ВІДТВОРЕННЯ ОСНОВНОГО КАПІТАЛУ В УКРАЇНІ: ДЕЯКІ ОСОБЛИВОСТІ ТА РЕКОМЕНДАЦІЇ ДЛЯ ДЕРЖАВНОЇ ПОЛІТИКИ

Актуальність. ВВП України не досяг рівня початку 1990-х років, а конкурентоспроможність економіки залишається низькою. Багато в чому це пов’язано із станом інвестиційного процесу. Для його дослідження зазвичай використовуються узагальнені статистичні дані. Однак ситуація на окремих підприємствах, особливо в умовах перехідної економіки, суттєво відрізняється. Для з’ясування, як відбувається оновлення основного капіталу, вироблення обґрунтованих рекомендацій необхідний аналіз даних великих груп підприємств.

Мета та завдання. Мета статті – з’ясувати, чи існує в Україні значний сектор підприємств із негативними чистими інвестиціями. Це дозволить дати обґрунтовані рекомендації щодо вдосконалення економічної політики.

Результати. У статті проаналізовано звітність 2,5 тисяч промислових підприємств України. З’ясовано, що більше як третина інвестицій припадає на 5% підприємств. Водночас приблизно на 30% з них чисті інвестиції систематично є негативними. Існування значного сектора таких підприємств вкрай негативно впливає на конкурентоспроможність національної економіки. Обґрунтовано, що основними причинами такої ситуації є неадекватний захист прав власності, низький рівень конкуренції та її нерівні умови на багатьох ринках.

Висновки. Істотне скорочення сектора підприємств із негативними чистими інвестиціями – одна з найважливіших умов підвищення конкурентоспроможності економіки України. Це можливо внаслідок реформ, які забезпечать посилення конкуренції, вирівнювання її умов, надійний захист прав власності. Для усунення антиконкурентних норм із законодавства слід використовувати Інструментарій ОЕСР для оцінки впливу на конкуренцію. Щоб не допустити скорочення виробництва та зростання безробіття внаслідок банкрутства неефективних підприємств, пропонується здійснення заходів, спрямованих на стимулювання розвитку найбільш динамічних компаній і збільшення їх внеску у економіку, передусім за рахунок підтримки фірм-газелей та кластерів.

Ключові слова: негативні чисті інвестиції, амортизація, конкуренція, перехідна економіка

SHCHERBAK A.V.,
PhD (Economics)
Senior researcher
Institute of Market and Economic\Ecological Research of the National Academy of Sciences of Ukraine
Frantsuzskiy Boulevard, 29, Odessa, Ukraine, 65044
E-mail: av.shcherbak@gmail.com
ORCID: 0000-0002-7607-5266

SPASSKYI I.D.
Director
Odessa Private Lyceum "At the Crossroads".
REPRODUCTION OF FIXED CAPITAL IN UKRAINE: SOME FEATURES AND RECOMMENDATIONS FOR PUBLIC POLICY

**Topicality.** Ukraine's GDP has not reached the level of the early 1990s, and the competitiveness of the economy remains low. This is largely due to the state of the investment process. Generalized statistical data are usually used for its research. However, the situation at individual enterprises, especially in a transitional economy, is significantly different. To find out how the renewal of fixed capital takes place, to develop sound recommendations, it is necessary to analyze information concerning large groups of enterprises.

**Aim and tasks.** The purpose of the article is to find out if there is a significant sector of enterprises with negative net investments in Ukraine. This will make it possible to give sound recommendations for improving economic policy.

**Research results.** The article analyzes the reporting of 2.5 thousand industrial enterprises in Ukraine. It was found that more than a third of investments are in 5% of enterprises. At the same time, about 30% of them regularly make negative net investments. The existence of a significant sector of such enterprises has an extremely negative impact on the competitiveness of the national economy. It is substantiated that the main reasons for this situation are inadequate protection of property rights, a low level of competition and its unequal conditions in many markets.

