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INNOVATIVE ENTREPRENEURSHIP: A SOURCE OF ECONOMIC GROWTH IN THE REGION¹

This article presents the findings of the study on the role of innovative entrepreneurship in the regional economy. The analysis is based on the methodology developed by Hermann Simon, a German scientist who has coined the term "hidden champions" describing the phenomenon of little-known successful companies that act as innovative growth engines in the German economy. Today, the economies in different countries are developing amid the "new normal," in which no expected recovery followed the global crisis of 2008. This makes it necessary to rethink the role of entrepreneurship during a prolonged recession. The authors proposed and tested the hypothesis that, in this environment, the economic growth in the country and the region is increasingly determined not so much by large businesses, but by many small innovative companies. To identify Russian "hidden champions," we studied more than 1247 companies listed in the Innovation and Investment Market, a specialized section of the Moscow Exchange, and included in the specialized Register of Business Entities that use nanotechnology. We identified specifically Russian features of innovative entrepreneurship related to national cultural and historical characteristics and the current policy of import substitution. The authors proposed their own method for assessing the innovative entrepreneurship as a source of economic growth in the Russian regions that defines five groups of innovative entrepreneurs (global market leader, one of the global market leaders, Russian market leader, one of the Russian market leaders, not the leader in the Russian market) and compares them with large companies in terms of turnover and profit dynamics. Based on such criteria as "number of "hidden champions" and "number of large enterprises per 100 thousand organizations," we built a model for the ratio of "hidden champions" to major companies in the Russian regions that identifies, for each criterion, three subgroups, including leaders, medium-tier and outsiders, which allowed to identify nine types of Russian regions and substantiate different development strategies for main types of regions. The study confirms that the most justified strategy for the development of innovative entrepreneurship in the region is the strategy of cooperation between different types of companies in order to overcome their weaknesses, enhance existing opportunities and activate the innovation and entrepreneurial capacity.

Keywords: innovative entrepreneurship, regional economic growth, hidden champions, growth engines, study of entrepreneurs, assessment methodology, groups of entrepreneurs, model for ratio of the companies, types of regions, company development strategies

Introduction

On the level of global socio-economic space, there is no universal opinion as to what the economic growth actually is. Traditionally, it is ac-

companied by the growth of resource consumption and environmental problems, and there are increasingly fewer people who agree that it would be reasonable to continue such growth. As noted by Academician A.D. Nekipelov, there are a number of disadvantages in measuring the economic development only by the GDP growth rate. This

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ignores the quality of economic growth, limited availability of natural resources, differentiation of household income, types of economic activity outside any market transactions (such as subsistence economy or environmental damage), change in the price level and structure of the production. [1, p. 10–12]

In early 2015, there was an intensified debate in the rapidly developing Chinese economy on whether "it was time to abandon GDP as the main economic target" when elaborating the growth strategy. According to the experts, the Shanghai administration decided not to include the GDP growth rate in the regional targets for 2015 and replaced it with quality indicators of living standards, environmental pollution, development of innovation, development of "green and blue (pure water) economy." Given that in 2014 not a single Chinese province (except Tibet) achieved the planned GDP growth targets, there are already discussions on whether it would be advisable to use the experience of Shanghai. [2, p. 65]

A notable scientific contribution to the study of entrepreneurship as a source of socio-economic development has been made by such scholars as A.I. Ageev, I.G. Alexandrov, K.I. Arsenyev, V.Ya. Gorfinkel, Ye.F. Zyablovsky, I.K. Kirilov, N.N. Kolosovsky, S.P. Krashennnikov, M.G. Lapusta, I.I. Lepekhin, S.A. Nikolaev, V.N. Tatishchev, A.Yu. Chepurenko, including such representatives of the Ural school of entrepreneurship studies as V.N. Arkhangelsky, N.N. Bepamyatnykh, S.V. Doroshenko, Ye.M. Kozakov, Ye.S. Mezentsseva, A.S. Melnikova, A.Ye. Novozhilov, O.A. Romanova, A.I. Tatarkin, O.B. Franz, A.G. Shelomentsev and others. The issues of regional innovation development were considered in the works of V.V. Akberdina, A.I. Anchishkin, M.A. Vilensky, L.I. Vlasyuk, N.A. Ganichev, I.M. Golova, S.Yu. Glazyev, S.A. Ivanova, I.N. Korabeynikov, A.A. Kuklin, P.A. Minakir, A.F. Sukhovey, A.I. Tatarkin, A.S. Frolov [3–14] and others. However, at the same time, the existing studies had no sufficient interrelated assessment of these two scientific fields in a unified approach to studying the innovative entrepreneurship and its role in regional development.

The economies in different countries are developing today amid the "new normal", in which no expected recovery followed the global crisis of 2008. This makes it necessary to rethink the role of entrepreneurship during a prolonged recession. The authors proposed and tested the hypothesis that, in this environment, the economic growth in the country and the region is increasingly de-

termined not so much by large businesses, but by many small innovative companies.

