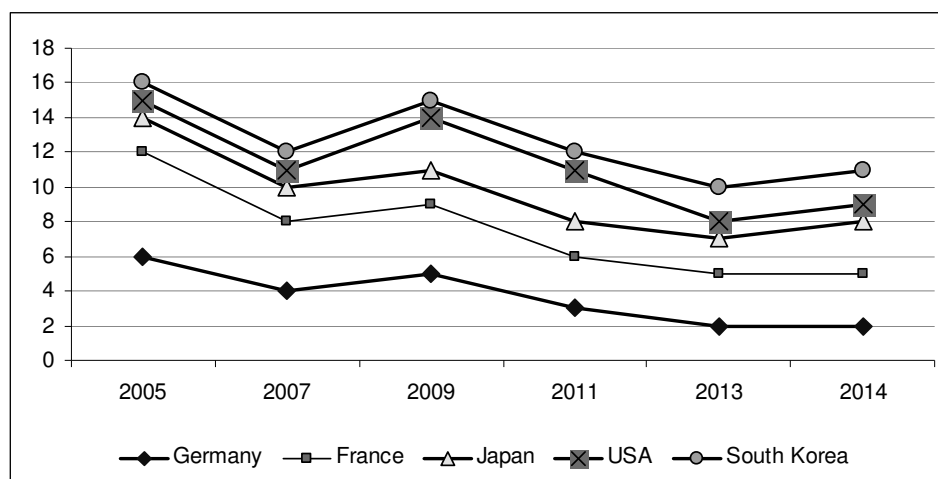
The majority of successful state-owned enterprises operate in the sectors of the real economy. In 2014, the market value of enterprises as well as revenues were the highest possible in China and somewhat lower in Germany, Italy, Russia, and France (Table 2).

Despite the overall positive tendency in the number of state-owned enterprises on the Fortune Global 500 list, the situation is different in terms of groups of countries. In the developed countries a decrease in the number was common, especially during 2009–2011 (Figure 2).

The growth driven by openness of joint-stock enterprises with the state's share in the statutory fund to collaboration with private investors has promoted mixed ownership and the idea of state-private partnership. Another factor that affected the dynamics was a set of proactive policies being followed by the developed countries. Those policies aimed at optimization of the public sector were implemented in the 2000s of the 21<sup>st</sup> century.

Figure 2

**Dynamics of the number of state-owned enterprises  
in the developed countries on the Fortune Global 500, in 2005–2014**



Note: Created by the authors on the basis of data from (Kwiatkowski, Augustynowicz, 2015, p. 1743).

At the same time, the developing countries give a crucial role to state entrepreneurship due to the need of ensuring control over integration processes, enhancing economic links, protecting national interests under conditions of globalization and internationalization (Figure 3).

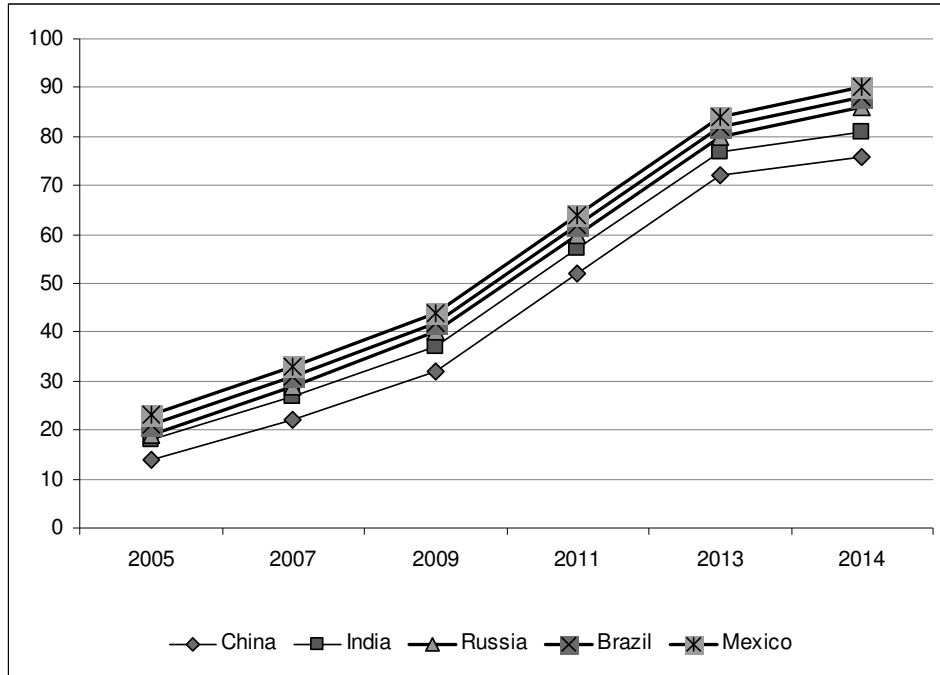
In Ukraine, where reforms and transformations are being actively implemented, a decrease in the number of state-owned enterprises is observed, and their ratio in the public sector fell from 1.5% in 2005 to 0.7% in 2014 (The share of public sector in the economy of Ukraine, 2015). None of Ukrainian state-owned enterprises has been included in global rankings of success (although certain enterprises have necessary potential and need state support for its realization), which is clear evidence of their poor performance and inefficiency.