**Conclusion.** A significant reduction in the sector of enterprises with negative net investments is one of the most important conditions for increasing the competitiveness of the Ukrainian economy. This is possible as a result of reforms that will enhance competition, leveling its conditions, and reliable protection of property rights. The OECD Competition Assessment Toolkit should be used to remove anti-competitive regulations from legislation. In order to prevent a decrease in production and an increase in unemployment as a result of the bankruptcy of inefficient enterprises, it is necessary to take measures aimed at stimulating the development of the most dynamic companies and increasing their contribution to the economy, primarily by supporting gazelle firms and clusters.

**Keywords:** negative net investments, depreciation, competition, transition economy.

**Problem statement and its connection with important scientific and practical tasks.** Investment of a portion of the profits is an essential precondition for normal development of an enterprise. Approximate equality of gross investment and depreciation generally leads to a drastic slowdown in growth or stagnation in production. Of course, in conditions of rapid scientific and technical progress and use of accelerated depreciation, expansion of production can be achieved by depreciation. However, even in developed countries this is possible only in some industries. At the same time, for some companies net investments remain negative for a number of years. This has a very negative impact on their activities.

This problem was investigated by Ludwig von Mises. He linked it to time preference theory, according to which people tend more to value satisfaction of needs in the near future rather than in some distant future. Mises indicated that each individual is forced to choose between satisfaction in various periods of time. «Some people consume all that they earn, others consume a part of their capital, others save a part of their income» [1, p. 486].

However, in reality, an entrepreneur is far from being always free to choose a pattern of behaviour. Often negative net investments is a forced measure. Low production efficiency, insufficient demand for the company's products forces managers to use available resources for survival. The enterprise can recover by means of restructuring, updating of products, expansion into new markets. Otherwise, it will sooner or later be out of business. That is why there can not be many of such enterprises in developed countries.

The situation is quite different in the time of crisis. In the USA net investments were negative during the Great Depression. In the period 1931- 1935 their total volume reached minus 18.3 billion US dollars [2, p.7]. At the same time, the crisis boosted large-scale investments by intensifying competition. This manifested itself strongly in the 19th century, when steep drop in prices during crisis created conditions for massive renovation of fixed assets [3].

Negative net investments were typical for a significant part of enterprises in conditions of a transformational recession that post-socialist countries experienced in the 1990s. L. Lizal and J. Svejnar analized the state of investment in the Czech industry in 1992-1995. They showed that the relationship between gross investment and depreciation was different in different groups of enterprises. Meanwhile private enterprises and companies with foreign capital were actively investing, the situation at the State-owned enterprises was significantly different. Gross investments consistently exceeded depreciation in private companies and companies with foreign capital in the State-owned joint-stock companies, while for other State-owned enterprises gross investments were less than depreciation during two years out of four,
and during the rest of the years they exceeded depreciation only narrowly. This goes to show that quite a large number of the State-owned enterprises used depreciation for salaries payments and other current needs [4].

Scale and duration of the transformational recession were especially notable in countries that emerged as a result of the collapse of the USSR (except for the Baltic states). At the same time Ye. Yasin noted in 2004, that even after the end of recession and the start of economic growth the reduction of capital of many Russian enterprises continued. Percentage of the Russian industrial enterprises with negative net investments, even with adjustments for the facilities’ utilization rate, was 59.5% in 2000 and 72.2% in 2001.

This can be partly explained by the fact that production growth was largely due to an increase in the utilization of available facilities with minimal investment. However, according to Yasin, institutional factors were more important here: uncertainty of property rights and lack of its protection, lack of trust in investors, unwillingness of investors and banks to take any risks, poor performance of natural selection mechanisms which are characteristic for the market economy. He drew a conclusion that the problem of modernization of the Russian economy is not a lack of money, but the absence of incentives and an overblown distrust [5].

Ukraine's GDP has not yet reached the level of the early 1990s, and the competitiveness of the economy remains low. This is largely due to the state of the investment process.