Scientific Problem and Discussion

In the global scientific community, there are two schools of thought in terms of viewing the prospects of economic growth based on the development of innovative entrepreneurship—pessimistic and optimistic. The proponents of pessimistic views include D. Cohen (France); M. Migel (Germany), L. Summers (USA), R.J. Gordon (USA) and others, who advocate the adjustments to the idea of economic growth. There is even a so-called Eroom's law in the area of pharmaceuticals, according to which the output of new pharmaceutical products generated by a billion dollars spent on R&D is halved every 9 years, that is, the invention of new drugs becomes slower and more expensive over time, despite the improvements in technology.

This law can be contrasted with the optimistic Moore's law describing the production of information technology equipment, according to which the scientific and technological progress in the manufacturing of integrated circuits used in computer equipment is characterized by such rate that the number of transistors on an integrated circuit chip doubles every two years. The optimistic economic views are presented in a number of scientific papers.

For example, P. Diamandis and S. Kotler [15] described the potential of technological innovation that could radically change the standard of living. In their book, E. Brynjolfsson and A. McAfee [16] made an assumption that digital technology with network structures would change the development of many economic sectors through the use of non-standard data sets and more efficient performance of different tasks (for example, in the area of medicine, retail and others). In his work, N. Bostrom [17] made an assumption that, in principle, the machines could be made in such a way that they would process the information as effectively (or even better) as biological nervous systems. In his book "Zero to One: Notes on Startups, or How to Build the Future" [18], P. Thiel pointed out that there were no reasons for progress to be limited by computers or Silicon Valley. Progress can be achieved in any industry or business area. Copying of other people's inventions and ideas leads the world from 1 to 0. Only those who do something new go from 0 to 1. The optimistic views on the prospects for economic growth through entrepreneurial potential are reflected in the biography of Elon Musk, a businessman, (Tesla, SpaceX, and the Quest for

a Fantastic Future [19], 2015). His first startup (Zip2) was a project to create an online directory of businesses tied to a map (like a combination of Google Maps and Yelp). Elon Musk managed to establish the business when the opportunities offered by this catalog were not clear to potential mass customers and to find customers was not an easy task. The characteristic resource of this startup was the availability of top-class specialists. The second startup of Elon Musk was SpaceX (Space Exploration Technologies Corp., rocket-engineering industry). His goal was to build a medium-sized rocket for the lower segment of the satellite market; as a result, this startup provided the company with the following benefits:

- Large amount of seed money (more than \$100 million) and independent production facilities for most of the rocket components (over 80 %);

- Relatively low cost of independently manufactured equipment and the ability to use the same engines in various configurations of rockets.

The next company led by Elon Musk was Tesla Motors, an electric car manufacturer. Over a short period (4 months), a team of 18 people managed to create a new type of car. An important success factor was the involvement of energetic specialists. Another project of Elon Musk was Solar City, a company supplying solar panels to private consumers and businesses [19].

Therefore, we can conclude that the economic growth in the works of those representing the optimistic school of thought is directly associated with innovative entrepreneurship.

The Phenomenon of «Hidden Champions» and Methodology for Assessing Their Impact in German Economy

According to H. Simon, the innovative engines of economic growth in the economy and the region are little-known successful enterprises that create or own their highly specialized market niche and have high capacity development potential as a result of globalization. He called such companies "hidden champions" [20].

Under the methodology proposed by H. Simon, a "hidden champion" company should meet the following conditions:

- Being or striving to become number 1 in the global and European market. The position of the company in the market is measured by the share of its sales in that market. If the exact market share of the company is not known, the company must be stronger than its most successful competitor;

- Turnover of no more than 1 billion Euros (with some exceptions);

- Being little-known.

The study of "hidden champions" around the world reveals that the presence of major enterprises does not necessarily ensure the overall growth of the economy. The overall economic activity can be provided not only by large companies but also by medium and small enterprises. Since 2000, the growth of German "hidden champions" at a pace of almost 10 % annually (which is comparable to the figures for Chinese economy) has ensured the creation of 1.5 million new jobs.

Even during the recession, these companies achieved the average worldwide growth of 6.5 % and demonstrated their viability in adverse environment, as evidenced by the following list of headlines about the "hidden champions": "The recession had almost no effect on us," "Not dependent on the decline in business activity," "The winner in the period of recession," "Immune to recessions," "We managed to retain the positive trends of previous years," "For 35 years, we never had a recession, but only fluctuations of growth." This confirms that the "hidden champions" have the same, if not higher, ability to survive in crisis as large companies.

H. Simon compared the turnover growth in "hidden champions" and large companies [20]. For example, Dachser and Knorr Bremse, the companies initially belonging to the group of "hidden champions," saw their turnover to increase in 1995–2014 from less than 1 billion Euros to 5 billion Euros; for Enercon, this figure increased from less than a third of a billion Euros to 6.5 billion Euros. The turnover of such smaller "hidden champions" as Beckhoff, Rational and Igus increased in 1995–2014 from less than 100 million Euros to 400–500 million Euros. All these companies have demonstrated a fivefold increase in turnover in almost twenty years. On the contrary, large German companies saw their positions deteriorating over the same period. For example, the number of German enterprises included in the Fortune Global 500, a ranking of the world's largest companies, dropped from 37 to 28. Over the indicated period, the growth for all companies included in this rating was only 6.4 %, while for the German companies, this figure was just 2.8 %. The comparison of economic results shown by selected "hidden champions" and large companies from various countries is presented in Table 1.