The results of the recent privatization reforms had an impact on both quantitative and sectoral changes in the economic structure. In 2014, in the OECD countries state ownership amounted to only 14% in transport, 24% in electric power industry, 3% in telecommunications, 14% in primary sector and 24% in financial sector. In developing countries, state ownership is found in: infrastructure (34%), electric power industry (5%), and manufacturing industry (45%) (OECD, 2015).



Figure 3

**Dynamics of the number of state-owned enterprises  
in the developing countries on the Fortune Global 500, in 2005–2014**



Note: Created by the authors on the basis of data from [16, p. 1743].

The reform of property relations in most post-socialist countries did not produce the expected results, as evidenced by the overall indicator of economic growth, calculated on the basis of changes in the value of GDP at purchasing power parity per capita in 1990-2014.<sup>8</sup> Estonia, Kazakhstan, Belarus, Uzbekistan, and Azerbaijan coped with exogenous and endogenous challenges much better than other countries. Ukraine ranked thirteenth of fifteen countries, and it is currently continuing to lag significantly behind the development level of Latvia, Lithuania, Armenia, Georgia and Russia, which turns it into an outsider of transformation processes along with Kyrgyzstan and Tajikistan (Electronic Resource,

<sup>8</sup>The overall indicator of growth in post-Soviet economies is calculated for 15 countries by information and analytical center «Info-Light».

n.d.). Ultimately, post-Soviet economies failed the initiated transformations, as their shares in the world GDP went down by 40% over the last 20 years, which was almost the worst regional result in the world (Electronic Resource, n.d.).

According to the Fortune Top 100 ranking, in 2014 in the global dimension Ukraine had a decisive influence on 22 (22.0%) of the world's biggest companies; in the Fortune 2000, it influenced 282 (14.1%) of enterprises with state investments (Kwiatkowski, Augustynowicz, 2015, p. 1743).). According to «The Economist» in 2003-2010 state-owned enterprises represented a third of foreign direct investments, and in 2012 provided 80% of added value to China's stock market, 62% to Russia's, and 38% to Brazil's (The Economist, 2012; Kowalski, p. 1–44).

Today, the top 8 countries with the largest concentration of state-owned enterprises in the economy account for over 20% of the world's trade, namely: China, the United Arab Emirates, Russia, Indonesia, Malaysia, Saudi Arabia, India, and Brazil. This can be explained not only by the effect of state entrepreneurship, but also by a rapid urbanization, demographic and social factors, technological discoveries, climate changes and resource depletion in the world.

### **Innovation and investment contributions of state entrepreneurship as part of its internationalization**

Privatization has encouraged a speedy movement of financial resources, and therefore state entrepreneurship has become responsible for the implementation of efficient public investment policies and begun to play a new role of the guarantor of a return on investments for private / foreign investors.

A number of lead countries, namely China, India, Germany, France, Russia, Italy, Thailand, are co-owners of top companies with state capital by the number of attracted private investments. Ukraine, Bulgaria, Belarus, Lithuania, Moldova, and Romania lagged significantly behind in terms of attracted investments and concluded agreement. The effectiveness of state entrepreneurship in investing activities is evidenced by many business stories of well-known companies that began their path to success in the status of state-owned enterprises (France: Renault, Alcatel, EdF, Thomson, Elf; the UK: Rolls Royce, British Aerospace; the USA: Apple).