Analysis of recent publications on the problem. The problems of reproduction of fixed capital in Ukraine were considered in the works of I.Kryuchkova, B.Kvasnuk, L.Lazebnik, L. Zhdanova, M. Zveryakov. Allocation of previously unsolved parts of the general problem. However, their works did not investigate whether there is a sector of enterprises with negative net investment in Ukraine.

Formulation of research objectives (problem statement). The purpose of this article is to find out whether there is a significant sector of enterprises with negative net investments in Ukraine. This will make it possible to give sound recommendations for improving economic policy. Since the manufacturing plays a crucial role in the implementation of the achievements of scientific and technological progress, let us consider the situation in this industry.

An outline of the main results and their justification

Methodology and empirical analysis

In the USSR the State authorities controlled proper use of depreciation. Enterprises created depreciation funds, which were used to finance investments and conduct overhaul repairs of fixed assets. After the implementation of market reforms investment financing mechanisms have undergone significant changes. Thus, the share of depreciation in financing investments in Ukraine amounted to 9-12% in recent years. At first glance, this is an indication of low rates of depreciation which exist in the country. However, L. Lazebnik drew attention to the paradoxical situation when, on average, in the period of time between 2011 and 2016 depreciation was 6 times higher than the investments which it was used to finance [6, p.70].

A. Tsigichko, who conducted an in-depth research into the processes of refunding fixed capital in developed countries way back in the time of the Soviet Union, noted that corporations rarely create depreciation funds, because their managers believe that money can be used more profitably in regular monetary transactions [7, p. 46].

The same logic guides business leaders in the countries with transition economy. Using a significant part of depreciation for current needs, if deemed necessary, they finance investments from profits and other sources. That is why, in order to study the process of renewal of fixed assets, it is necessary to compare depreciation and investments. When analyzing the relationship between investment and depreciation at individual enterprises, it is advisable to evaluate it over a period of time spanning several years. If said relationship is studied in a given industry or throughout the entire economy, yearly data may be used.

As can be seen from table 1, the depreciation in Ukraine in 2015, 2016, 2018 and 2020 exceeded the investments from own funds of enterprises and organizations. The difference between these indicators is especially large in 2020, because in the context of a severe economic crisis, capital investments fell by 38.2% that year. It is clear that the generalized data masks significant differences. Meanwhile some enterprises were investing a significant portion of their profits, other companies had negative net investments.

At the same time, for in-depth study of the problem it is impossible to limit oneself to the analysis of generalized statistical data and materials provided by individual companies. It is necessary to analyze information concerning large groups of enterprises. For this purpose, the 2015 statistical reporting data obtained from 2552 large and medium-sized enterprises in the manufacturing of Ukraine (with more than 50 employees) was used. Since the analyzed enterprises have provided almost 70% of the sales in
manufacturing, the sample can be considered a representative one, and the results of its analysis provide objective information about the state of the investment process.

Table 1. Investments and depreciation in Ukraine (billion UAH)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital investments from own funds of enterprises and organizations</td>
<td>184.3</td>
<td>248.8</td>
<td>310.0</td>
<td>409.6</td>
<td>408.3</td>
<td>279.3</td>
</tr>
<tr>
<td>Depreciation</td>
<td>199.8</td>
<td>271.8</td>
<td>244.0</td>
<td>451.0</td>
<td>399.2</td>
<td>508.8</td>
</tr>
</tbody>
</table>


The above mentioned reporting documents provide data on tangible assets investments. Since for the whole Ukrainian economy the intangible assets investments amounted to 6.7% of total investments in 2015, the fact that they were not taken into account did not significantly affect the results of the study.

Depreciation of 49 enterprises amount to zero, for another 28 companies its volume was less than 10 thousand UAH. With this, most of them had a significant volume of sales and employed tens, sometimes hundreds, of workers. Such situation is often associated with the methods used to protect a business against raider attacks, when an enterprise owns the fixed assets, and the other enterprise carries out economic activities by leasing it. Tangible assets investments of 245 enterprises amount to zero, at another 57 enterprises their volume is less than 10 thousand UAH.