As shown by the data in Table 1, large turnover does not always lead to high development dynamics, and vice versa, a relatively small turnover does not necessarily mean slow growth. In 1950, the probability that the companies with the highest turnover were the most profitable (according

Table 1

The main indicators of selected large companies and «hidden champions»

Company	Turnover, billion Euros	Average annual turnover growth (2009–2014) %	Profit (% of turnover)	Capitalization, billion Euros
Walmart (USA)	486	3.5	16 billion Euros (3.2 %)	213
Rational (Germany)	497	6.4	138 million Euros (27.7 %)	4.16
Amazon (USA)	89	29.4	0	210
Spotify (Sweden)	1.08	>100	15 million Euros (15 %)	7.62

to data provided by US exchange) was more than 35 %, but in 2010, it was less than 10 %. The dynamics of such two important indicators, as turnover and profit, allow to identify the following groups of companies:

— "Weak": Lufthansa, Walmart (profit to sales within 0–5 %; turnover growth within 2.5–7.5 %), they are mostly represented by large companies;

— "Stable": Stick, Linde, Bayer (profit to sales at about 10 %; turnover growth within 5–10 %); this group includes the "hidden champions";

— "Exchange Stars": Spotify (growth by more than 100 %; profit at about 15 %), Salesforce.com (growth at about 40 %; profit at about 5 %), Amazon (growth at about 30 %; profit at about 0 %), Apple (growth at about 35 %; profit at about 30 %), Rational (growth at about 5 %; profit within 25–30 %), this group may include both the "hidden champions" and the large companies that apparently operate according to the principles of "hidden champions" and represent the so-called "big champion" companies (or the group of "hidden champions").

According to H. Simon, for German companies, the most optimal ratio of turnover growth and profit to the sales could be 10 % to 10 %, which is exactly what the "hidden champions" are demonstrating, all the while maintaining such pace over the long-term period. In many ways, they are able to do this by entering foreign markets, which eliminates the risks of their overspecialization and constraints for growth in the domestic market (which is, of course, smaller than the Russian one). In turn, the grounds for a long-term success of a company in the global market are primarily provided by innovation potential and a strong independent manufacturing base. It is with these "hidden champions" that Germany is able to maintain the exports at the level comparable with those of USA (1.5 trillion and 1.6 trillion dollars, respectively), despite almost fourfold numerical advantage of USA in terms of corporations included in the list of world's top 500 largest corporations

(Fortune Global 500) — 28 for Germany compared to 128 for USA.

Methods for Assessing the Innovative Entrepreneurship as a Source of Economic Growth in Russian Regions

The outstanding success of German and American "hidden champions," which outperform their big national corporations in terms of growth, generates interest in looking for specifically Russian characteristics of innovative entrepreneurship. The research hypothesis was to test the assumption that the Russian contenders for the title of "hidden champion" also had the best ratio of turnover growth to profit.

First of all, it must be noted that many regional centers that create and attract Russian innovative companies and can cultivate firms, which meet the criteria of "hidden champions," cannot be subjected to an all-inclusive analysis given the lack of relevant data. Ignoring the availability of data on innovative enterprises operating at the level of "hidden champions" is especially unjustified on the part of the state institutions for development of entrepreneurship. Since there are no statistics on such phenomenon as the "hidden champions," the authors made an attempt to identify and analyze the little-known but successful Russian companies and compare their performance to the performance of large companies.

While addressing this initial research task, we checked how many companies listed in the Innovation and Investment Market, a specialized section of the Moscow Exchange could be considered as Russian "hidden champions" and what were their characteristics.

To be included in the Innovation and Investment Market, a company should meet one of the following criteria¹:

¹ Rynok innovatsiy i investitsiy Moskovskoy birzhi [Innovation and investment market of the Moscow exchange]. Moskovskaya birzha [Moscow exchange]. Retrieved from: <http://moex.com/s25> (date of access: February 24, 2016).

