

ІННОВАЦІЇ ТА ІНВЕСТИЦІЙНА ДІЯЛЬНІСТЬ

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EVALUATION OF SINGAPORE ECONOMY INNOVATION LEVEL

Effective functioning of the country's economy in a dynamic environment requires implementation of innovative products into all areas and management of economic development of the state. The result of this update is the acquisition of competitive advantages through modernization of production and enterprise management systems.

Singapore has only transformed itself from a developing country, with limited natural resources, into a thriving global metropolis, ranked fifth in the world in the Global Innovation Index for over 50 years [3]. Per capita GDP in Singapore has increased from 516 dollars. US in 1965 to \$ 61,230 US in 2018 [1].

Since its independence in 1965, the Singapore government has decided on the need to develop science and technology as the only way to develop the economy in conditions of limited natural resources and a small country. In 1966, Prime Minister Lee Kuan Yu proclaimed that under the prevailing conditions, Singapore's competitive advantage is its population.

An important indicator of stability of the economy is the positioning of the international economic ratings, the position in terms of competitiveness, investment attractiveness, economic freedom, overall economic potential, etc. The change in the indicators of international economic ratings reveals economic changes in the country from the standpoint of independent evaluation. The analysis of the dynamics of indicators of international economic ratings enables to determine certain regularities, as well as problems in the current state of the countries' economy.

Totally, there are at about ten international indexes. The most common are the Global Competitiveness Index (GCI), the Index of Economic Freedom (IEF) and the Human Development Index (HDI).

Table 1

Singapore Indices, 2010-2018

Rating	Index value								
	2010	2011	2012	2013	2014	2015	2016	2017	2018
1. The Global Competitiveness Index	5,48	5,63	5,67	5,61	5,65	5,68	5,72	5,71	-
2. Index of Economic Freedom	86,1	87,2	87,5	88	89,4	89,4	87,8	88,6	88,8
3. Human Development Index, HDI	0.909	0.914	0.920	0.923	0.928	0.929	0.930	0.932	-

Source: Own study on the basis of [2]

It should be noted that over the past eight years, Singapore has taken a leadership position with a tendency to further increase, leaving behind developed countries such as Switzerland, Japan, Germany, the Netherlands and Hong Kong [2].

Recognizing the powerful impact of innovation on economic growth and prosperity, INSEAD International Innovation Business School, in cooperation with Cornell University and the World Intellectual Property Organization, since 2007, annually computes the Global Innovation Index (GII). The rating covers more than 120 countries that are at different levels of innovation development [3].

According to the study, Singapore is considered a high-income country and is among the top 10 most innovative countries in the world.

In particular, it should be noted that the Singapore government pays enough attention to the education of citizens, so every year the percentage of people who have received higher education is increasing – 97.3% in 2018 [5].

In order to develop the educational system of the country, considerable funds are allocated – in average \$ 12 billion USA. The result of the effective functioning of the educational system in the country is the leadership in the Global Talent Competitiveness Index, GTCI – for five consecutive years Singapore ranked 2nd in 125 countries [4] (Table 3).

Table 2

Global countries ranking according to Global Innovation Index 2018

Rating 2018	Country	Index	Income level	Rating 2017	Index 2017
1	Switzerland	68,40	High	1	67,69
2	Netherlands	63,32	High	3	63,36
3	Sweden	63,08	High	2	63,82
4	United Kingdom	60,13	High	5	60,89
5	Singapore	59,83	High	7	58,69
6	USA	59,81	High	4	61,40
7	Finland	59,63	High	8	58,49
8	Denmark	58,39	High	6	58,70
9	Germany	58,03	High	9	58,39
10	Ireland	57,19	High	10	58,10

Source: Own study on the basis of [3]

Table 3

Education indicators in Singapore, 2013-2018

Показник	2013	2014	2015	2016	2017	2018
Public expenditures on education, USD billion	11,63	11,59	11,934	12,46	12,68	-
Public expenditures on education in% of GDP	3,05	2,92	2,83	2,85	2,73	-
Level of literacy (15 years and above), %	96.6	96.7	96.8	97	97.2	97.3
Population	5 399 162	5 469 724	5 535 002	5 607 283	5 612 253	5 638 676

Source: Own study on the basis of [5]

Regarding the effectiveness of the implementation of IT in the infrastructure of the country and society in general, it can be said that Singapore is one of the leading countries in this area, but, against the background of overall success, according to the United Nations, there is not enough e-government services in Singapore [6].

Among the key factors for Singapore's success in the creation of national high-tech companies can be as follows: the formation of highly skilled labor

resources; creation of a large number of state institutions for conducting applied research and scientific parks; transfer of foreign technologies through FDI attraction; integration into the global R&D system, in particular, the active promotion of TNC affiliates located on the territory of the country, to increase the costs of R & D, resulting in foreign affiliates accounting for about 60% of all commercial research and development in Singapore.

High-tech exports in Singapore by 2016 amounted to 67.43% of total commodity exports. The highest value for the last 27 years – 67.43% in 2016, and the lowest figure in 1989 – 36.44% [7].

Due to well-meaning government policies and substantial financial support for science and innovation, a diversified, innovative ecosystem has been created in Singapore over the past 25 years. But at the same time, developing the priority sectors of the economy (electronics, biotechnology, etc.), the government did not pay enough attention to other industries. As a result, a number of industries, including agriculture and energy, have not been properly developed. Thus, we can conclude about a certain bias in the structure of the economy of Singapore.

So, although Singapore is a country that is located on a small territory and is quite limited in natural resources, it maximizes its position in the island state, actively introducing the latest technologies in all spheres of social and economic life of the country. The priority of the development of the Singaporean economy is the innovation industry.

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