It is interesting to compare the size of investments and depreciation. 38 enterprises did not make investments and did not accrue depreciation. Investments of 1107 enterprises exceeded their depreciation. At the same time, net investments of 1407 enterprises (56%) were negative. With this, investments of 221 enterprises were ten or more times less than the depreciation accrued during the year. And in 2015 208 enterprises did not invest at all, although depreciation was accrued.

As can be seen from table 2, tangible assets investments of the analyzed enterprises amounted to 28.6 billion UAH and were slightly less than the amount of depreciation. It is noteworthy that this proportion depends on the size of enterprises. While at large-sized enterprises (with 250 or more employees) depreciation was 15.7% higher than tangible assets investments, at medium-sized enterprises the situation was different. Investments were two times bigger than depreciation. This can be partly explained by sizable fixed assets owned by many large enterprises. But investment activity of medium-sized enterprises is of more importance. The share of investments in the volume of their sales amounted to 4.4%, which is significantly higher than that of large-sized enterprises. At the same time, the percentage of medium-sized enterprises with negative net investments is higher than that of large-sized ones. This data needs explanation. In developed countries the majority of medium-sized enterprises were in the past the most successful small firms, that is why they are generally more dynamic than large-sized ones. However, in a transition economy of Ukraine many medium-sized enterprises had previously been large, but reduced their volume of production and the number of employees. With this, some of them, upon restructuring, increased their production efficiency. The others failed to do this, and their capital continues to decrease.

Table 2. Investments and depreciation of the Ukrainian manufacturing enterprises in 2015

<table>
<thead>
<tr>
<th></th>
<th>Tangible assets investments, mln UAH</th>
<th>Depreciation, mln UAH</th>
<th>Percentage of tangible assets investments in the volume of sales, %</th>
<th>Percentage of enterprises with negative investments, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-sized enterprises</td>
<td>22139.3</td>
<td>25619.8</td>
<td>3.5</td>
<td>53.6</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>6485.2</td>
<td>3133.8</td>
<td>4.4</td>
<td>56.8</td>
</tr>
<tr>
<td>Total</td>
<td>28624.5</td>
<td>28753.6</td>
<td>3.7</td>
<td>56.0</td>
</tr>
</tbody>
</table>

Source: authors own calculations
Also, it is important that a significant part of the investment was absorbed by a relatively small number of enterprises. This can be seen from Table 3 which shows basic performance characteristics of 5% of enterprises which were investing most actively. This group of enterprises (10.2% of employed) was responsible for 37.1% of investments, although the group absorbed only 10.9% of the total depreciation.

5% of medium-sized enterprises (7% of employed) were responsible for 67.3% of investments, although they absorbed only 20.5% of the total depreciation of such enterprises. It is also possible to calculate the percentage of this group of enterprises in the manufacturing as a whole. They employed 1.8% of work force, but they absorbed 15.2% of investments!

This attests to the fact that there are a lot of dynamically developing enterprises in Ukraine. Thus, Interchem Company, established in Odessa in 1992, has begun production of pharmaceutical drugs on the basis of its R&D, as well as import-substituting preparations, previously not manufactured in Ukraine. In 2016 the company completed implementation of an investment project worth over 40 million euros, launching its laboratory-cum-production facility into operation. This allowed the company to increase its production capacity almost 4-fold.

Of course, when analyzing this data, it should be borne in mind that in 2015 Ukraine was experiencing a severe economic crisis, caused first and foremost by the Russian aggression, the industrial output fell by 13% and the industrial investment dropped by 19.9%. It should also be borne in mind that depreciation is accrued constantly, and large-scale investments are carried out periodically. Besides, intangible assets investments were not included in the calculations. Taking into account all of the above mentioned, we estimate that approximately 30% of the Ukrainian industrial enterprises systematically carry out negative net investments.