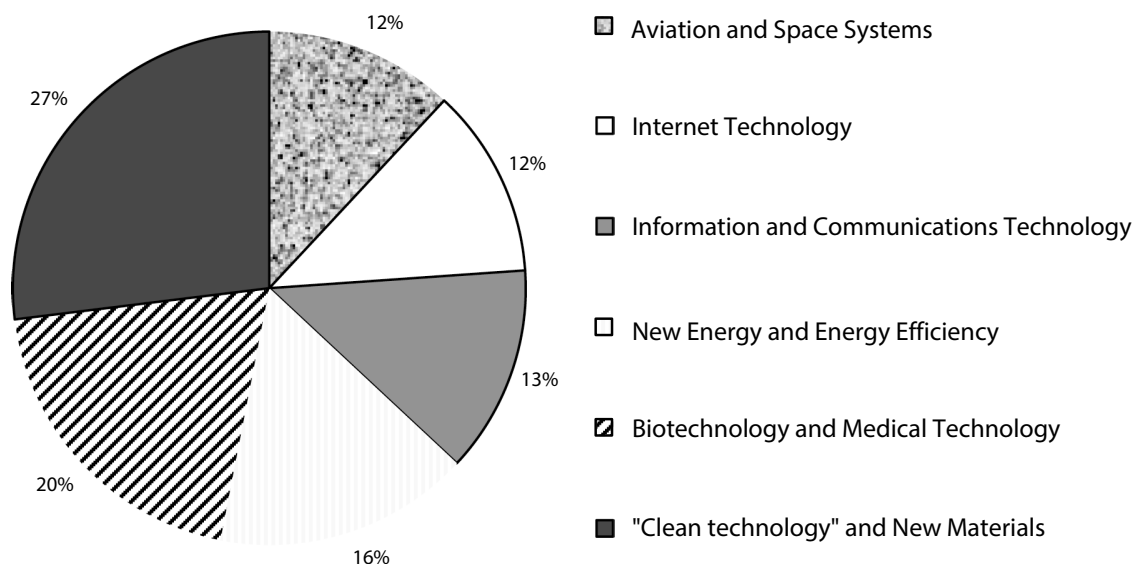


Fig. 1. The sectoral structure of companies listed in the Innovation and Investment Market of the Moscow Exchange

— Manufacturing products, providing services, producing and/or using the technologies included in the list of priority directions for development of science, technology and engineering in the Russian Federation or in the list of critical technologies of the Russian Federation (the Decree of the President of the Russian Federation No. 899 of July 7, 2011);

— Manufacturing products, providing services, producing and/or using the technologies included in the Register of innovative products, technologies and services recommended for use in the Russian Federation;

— Making investments in innovative and high-tech companies and nanotechnology projects; financing of the company (the issuer of securities or its subsidiary) and/or other assistance from one of the following organizations: JSC RUSNANO, JSC RVC (foundations established by JSC RVC), VEB Innovation Fund, Foundation for Assistance to Small Innovative Enterprises in Science and Technology, Skolkovo Foundation, Russian Foundation for Technological Development, Internet Initiatives Development Fund;

— Engaging in economic activities with the use of innovative technologies and approaches.

Since these criteria do not contradict the methodology of "hidden champions," the sectoral structure of companies included in the Innovation and Investment Market (Fig. 1) confirms their innovative character, and the availability of financial statements (only for open (public) joint-stock companies) allows to assess whether they meet the criteria of "hidden champions" and the ratio of turnover dynamics and profit.

Unfortunately, none of the companies listed in the specialized section of the Moscow Exchange

is the "leader in global / European market," one company meets the criteria for being "one of the leaders in global / European market," 5 companies are the "Russian market leaders," 5 companies can be considered as "one of the Russian market leaders," 6 companies are "not the leaders in the Russian market." The example of these companies shows that there are virtually no "superstars" among the "hidden champions" (unlike the German economy), although there are some other types of leaders.

Results of Assessing Russian Innovative Entrepreneurship

We selected the companies from a specialized Register of business entities that use nanotechnology as the subject for our study of innovative entrepreneurship¹. The versatile use of nanotechnology allows to review the innovative companies from different industries and sectors (instrument engineering, oil and gas industry, microelectronics, rocket and space industry, consumer electronics, metallurgy and others.) Among 1247 companies (which is 1.4 % of all legal entities of the Russian Federation) included in the Register, we analyzed all 207 open (public) joint-stock companies (16.6 % of all companies included in the Register, which is close to the share of open joint-stock companies in Russia (13.1 %)). According to

¹ Reyster khozyaystvuyushchikh subyektov, osushchestvlyayushchikh proizvodstvennyuyu deyatel'nost' v sfere nanoindustrii, proizvoditeley nanotekhnologicheskoy produktsii [Register of economic entities engaged in production activities in the area of nanotechnology, manufacturers of nanotechnology products]. Startbase. Retrieved from: <http://www.startbase.ru/rnp/companies/> (date of access: February 3, 2016).

Table 2

The types of companies according to market leadership criterion

Market leadership type	Description	Number of companies	
		absolute, units	relative, %
Leader in the global (or European) market	No. 1 (largest market share) in the global or European market	Not found	—
One of the leaders in the global (or European) market	No. 2 or less (not the largest, but still a substantial share in the global (or European) market)	5	2.4
Russian market leader	No. 1 (largest market share) in the Russian market	8	3.9
One of the Russian market leaders	No. 2 or less (not the largest, but still a substantial share in the Russian market)	9	4.3
Not the leader in the Russian market	Not a substantial share in the Russian market	185	89.4
Total		207	100

the methodology proposed by H. Simon, we assessed three attributes of "hidden champions."

I. The criterion of leadership in terms of sales market share held by the company proved to be the most difficult to meet in order to be recognized as a "hidden champion." Following the analysis of official data provided by each company, the companies have been grouped by type (Table 2).

Hence, the first significant difference of Russian "hidden champions" — they are predominantly the leaders in the Russian market but not in the global one (unlike, for example, the German companies). This can be explained by the following objective factors [21]:

- Capacity of the Russian market, which is large enough for a longer period of staying within the limits of the national segment and does not require the priority development of foreign markets;

- Greater psychological distance of Russian entrepreneurs coupled with less extensive experience of entrepreneurial activities, including those related to internationalization;

- Policy of import substitution and inter-regional cooperation supported by the state and the regions;

- Predominantly "catch-up" nature of development in most Russian companies as they follow the global leaders.

