



# Formation and development of human capital and social-labor relations: The experience of Singapore

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## Abstract

The article discusses Singapore's experience in the formation and development of human capital and social-labor relations. Singapore's successful implementation of policies in the areas of education, health care and the development of social and industrial relations was studied. Among the four major 'economic tigers' of East Asia, Singapore is the undisputed leader, as evidenced by key economic indices and ratings. Singapore has steadily improved its economic performance thanks to Lee Kuan Yew's forward-looking policies and rigorous implementation, and anticipating challenges on many fronts. The President of the Republic of Uzbekistan has identified six key areas of cooperation with Singapore in the near future, which are outlined in the article. There are great prospects for cooperation in the field of education, the development of information and telecommunications technologies, the financial and banking sectors, partnership in the areas of 'smart nation' and 'digital government' in the field of 'smart cities,' digital public services, fintech and artificial intelligence. In this way, Singapore has shown that investment in human capital can pay big dividends, and that nothing is impossible when it comes to technological breakthroughs in the Republic of Uzbekistan.

**Keywords:** human capital, investment, social-labor relations, tripartism, managerial skills, education, healthcare, preschool, school and higher education.

## For citation:

Abdurakhmanov K.Kh. (2023). Formation and development of human capital and social-labor relations: The experience of Singapore. *Strategic Decisions and Risk Management*, 14(2): 188-197. DOI: 10.17747/2618-947X-2023-2-188-197. (In Russ.)

## 新加坡在形成和发展人力资本以及社会和劳资关系方面的经验

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## 摘要

本文介绍了新加坡在人力资本的形成和发展以及社会和劳资关系方面的经验：在教育、医疗保健以及发展社会和劳动关系领域成功实施国家战略。在“亚洲四小龙”中，新加坡无疑是佼佼者。主要经济指数和排名证实了这一领先地位。得益于李光耀高瞻远瞩的政策，新加坡的经济表现稳步提升。严格遵守这一政策有助于预见许多方面的挑战。乌兹别克斯坦共和国总统确定了近期与新加坡合作的六个关键领域，本文将对此进行介绍。在教育、信息和电信技术发展、金融和银行业方面、在智慧国家和数字政府、智慧城市、数字公共服务、金融科技和人工智能等领域的合作前景广阔。新加坡已经证明，人力资本投资可以带来丰厚的回报，乌兹别克斯坦共和国在技术突破方面也没有什么是不可能的。

**关键词：**人力资本、投资、社会和劳资关系、三方主义、管理技术、教育、医疗保健。

## 供引用:

Abdurakhmanov K.Kh. (2023). 新加坡在形成和发展人力资本以及社会和劳资关系方面的经验. *战略决策和风险管理*, 14 (2) : 188–197. DOI: 10.17747/2618-947X-2023-2-188-197. (俄文)

Increasing the intellectual and spiritual potential of the youth, forming a new generation with deep knowledge, educated in the spirit of patriotism, national and universal values are related to the future of Uzbekistan are the most important at the current stage of reforms in the country.