It was national expenditure on defence that created prerequisites for the emergence of «virtual assistants» with voice control, GPS and the Internet penetration, whose inventors were mostly scholars from state universities (as in the case with touch-screen and HTML). The Apple Corporation strengthened its positions thanks to state investments and the reduction in the tax burden at its early stages of establishment. The National Science Foundation in the USA supported

a grant for developing a web search engine by Google. The pharmaceutical industry and electronics manufacturer are the first consumers of state innovations (Entrepreneurial statism, 2013, pp. 11–12).

The latest research and technology breakthroughs in IT, pharmacy and biotechnology, energy-saving technology would not be possible without the leading role of the state in promoting the development of nanotechnology. There is even a Chinese proverb related to the issue: when the private sector backs out, the public sectors advances (Entrepreneurial Statism, 2013, pp. 11–12). Then there is a clear difference between the state and private businesses: the former is not always able to quit while it is ahead, because money from taxes is a constant source of income; whereas for a private entrepreneur financial resources are limited, and running out of them signals inefficiency of investments.

Integration processes have led to the emergence of multinational companies, which promote active circulation of foreign direct investments. Mergers and acquisitions of state-owned enterprises in different countries have become an international tendency (from 20% of change of ownership transactions in 2009 to 9% in 2014) (Armstrong, 2015).

Morgan Stanley Composite Index (MSCI index) and the number of international mergers and acquisitions of state-owned assets are moving in opposite directions: when one is rising, the other is decreasing. The total amount of transactions undertaken by state-owned enterprises over 1996-2013 was \$521 million (Armstrong, 2015). The most transactions were accomplished by joint-stock enterprises whose state share of capital does not exceed 50%. During that period, private enterprises carried out transactions amounting to \$235 million, which is half less than state-owned enterprises did (Armstrong, 2015).

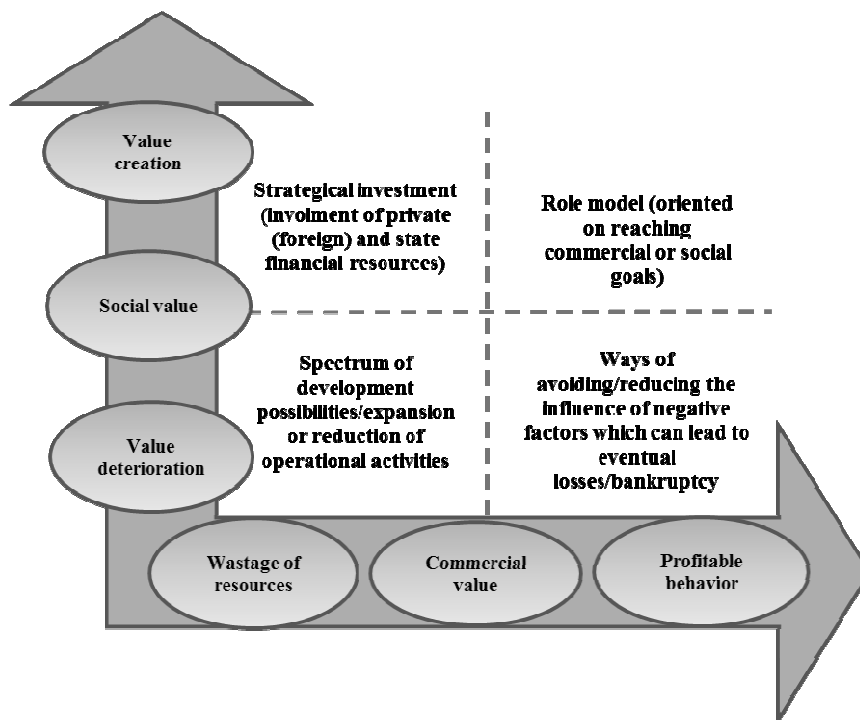
Given the transient and unstable circumstances, activities in the sphere of innovation and investment performed by state-owned enterprises depend on a wide range of factors, which have been taken into account by experts of PwC in developing a matrix on generating added value by enterprises with state investments. Some supplements to the matrix make it possible to forecast a probable conduct of the state investor/state innovator under various circumstances and reconsider possible actions (Figure 4).