While the first two factors are caused by national and cultural characteristics and, therefore, are very slow to change, the direction of two other factors can and should be modified, including by providing the incentives and disseminating the experience of "hidden champions", both Russian and foreign as the key source of innovative renewal, which represents a direct tool for implementing of the policy of import substitution and achieving, in this case, the desired level and quality of economic growth in the region and Russia as a whole.

In our view, the Russian "hidden champions" that are within the shortest distance from the global leadership include, for example, JSC Krasnoyarsk Machine Building Plant, which holds a share close to 100 % in certain areas of the domestic market, and, in the global market, holds a quarter of world's orders for bringing the spacecraft to geostationary orbit; JSC Volzhsky Pipe Plant, which produces more than 20 % of total Russian exports of steel pipes; OJSC Diod, which is a global leader in the production of dihydroquercetin (a vegetable antioxidant for cosmetics and biologically active food additives).

As a special exception, we can call "hidden champions" the companies that are not the leaders in the global or European markets, but hold leading position in individual regions, for example, JSC Mikron is a leader in the production of chips for industrial applications and RFID products (cards and tags with embedded chips) in Russia, CIS and Europe (STMicroelectronics, a Franco-Italian company and the leader of European microelectronics, is the technology partner of Mikron that transferred the technology for manufacturing integrated circuits to the enterprise).

II. The easiest criterion to meet (and to assess the economic activities) was the company's turnover. The threshold value of 1 billion dollars was exceeded only by individual companies included in the innovation register (for example, OJSC Severstal).

III. The criterion of being a "little-known company" was assessed by examining whether the enterprise was included in the list of 400 largest Russian companies prepared by Expert, a rating agency. Under these conditions, OJSC Severstal, OJSC Kazanorgsintez and a number of similar would-be "hidden champions" have been recognized as not meeting the established criteria.

The turnover growth rates (as compared to the previous year) of the selected companies were

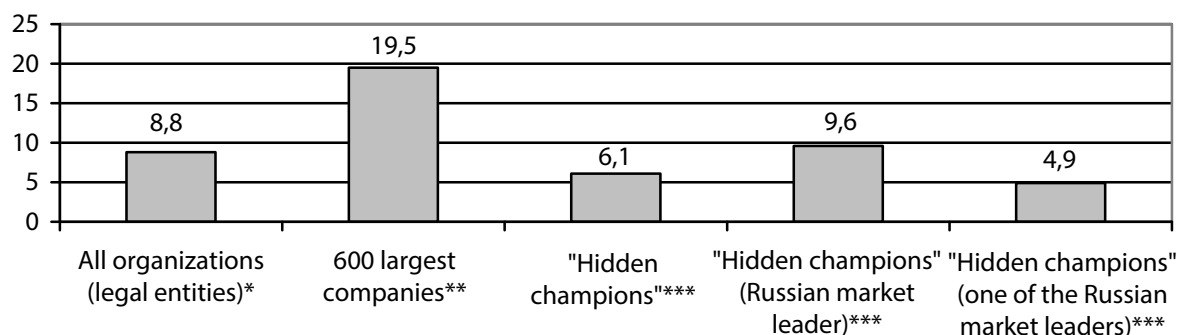


Fig. 2. The turnover growth in selected companies for 2014, as % to previous year (*calculated by the authors based on Rosstat data (according to the methodology: for organizations excluding small business entities, budgetary organizations, banks, insurance companies and other financial and credit institutions); **calculated by the authors based on the data provided by Expert RA (Reyting 600 krupneyshikh kompaniy Rossii po itogam 2014 goda [Ranking of 600 largest Russian companies following 2014]. Reytingovoy agentstvo RAEX ("Ekspert RA") [RAEX Rating Agency (Expert RA)]. Retrieved from: <http://raexpert.ru/project/topcompanies/2015/ranking/> (date of access: February 3, 2016)); *** calculated by the authors based on financial results of the companies referred to the «hidden champions»)

compared with the similar figures of large companies, as well as with the average indicator for all legal entities.

The all-Russian annual average of turnover growth for the Russian companies (legal entities) for 2005–2014 is 16 %.¹ A particular aspect of the analyzed period (2014) was that the turnover growth rate was 8.8 %, which is almost two times less than the average for the previous decade, but it is still not negative, unlike the crisis year of 2009.

The Figure 2 provides a comparison of turnover (revenue) growth for Russian companies of different size.

The highest revenue growth was demonstrated by major companies (more than 2 times higher than the national Russian average for all organizations). Overall, the Russian "hidden champions" had a somewhat lower revenue growth (6.1 %) than the average for the economy and were significantly behind the major companies in terms of growth rate. But the assessment of "hidden champions" that are the Russian market leaders shows that their indicators are higher than the average (9.6 %). Therefore, for most successful "hidden champions," we obtained the turnover growth figure recommended by H. Simon for German "hidden champions." However, a particular feature of the Russian market is the fact that, unlike the major national enterprises, the Russian "hidden champions" are not the undisputed leaders, which is caused by the historically high traditional role

of big businesses and the industry affiliation of these "hidden champions."