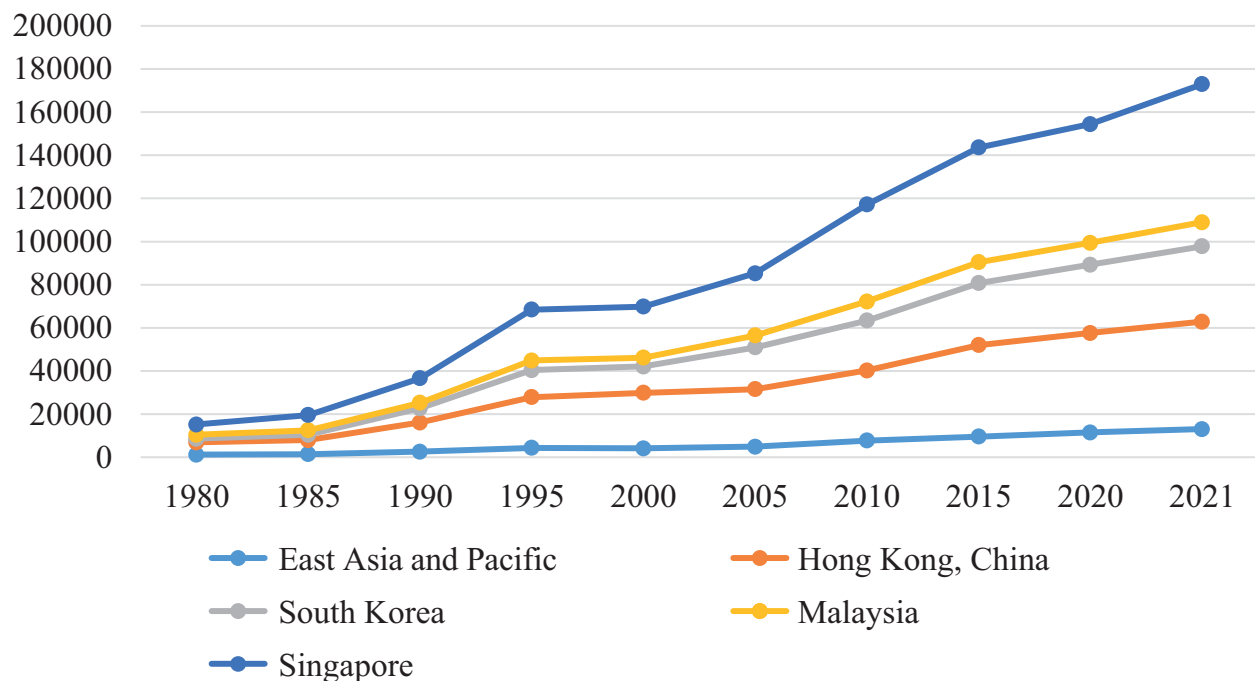
It is obvious that the accelerated development of Uzbekistan depends on the generation that has mastered modern knowledge and advanced technologies. It is highly qualified personnel, who are associated with the 'new renaissance'. In this respect, the state is sparing no effort or resources to ensure their harmonious development. It is no coincidence that the President of the Republic of Uzbekistan emphasises the importance of this issue, noting that the development of pre-school, school and higher education is 'a matter of life and death'<sup>1</sup>. In view of the above, it seems interesting to study the experience of Singapore, one of the world's leading countries and the economic centre of the Asia-Pacific region.

Since independence in 1965, Singapore's economy has transformed from a low-income economy to a developed high-income economy. During this period, the country's education policy has been aligned with national economic policy and human capital formation. Singapore has demonstrated that investment in human capital can yield greater returns in technological breakthroughs.

Many elements of the Singapore model are now widely accepted. Although many developing countries have attempted to follow similar strategies, few have been fully successful in achieving similar results. This study examines the policies, programmes and processes that Singapore has implemented from 1960 to the present to stay ahead of other countries.

The article identifies several factors that have contributed to Singapore's successful implementation of policies in the areas of education, health and the development of industrial relations. First, the collection and analysis of data to

Fig. 1. Dynamics of GDP per capita in East Asian countries, 1980–2021



Источник: составлено автором на основе данных рейтинга глобальной конкурентоспособности, составляемого Всемирным банком: <http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2022.pdf>: <https://www.imd.org/wcc/world-competitiveness-center-rankings/world-competitiveness-ranking-2022/>.

<sup>1</sup> Mirziyoyev Sh.M. (2022). Message from the President of the Republic of Uzbekistan to the Oliy Majlis and the people of Uzbekistan. 20<sup>th</sup> of December. <https://president.uz/ru/lists/view/5774>.

inform policy development. Second, effective leaders who fight corruption and set high standards for themselves and others. Third, Singapore has created a meritocratic and largely non-politicised bureaucracy that can strategise, develop forward-looking policies and implement them in a coordinated manner. Coordinated implementation is key to achieving results. Fourth, the national leadership maintained harmony in the multi-ethnic society and actively reduced tensions. Fifth, Singapore attracted immigrants, both skilled and unskilled. Sixth, the leadership mobilised domestic resources, which played a critical role in financing infrastructure, housing and other key investments. Finally, Singapore has never rested on its laurels; it has always been open to ideas, willing to learn, innovate and embrace new technologies.