However, despite many positive changes, it is worth drawing attention to the following current challenges of state entrepreneurship that many countries are facing:

1) the principal-agent problem, that is an imperfect communication between the principal and the agent: state-owned enterprises are managed by managers rather than by owners, who do not always have exact information on the financial status. There might be conflicts between them, which lead to a lack of motivation to work hard for results (no proper delimitation of functions between an owner and regulator);

Figure 4

## Matrix on generating value by state-owned enterprises



Note: Created by the authors on the basis of data from (Jones, Meintyre, Sturesson, 2015, p. 24).

2) the free-rider problem: according to the ideology of state entrepreneurship, state property items belong to public. None of them bear individual responsibility for regulatory activities, since all consumers of public goods, without exception, ultimately benefit;

3) the soft budget constraints: state-owned enterprises provide the state with extra financial assistance in times of crisis, even though sometimes they are unable to handle their own obligations. They are protected from certain threats and challenges that other entities face on a daily basis, which does not have a positive impact on their performance.

4) accountability and performance, that is an issue of accountability and performance of state-owned enterprises as a political arena: the ambiguity of

non-commercial aims of state-owned enterprises and a lack of openness and transparency of their activities enhance lobbying by narrow interest groups and encourage corruption and shadow economy.

Taking into account the above matrix and the current challenges affecting the world's economies, PwC produced a roadmap for state entrepreneurship of the future, which will help countries develop common responsibilities for entities in the public sector in order to increase their compatibility and efficiency (Jones, Meintyre, Sturesson, 2015, p. 28). Based on this roadmap and the research findings, the following key tasks of state entrepreneurship in the near future can be identified, which will remain relevant both in the world and Ukraine: shaping national brands and reputation; encouraging innovative development; employment creation; maintaining the stability of economic environment; the supply of public goods.

## **Conclusions**

The optimization of the public sector carried out during the privatization process has failed to meet expectation in most countries. Inefficient management of state-owned enterprises has remained an unsolved problem. Simultaneously, state entrepreneurship has proved its importance in times of crisis in the economy. Therefore, the tasks of organizing the proper usage of state-owned enterprises' capacity at the most favourable times, during internationalization of economic activities of entities, globalization and application of an improved model of state capitalism are now more relevant than ever.

The process within which state-owned enterprises are entering the international market and growing into multinational corporations has confirmed the evolution of state entrepreneurship seen as the state's tool for managing the economy. This, in turn, requires a complete revision of socio-economic purposes of state-owned enterprises and a clear definition of their functions.

The research findings have shown that governments are unable to create a climate for economic growth on their own, since certain companies go beyond their control and regulatory framework. At G20 Summit in 2016, world leaders confirmed the need for global economic stability through establishing common tools for state administration of the public and private sectors.

According to P. Armstrong, state entrepreneurship is capable of providing an exclusive way of economic growth in developing countries (Fortune Global 500, 2015). Even though we agree with him, we propose our own set of actions to be completed in order to ultimately establish state entrepreneurship as an integral part of state administration of the economy under current conditions: formation of self-reliant managerial elite in the public sector who are com-

mitted to fundamental components of 4C-model<sup>9</sup>; introduction into practice of advanced approaches to business activities based on the penta-helix<sup>10</sup> model and the blue ocean strategy<sup>11</sup>; openness, accountability and accounting of state-owned enterprises, which enable the government as an owner to build a relationship of trust with the public, other shareholders and directly with management; introduction of science and technology innovations only if a budget is clearly defined («better for less») in order to address economic and social needs; division between commercially and socially important targets; development of a specific management policy for transnational companies whose activities should contribute to positive social and economic changes. The privatization doctrine also requires reconsideration and introduction of successful experience and practices of the OECD countries, especially in post-socialist environment.

Concerning further studies, a detailed review of domestic and foreign methodological approaches to determining the efficiency of management of state property should be undertaken in order to develop a single criterion approach, which enables state entrepreneurship to position itself as a system element of economic governance.

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<sup>9</sup> The marketing model of entrepreneurial activities which includes the following components: clarity, capacity, capability, commitment to integrity.

<sup>10</sup> The concept of inter-sectoral cooperation which combines the government, social organizations, the private sector, the public, and educational institutions, ensuring cooperation between them in order to maximize social benefits.

<sup>11</sup> The strategy is widely used by enterprises in Asian countries as an instruction for forming their niche in a competitive environment through innovation activities.

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