Therefore, in Russia, unlike in the German economy, the "hidden champions" do not demonstrate higher turnover growth. Do they have other advantages or, in the Russian economy, all success belongs exclusively to big business? To answer this question, let's compare the profit growth of "hidden champions" and other types of companies. The dynamics of the annual profit growth (profit or loss) as the description of Russian companies' success in different years is very meaningful. While in 2014, the turnover pace of an average Russian organization was positive, it still registered a loss of -31.8 %, which is the worst result for more than 15 years. The profit (loss) of organizations is a prompt signal indicating the improving (2003, 2004, 2006, 2011) or worsening (2002, 2008, 2013, 2014) situation in the national and regional economy. For example, since 2013, Most Russian companies showed a loss, which even at that time clearly indicated the impending recession.

As a next hypothesis, we assumed that the "hidden champions" were ahead of large companies in terms of profit growth. To test this hypothesis, we calculated the pace of profit / loss for three groups of entities: 1) All organizations (legal entities) of the Russian Federation (according to Rosstat's methodology); 2) Largest Russian companies (based on 400 companies included in the ranking of Expert RA); 3) 207 Russian innovative companies selected by the authors as meeting the criteria for various types of "hidden champions" (Fig. 3).

The obtained results clearly confirmed the hypothesis. While the large companies, along with the growth of their revenue (19.5 %), showed a loss of -279.9 %, which does not stand any com-

¹ Oborot organizatsiy godovoy (bez subyektov malogo predprinimatelstva) [Annual turnover of organizations (excluding small business entities, etc.)]. Federalnaya sluzhba gosudarstvennoy statistiki [Federal State Statistics Service]. Retrieved from: http://www.gks.ru/free_doc/new_site/business/prom/oborot.htm (date of access: February 24, 2016).

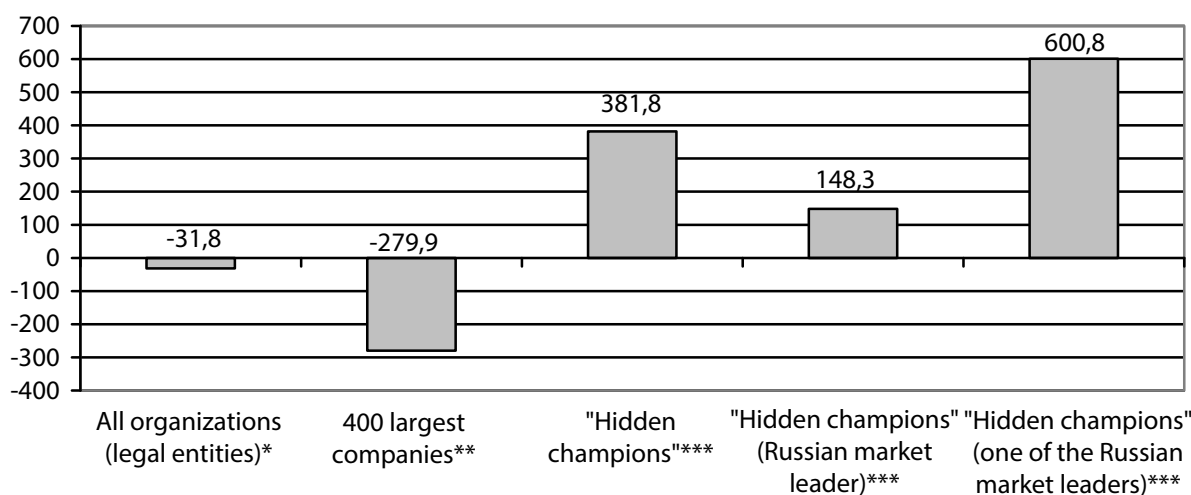


Fig. 3. The rate of profit/loss in 2014, as % to the previous year (* calculated by the authors based on Rosstat data (Oborot organizatsiy godovoy (bez subyektov malogo predprinimatelstva) [Annual turnover of organizations (excluding small business entities, etc.)]. Federalnaya sluzhba gosudarstvennoy statistiki [Federal State Statistics Service]. Retrieved from: http://www.gks.ru/free_doc/new_site/business/prom/oborot.htm (date of access: February 24, 2016)); ** calculated by the authors based on the data provided by Expert RA (Reyting 600 krupneyshikh kompaniy Rossii po itogam 2014 goda [Ranking of 600 largest Russian companies following 2014]. Reytingovoye agentstvo RAEX ("Ekspert RA") [RAEX Rating Agency (Expert RA)]. Retrieved from: <http://raexpert.ru/project/topcompanies/2015/ranking/> (date of access: February 3, 2016)); *** calculated by the authors based on financial results of the companies referred to the "hidden champions")

parison even with a negative general figure for Russia (–31.8 %), the "hidden champions" not only demonstrated a positive trend compared to loss-making big businesses, but were also significantly ahead of average companies, and even more (661.7 %) of the major companies. Moreover, all these results have been achieved amid economic crisis. However, for this indicator, the distribution within the group of "hidden champions" was not in favor of the "Russian market leaders" (148.4 %), while the highest growth rate was demonstrated by those that belong to "one of the Russian market leaders" (600 %), which again confirms the advantage presented by the high capacity of the Russian market in the environment of import substitution. The leaders for this type of growth are such companies as OJSC Scientific and Production Association Nauka (aviation and space systems), OJSC Trade and Industrial Group AESSEL (new materials with polyurethane and styrene), OJSC Kirov Tyre Plant (tires and inner tubes). Therefore, the importance of "hidden champions" in Russia, especially in implementing the import substitution policy during the crisis, is in their higher profit growth, that outperforms both medium-sized and large businesses, which is obviously made possible only by the innovation component.