In reality the situation is even worse. The overwhelming majority of the equipment purchased by our enterprises is imported. At the same time, the market exchange rate of the hryvnia is significantly lower than the rate based on purchasing power parity (PPP). Using the results of the International Comparison Program, L. Zhdanova calculated the real size of the accumulation of fixed capital for a number of countries. So, in 2017, the share of gross fixed capital formation in Ukraine's GDP, calculated on the basis of national currency, was 15.76%, and on the basis of PPP - 10.35%. Investments in machinery and equipment, calculated in hryvnia, amounted to 8.02% of Ukraine's GDP, and based on PPP - 2% [8, p.37-38].

There is reason to believe that significant sector of enterprises with negative net investment exists in a number of other countries with economies in transition, in particular countries that emerged as a result of the collapse of the USSR. In 2016-2020 investments from own funds of enterprises and organizations in Russia roughly corresponded to the amount of depreciation. Since 2015 the Belarusian enterprises have been granted the right not to accrue depreciation on all or some fixed or intangible assets. The relevant decrees were annually adopted by the Council of Ministers of this country. This makes it possible to reduce costs by improving the financial condition of the enterprises in a crisis situation. Exploring the reproduction of fixed capital in the Kyrgyz Republic, A. Dzholdubaeva concluded that the most important reason for its obsolescence is the use of depreciation to finance other needs of enterprises [9]. At the same time, additional studies are needed to determine the extent of this phenomenon.

The study of the investment activity of the Czech industrial enterprises in 1992-1995, which was already mentioned in this paper, showed that the profitability of the enterprises had a strong positive impact on net investments. A one crown increase in profit results in a 0.1 crown instantaneous and 0.12 crown long-term increase in investment [4, p.11]. In our opinion, this is also true for the countries being analysed. After all, the most important source of financing investments in these countries is the enterprises’ own resources.

<table>
<thead>
<tr>
<th>Enterprises</th>
<th>Share of 5% of the enterprises in basic indicators (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sales</td>
</tr>
<tr>
<td>Large-sized</td>
<td>16.5</td>
</tr>
<tr>
<td>Medium-sized</td>
<td>15.5</td>
</tr>
<tr>
<td>Large- and medium-sized</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Source: author’s own calculations.
Therefore, in most cases negative net investments are indications of low profitability or unprofitability of the enterprise and, accordingly, attest to low efficiency of production. At the same time, the low level of investment hinders introduction of new technology and improvement in production technology. As a result, the existence of a significant sector of such enterprises has a very negative effect on the competitiveness of the economies of these countries.

Factors that determine growth and stagnation of investment

The American economist David Birch claimed that a large portion of the increase in employment and production output was achieved as a result of activities of a small number of fast-growing companies. Birch called them «gazelles», noting that such companies resemble this animal which is able to travel at high speeds for a long time [10]. The research conducted in a number of countries has confirmed that D. Birch was right. The study showed that 5 to 6% of companies create about 50% of jobs in developed countries [11].

In this connection, in the UK, Malaysia and a number of other countries there exist programs aimed at supporting the gazelle companies. This work is performed on a large scale in South Korea, where 7 projects aimed at stimulating the development of fast-growing innovative firms are being implemented [12]. The data specified above shows that the gazelle companies exist in Ukraine. According to some estimates the gazelles comprised 12-13% of the companies that existed in Russia in 1999-2007 [13].

In modern economy the clusters – associations of companies and related organizations located in the same territory that operate in a certain field and complement each other - become centres of growth. Clusters ensure a rapid increase in investment and employment; they generate numerous innovations [14]. Clusters operate in countries with a transition economy [15]. Ukraine is one of the few countries in Europe without cluster support programs at the national level.

In a transition economy, institutional factors have a significant impact on the investment process. In 2021 Ukraine ranked 106th among 129 countries of the world according to the level of property rights protection in the ranking compiled by the Property Rights Alliance. Unsatisfactory property rights protection contributes to "investor myopia", when a significant part of the funds is used to purchase real estate, gold or transferred abroad [16].