Social and labour relations in Singapore can be understood and studied using Dunlop's model [Dunlop, 1993]. It consists of three actors (government, union and management) in the context of the environment, the mechanisms through which the actors interact, the outcomes of the cooperation (workplace rules) and the feedback mechanism (consequences for the actors and society). The Singapore model is also characterised by cooperative tripartism, with features such as (1) strong informal and formal communication networks, (2) the dominance of government as a policy, (3) a primary concern for economic growth, political stability and industrial peace, (4) a strong centralised trade union movement (there is only one trade union federation - the National Trade Union Congress), (5) a symbiotic relationship between government and trade unions, and (6) a non-confrontational approach to problem solving.

Singapore is the undisputed leader among East Asia's four major economic tigers. This is confirmed by key economic indices and rankings<sup>2</sup>. The country's GDP per capita growth has outpaced other Asian tigers since 1980 (Fig. 1). Singapore is highly competitive (ranked third in the International Institute for Management Development's World Competitiveness Index and second in the World Economic Forum's Global Competitiveness Index<sup>3</sup>). The country was ranked fifth among the most innovative economies in the world in the Global Innovation Index [Breuer, Pinkwart, 2018]. Singapore also ranks fifth in the Observatory of Economic Complexity's Economic Complexity Index. The country ranks second in the World Bank's Doing Business Index for ease of doing business, and has the highest online readiness score in the Global Information Technology Report. Singapore was ahead of other East Asian countries because it never rested on its laurels.

Since becoming an independent republic in August 1965, Singapore has steadily improved its economic performance through forward-looking policies and strict adherence to them, anticipating challenges on many fronts. To paraphrase Lee Kuan Yew, the man who made Singapore what it is today, relentless effort can achieve the impossible.

Under the leadership of Lee Kuan Yew, Singapore's government adopted a strategy of rapid industrialisation aimed at creating jobs for low-skilled workers and generating income from exports. As with other 'Asian Tigers', it began with the production of garments, shoes, toys and basic consumer electronics. The government has set its sights on rapidly diversifying and deepening industry to move up the income ladder. To achieve this goal, the small island economy needed to attract investment from transnational corporations (TNCs) and integrate local industry into their emerging global value chains. This was achieved by developing industrial zones supported by modern heavy and light infrastructure, reforming laws to end endemic labour disputes and, most importantly, creating an efficient bureaucracy to minimise transaction costs for business. Recognising that the quality of the workforce would be a key attraction for multinationals, the government laid the foundations early on for an education system that would provide the skills needed to support a modern industrial economy.

The quality of human capital, management skills and intangible capital have had a strong impact on Singapore's economic performance. Representatives of the scientific school 'Labour Economics and Human Capital' at the Tashkent State University of Economics argue that we live in 'the era of human capital in the sense that human capital is the most important form of intangible capital in the modern economy on a global scale, including in the Republic of Uzbekistan. The economic success of individuals, as well as entire economies, depends on how extensively and effectively people invest in themselves' [Abdurakhmanov, 2021].

It should be noted, however, that Uzbekistan has significant shortcomings in its education system. Enrolment in kindergartens was low, a crisis was brewing in school education, and young people graduating from universities were unprepared to compete in the labour market. The level of education in universities was unsatisfactory, but competition for admission to universities and institutes was in the double digits, while professors and teachers received low salaries, students and teachers were tired of forced labour, and the status and authority of teachers in society was unacceptably low.

Solving these problems required huge amounts of money and decisive action. Funds were and are being allocated, and education reform began at an accelerated pace. The head of state identified education as one of the priority areas for laying the foundations of a new Uzbekistan.

In general, a great deal of work has been done in the field of education. This has resulted in the creation of an effective system of comprehensive and continuous support for children from birth to adulthood, helping them to find a worthy place in life. The President of the Republic of Uzbekistan regularly holds meetings on the subject of education, at which the accumulated problems

<sup>2</sup> The search for the sources of Singapore's economic power, political system and leadership has been the subject of numerous academic studies. A keyword search by author identified 45,300 articles published between 1993 and 2016, including 200 academic articles on the Singapore model alone.