Thus, the test partially confirmed the hypothesis of the leadership of Russian "hidden champions" compared to the large national companies. On the one hand, the hypothesis is not fully confirmed given the fact that the "hidden champi-

ons" were behind the large companies in terms of turnover growth (unlike the German), on the other hand, the "hidden champions" clearly lead in the economy in terms of profit growth. All this shows, first, the special role played by big businesses with state participation in the Russian economy and, second, high and still unused growth potential of Russian "hidden champions," including through the development of foreign markets.

Model for the Ratio of Innovative Entrepreneurship Types in the Russian Regions

The next research task was to identify regions that serve as centers of localization for "hidden champions." Are there any regions with many "hidden champions" and what is their ratio to large enterprises in the region (Fig. 4)?

Based on the obtained data, we developed a model for the ratio of "hidden champions" to major enterprises in the Russian regions. As the criteria for the typology, we used such two indicators as the number of "hidden champions" and the number of major enterprises per 100 thousand organizations. Depending on the value of the first indicator, the regions were divided into three subgroups, including the leaders (88–153), medium-tier regions (12–87) and outsiders (0–11); depending on the value of the second indicator, the regions were divided into 3 subgroups with their own thresholds, including the leaders (44–85), medium-tier regions (1.7–43) and outsiders (0–1.6). The Figure 5 presents the results of testing

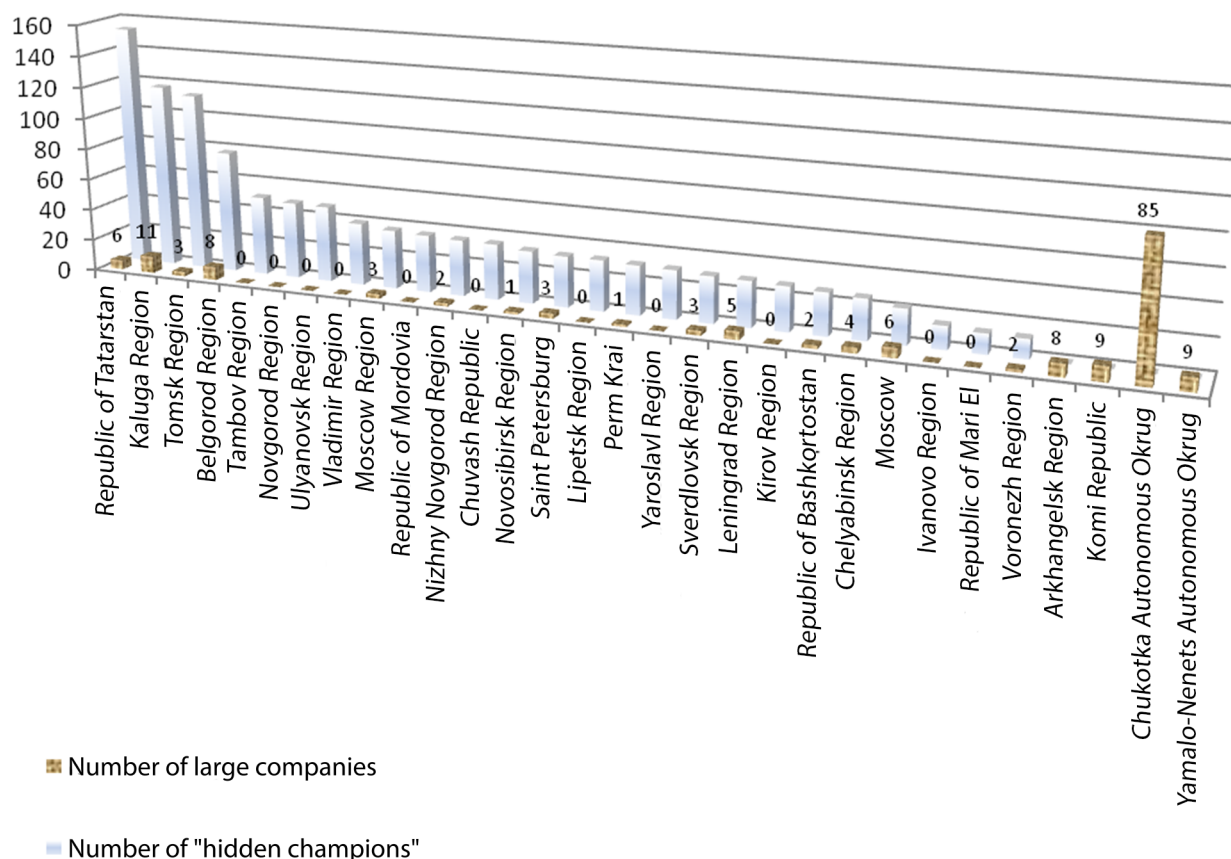


Fig. 4. The regions with the highest number of "hidden champions" and large companies, units per 100 thousand organizations in the constituent subject of the Russian Federation

Regions		By the number of hidden champions		
By the number of large companies	Leaders	Leaders	Medium-Tier Group	Outsiders
		—	—	1
	Medium-Tier Group	3	13	12
	Outsiders	—	22	32

Fig. 5. The distribution of Russian regions in the model for the ratio of "hidden champions" to large companies

the author's model for the constituent subjects of the Russian Federation based on 2014 data.