The level of competition has a significant impact on the process of capital accumulation. Intense competition promotes the introduction of new machinery and state-of-the-art technologies.

According to a survey conducted by the Institute for Economic Research and Political Consultations among the managers of the industrial enterprises, in the fourth quarter of 2018 only 36.8% of respondents felt strong competitive pressure from other domestic enterprises. The level of import competition was significantly lower [17, p.8]. Unfortunately, such data were not published later, but the situation is unlikely to change fundamentally. Ukraine characterized by unequal conditions of competition - different tax regimes, subsidies from the State and local authorities, unequal access to land and infrastructure facilities. As a result, inefficient enterprises sometimes get high profits, while their more efficient competitors experience difficulties.

Low level of competition in many markets, unequal conditions of competition also do not further active introduction of new machinery and technologies. Restrictions on competition and unequal conditions of competition often result from the existing legislation.

In this connection the Australian achievements must be mentioned. During expert examination of the legislation that was performed in the 1990s, 1700 legislative acts which contained norms restricting competition were identified. Most of them have been amended. Since then Australia, unlike many other countries, is developing steadily and dynamically. The Australian government has estimated annual benefits to the economy to be 2.5% of GDP, or AUD 20 billion, from productivity improvements and price rebalancing in many different sectors where reforms have occurred [18, p.39].

Summing up the positive results achieved in Australia and some other countries, the OECD has prepared the Competition Assessment Toolkit. It includes methodology for identification of unnecessary restrictions on competition and development of alternative measures which make it possible to achieve the goals set. The OECD Council recommended using this document to improve economic policy.

Conclusions and perspectives of further research. During the post-communist transformation unstable economic growth and a low level of competitiveness are characteristic for Ukraine. The article substantiates that one of the reasons for this situation is the existence of a significant sector of enterprises with negative net investments. This is confirmed by the analysis of statistical data, as well as the reporting of 2.5 thousand industrial enterprises. The existence of a significant sector of enterprises with negative net investments in Ukraine has not been reflected in the literature. At the same time, such a research makes it
possible to better understand the reasons for our lagging behind many other countries with economies in transition. The major reasons for the existence of such a sector are inadequate property rights protection, low level of competition and its unequal conditions in many markets.

An analysis of the reporting of Ukrainian industrial enterprises indicates that a significant part of investments is absorbed by a relatively small number of enterprises. This indicates the presence of gazelle companies. But there are too few of them to ensure the dynamic growth of the economy as a whole.

In order to change the situation, the entrepreneurial climate has to be improved, first of all by ensuring reliable property rights protection. To encourage investment and innovation it is necessary to intensify competition and to level its conditions. This requires steady and consistent work aimed at removing anti-competitive norms from legislation. In this work the OECD’s Competition Assessment Toolkit should be actively used.

It should be borne in mind that such measures may lead to bankruptcy of a number of inefficient enterprises. In order to prevent a drop in production and growth of unemployment, it is necessary to take measures aimed at stimulating the development of the most dynamic companies and increasing their contribution to the economy, primarily through support to gazelle companies and clusters.

**ЛІТЕРАТУРА**

9. Джоллдуваева А.Э. Амортизация как основной источник воспроизводства основных фондов на предприятиях Кыргызской республики / А.Э. Джоллдуваева - Реформа - 2012 - №3 (55). - С. 46-51
16. Розмайновский И. «Инвестиционная близорукость» в посткейнсианской теории и в российской экономике. / И. Розмайновский - Вопросы экономики - 2006 - №9 - С.71-82.
REFERENCES:


9. Dzholdubaeva, A. (2012). Depreciation as a basic source of reproduction of fixed assets at the enterprises of the Kyrgyz republic [Amortizacija kak osnovnjoj istochnik vosproizvodstva osnovnyh fondov na predprijatijah Kyrgyzskoj respubliki], Reforma, №3 (55), s.46-51.