<sup>3</sup> <https://www.globalinnovationindex.org/gii-2022-report#>.

Table 1  
Uzbekistan human development index

Indicators	2020	2022	Dynamics from 2020 to 2022
Life expectancy at birth (years)	71.7	70.9	−0.8
Expected duration of study (years)	12.1	12.5	+0.4
Average duration of study (years)	11.8	11.9	+0.1
GNI per capita at PPP (USD)	7142	7917	+775
Human Development Index	0.72	0.727	+0.007
Human Development Index ranking	106	101	+5

Source: Compiled by the author on the basis of the data from <https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22overviewrupdf.pdf>.

are discussed in a critical spirit. For example, the issue of further improvement of 10,130 schools across the country was discussed - after all, the future of more than 6 million students and over 500,000 teachers, representatives of all strata of our society, every family, depends on his decision.

As a result of the ongoing reforms, the Republic of Uzbekistan is ranked 101 out of 191 countries in the Human Capital Index in 2022, with an index value of 0.727 (the maximum index value is 1,000), improving its ranking by five positions and the index value by 0.07 compared to 2020 (Table 1).

The comparative analysis shows that the only indicator negatively affecting the Human Development Index (hereafter HDI) for Uzbekistan is life expectancy at birth, which has fallen by 0.8 years compared with 2020. According to experts, the reason for this decline is the situation with the spread of COVID-19 and the weakness of the health system in the fight against this infection.

Singapore is the economic centre of the Asia-Pacific region. For many years, it has maintained its status as one of the world's largest and most developed economies, built on success in key industries such as electronics, chemicals, biotechnology, banking, logistics and transport.

With this in mind, the President of the Republic of Uzbekistan identified six key areas of cooperation with Singapore in the near future<sup>4</sup>.

Firstly, 'the development of human capital and the training of highly qualified personnel for public administration'. An implementation agreement was reached with the School of Public Policy. Lee Kuan Yew Joint Programme for the education and training of civil servants in the fields of governance,

urban planning, infrastructure development, digital transformation, innovation, education and health. An intensive retraining programme for civil servants will also be launched, based on the Academy of Public Administration of Uzbekistan, with the participation of leading Singaporean experts.

Secondly, the involvement of the Singaporean side in the privatisation processes in Uzbekistan. In this context, the prospects for implementing new projects in the framework of privatisation of large enterprises in Uzbekistan with the involvement of advanced experience, modern technologies and management of leading Singaporean companies have been identified. A joint investment fund for the transformation and restructuring of state-owned enterprises will be established, with the aim of further launching an IPO and attracting external investment.

Thirdly, attracting advanced green technologies and digital solutions is a top priority. Opportunities have been identified to leverage Singapore's achievements in digitalisation and the use of innovation and technology in 'green development'<sup>5</sup>.

Fourthly, to attract Singapore to improve Uzbekistan's urban infrastructure and communications. Measures have been developed for cooperation in urban planning and construction, landscaping and public utilities. The first step in this direction is the establishment of a joint design and engineering centre in Uzbekistan for the implementation of infrastructure and industrial projects.

Fifthly, areas of cooperation have been developed, including the promotion of investment and the expansion of mutual trade through the promotion of joint projects with leading Singaporean companies.

<sup>4</sup> Uzbekistan - Singapore: New horizons for the development of multifaceted cooperation. <https://president.uz/ru/lists/view/5825>.

<sup>5</sup> Id.

In this regard, an Uzbek-Singaporean investment company will be established with an authorised capital of \$500 million.

Sixthly, it is necessary to emphasise the exchange of experience in the field of ensuring public security, maintaining inter-ethnic harmony and combating radicalism.

In Singapore, the aforementioned School of Public Policy, named after Lee Kuan Yew at the National University of Singapore, is one of the world's leading higher education institutions. The school has long been at the top of the world rankings of higher education institutions and organises short-term training programmes for senior officials from abroad.