The analysis showed that by the ratio of "hidden champions" to major enterprises nine types of regions could be distinguished:

1. Simultaneous leadership in terms of "hidden champions" and large companies (in the course of this study such regions were not found).

2. Leadership in terms of "hidden champions" with a medium number of large companies. This most successful group in terms of "hidden champions" is represented by 3 regions (Republic of Tatarstan, Kaluga Region and Tomsk Region).

3. The leadership of "hidden champions" in the absence of large companies (there are no such regions).

4. The leadership of large companies with a medium number of "hidden champions" (there are no such regions).

5. A medium number of both "hidden champions" and largest companies is typical for 13 regions (Moscow, St. Petersburg, Udmurt Republic, Moscow Region, Sverdlovsk Region, Kemerovo Region, and others).

6. A medium number of "hidden champions" in the absence of large companies. This subgroup includes 22 regions (Vladimir Region, Ivanovo Region, Novosibirsk Region, Volgograd Region, Republic of Mordovia, Republic of Kabardino-Balkaria, Republic of Mari El and others).

7. The prevalence of large companies in the absence of "hidden champions." This subgroup includes Chukotka Autonomous Okrug with a record share of large companies (85 per 100 thousand organizations).

8. The medium number of large companies in the absence of "hidden champions" is typical for 12 regions (Kaliningrad Region, Tyumen Region,

Table 3

The strategies for developing the cooperation between large companies, «hidden champions,» and startups

Attribute	Large Companies (LC)		«Hidden Champions» (HC)		Startups (SU)	
Success Factor	Scale and growth opportunities in several markets		High profits through niche specialization		Super profits based on unique character	
Strengths	Financial resources		Innovation		Higher growth	
Shortage	of profit growth		Advanced innovation		Financial resources	
Development and Cooperation Strategy	LC ← SU (venture financing for startups)	LC → HC (spinning off HC from LC)	HC → LC (by establishing groups of HC)	HC ← SU (by acquiring startups that create new technology)	SU → HC (by growing into HC through specialization)	SU → LC [(niche specialization under the order from LC)]
Regions	with the prevalence of big businesses		with prevalence of «hidden champions»		without big business and «hidden champions»	

Irkutsk Region, Krasnodar Krai, Khabarovsk Krai, Krasnoyarsk Krai, Yamalo-Nenets Autonomous Okrug and others).

9. Simultaneous absence of both "hidden champions" and large companies. It is a telling fact that the most representative group (32 constituent subjects of the Russian Federation, or 39 % of all such subjects) includes the regions that are simultaneously outsiders by these two attributes.

Overall, 38 regions demonstrate a high and medium level of development of "hidden champions" while 45 regions (54 %) have no such companies according to available data.

Conclusions and Recommendations

The obtained results allow to conclude that, in the present conditions, the "hidden champions" are not yet a significant driver of economic growth in the Russian regions, as they have no opportunity to compete to the full extent with big businesses in a number of segments, including by developing their success through higher turnover generated by going beyond the national markets. R.S. Grinberg explained the unrealized potential of medium-sized and small innovative Russian companies, including the "hidden champions", by citing the following reasons: "First, there is weak motivation of national businesses to engage in innovative and investment activities, unless it is associated with the extraction of rent-based super profits of various origin ranging from natural to administrative resources. Second, the weakness of the national financial system and, as a result, the excessive dependence of the economy on external sources of financing, primarily foreign exchange earnings from commodity exports. Third, low technological competitiveness of the manufacturing industry aggravated by structural degradation of the economy's industrial capacity, especially in the area of Russian mechanical engineering" [22, p. 192].

Therefore, without waiting for such actively discussed changes in the factors that are external for the companies, including diversification of economy, increasing the share of high-tech and knowledge-intensive products, modernizing the manufacturing facilities [23], it is necessary to put the emphasis on cooperation aimed at overcoming these systemic limitations in order to ensure the survival (and all the more the creation and development) of innovative enterprises.

The systematization of "hidden champions" allows to identify their differences from large economic entities (major national enterprises) and from small innovative startups, as described in Table 3.

The identified differences highlight the advantages and disadvantages of each type of business and allow to provide the rationale for the use of these development strategies and cooperation in three main types of regions, including those with the prevalence of large businesses, or "hidden champions," or those that do not have them.

The study confirms that the most justified strategy for the development of innovative entrepreneurship in the region is the strategy of cooperation between different types of companies in order to overcome their weaknesses and enhance the existing opportunities. By expanding their opportunities through new markets, the "hidden champions," the most successful segment in the world, will be able to avoid the upcoming stagnation. For the large companies characterized by high turnover growth and interested in innovative development, it would be advisable to initiate the implementation of promising external projects involving the cooperation both with the "hidden champions" and the startups, some of which may be established with the financing provided through venture capital funds of large companies and regions. Such partnership will bring together the interests of the region, that is responsible

for creating favorable conditions for businesses, large companies, that have financial resources and sources of innovative growth for new business projects, and leading "hidden champions," which

will strengthen the competitive positions of the regions through more active, comprehensive use and engagement of entrepreneurial potential.

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