It is widely known that a well-thought-out human resources policy and the priority given to the training of qualified, competent and honest managers have played an important role in Singapore's economic and social success. The President of the Republic of Uzbekistan has paid special attention to these issues from the very beginning of his activity. Therefore, studying and applying Singapore's experience in the field of public administration training is of great importance.

In the context of expanding opportunities for bilateral partnership, we will look at the key milestones of cooperation between the countries and characterise the immediate prospects for interaction.

Uzbekistan is interested in attracting Singaporean capital and establishing production cooperation. An example of this is the partnership between the Uzeltehsanoat Association and the Singapore Semiconductor Industry Association. Hong Leong Asia plans to set up a production facility in Uzbekistan to supply precast concrete, cement and rigid packaging to the local and international markets. Pan-United Corporation Ltd will supply concrete innovations. Collaboration with Singaporean companies Wellchem Pharmaceuticals and Poli Medical will enable the opening of joint ventures for the processing of medicinal plants and the manufacture of medicines from them. Systems on Silicon Manufacturing Company Pte. Ltd. will start producing electronic chips for cars in Uzbekistan, and a joint venture with Continental Automotive Singapore will produce sensors and displays for transmissions.

There are broad prospects for cooperation in the field of education, development of information and telecommunication technologies, finance and banking. Partnership in the field of 'smart nation' and 'digital government' in the areas of 'smart cities', digital government services, fintech, artificial intelligence are priority areas for expanding cooperation between Uzbekistan and Singapore, which has been recognised as one of the world's best 'smart cities' for many years.

Table 2  
Timeline of Singapore's education system from 1965 to the present

1960–1970 - survival phase	1970–1980 – phase of increasing efficiency	1980–1990 – capability phase	1990–2000 – phase of forming schools of thought, learning nation	2000–2010 – 'teach less, learn more' phase
1960 Bilingualism	1970 Universal secondary education Council for Vocational and Industrial Education		1995/1999 International trends in mathematics and science education	2002 Comprehensive training programmes are established
1965 Universal primary education	1976 Technical education	1987 English taught as first language in Singapore schools	1997 Launch of a master plan for the development of IT technologies in education	From 2003 to present Creation of innovative and digital companies
1965–1970 Secondary enrolment almost doubles	1979 Introduction of continuing education		By 2000 the content of education programmes reduced by 30.0%.	

Source: compiled by the author using data from <https://www.straitstimes.com/singapore/education/the-education-system-over-the-years>.



Digital transformation is another promising area for the two countries, especially in the field of e-government. Singapore's focus on digital transformation began in the 1980s with the creation of the National Computerisation Programme. Today, 99.0% of all government transactions are conducted digitally.

Singapore's experience shows that it is not the length of education (the number of years of schooling) that contributes most to individual productivity and GDP growth, but the quality of education, as measured by the test scores of school leavers in science and mathematics. While years of education are weakly correlated with growth in accumulated knowledge, knowledge capital, which reflects the quality of learning, is strongly associated with growth in both magnitude and importance. Teachers' skills largely determine the amount and quality of knowledge transferred to students.

After independence, Singapore inherited a 'mix' of schools divided along ethnic lines: English, Chinese, Malay and Tamil schools, each with its own language of instruction and curriculum [Poon, 2009; Simon, 2016; Kerr, 2020; Testa et al., 2022]. During the colonial period, the administration favoured English-medium schools, which provided upward mobility for the local population, but most students attended schools where English was not the language of instruction. The first priority for the newly created state was to integrate Singapore's schools into a single system and, in the interests of the country's future outward-looking development strategy, to expand the use of English as the medium of instruction so that the future workforce could communicate with foreign companies. Fig. 2 provides a chronology of the measures taken to achieve these goals and other important developments from 1965 to the present.

As always, Singapore's policymakers are closely monitoring and absorbing global trends. They are well aware that global competition is intensifying. As intangible capital and innovation will be the main drivers of productivity growth in the future, the quality of human resources, the excellence of Singapore's researchers and the skills of its managers in government agencies, companies and schools will determine whether Singapore can remain at the forefront of Asia's economies. Singapore's administrative strength makes it flexible, and its small size makes it less likely to make mistakes.

In Singapore, the average family spends USD 71,000 on primary and tertiary education, according to an HSBC report on the value of education [Kerr, Kerr, 2020]. According to an earlier World Bank report, private expenditure on education in Singapore was 1.2% of GDP. Every Singaporean child between the ages of 7 and 16 has an Edusave account into which the government contributes USD 200 per year if the child is enrolled in a full-time school programme, vocational programme or special education programme. This money is intended to cover the family's educational expenses. Each child can also have a post-secondary education account, and the government will reimburse any payments made into this account, up to a certain limit, until the child reaches the

age of 18. Any funds in this account that are not used to pay for higher education are transferred to the individual's Central Provident Fund (CPF) account, Singapore's compulsory social security scheme. There are also awards and scholarships for successful work.

Research shows that increased investment in education boosts economic growth. The cumulative effect of improved education includes higher wages, workforce efficiency and gross domestic product.

By ensuring the provision of quality education, the government will be able to significantly improve the skills and competencies of the workforce in line with the needs of the economy over the long term. As part of the reforms and economic transformation undertaken by the country's leadership, Uzbekistan will need a skilled workforce in the medium term to achieve maximum productivity and continuous innovation. This is a trend in today's increasingly globalised economy that must be taken into account if tangible results are to be achieved.

According to international experts, effective policies in education, science and innovation can contribute not only to the personal development of individuals, but also to the development of regions, stimulating processes of social inclusion and integration. Meanwhile, recent market research in developed countries shows a growing gap between the skills people acquire through education and training and the skills required by the labour market. The main reasons for this mismatch are the transition to Industry 4.0, the widespread introduction of technological innovations and structural changes in the business environment. For example, a study by the World Economic Forum found that closing the skills gap could add USD 11.5 trillion to global GDP by 2028.

In his message, the President of the Republic of Uzbekistan proposed to the Oliy Majlis and the people of Uzbekistan to proclaim 2023 as the year of caring for people and quality education. 'It should be noted in particular that a social state means, first of all, the creation of equal opportunities for people to realise their potential and the necessary conditions for their decent life and the reduction of poverty. Therefore, we must first of all pay attention to supporting education - the most important investment in the new Uzbekistan'<sup>6</sup>.

To this end, a new programme will be implemented from 2023. European educational standards will be introduced in one of the technical schools in each region, and over the next five years such a system will cover all colleges and technical schools. At the same time, support for talented young people will be expanded. Specialist engineering schools will be set up in collaboration with leading international organisations in the chemical, electrical, transport and energy sectors. This will create a system for training a new generation of engineers.

Considering the share of youth in the republic's population structure, improving the quality of education and human capital will become an important driver of economic growth and improvement in the quality of life.

<sup>6</sup> Shavkat Mirziyoyev (2020). <https://president.uz/ru/lists/view/5774>.

The development strategy of the new Uzbekistan for 2022-2026 outlines the main aspects of radically improving the quality of education. In particular, tasks have been outlined whose implementation will ensure an increase in the rate of enrolment in pre-school education from the current 67.0% to at least 80.0%, as well as raising the quality of education in the pre-school system to a new level, including through the training of more than 160,000 teachers. It is also necessary to completely overhaul it on the basis of advanced foreign experience and to implement new curricula and textbooks<sup>7</sup> in practice by 2026. It is also worth noting that systematic work is being carried out in the Republic to increase the level of enrolment in higher education to 50.0%. All these measures are undoubtedly the main conditions for improving the quality of education. The necessary efforts are being made to improve Uzbekistan's position in the Global Innovation Index and to be included in the top 50 countries in the ranking by 2030.

As global practice shows, and Singapore's experience in particular, it is possible to achieve these goals. This is mainly possible by increasing spending on human capital, investing in infrastructure, and studying and adapting the best practices of the top 50 countries in the Global Innovation Index. Singapore's Skills Future Programme, for example, helps all students, from undergraduates to seasoned professionals, identify the skills they need for their chosen careers. It also provides access to the necessary resources. By reaching out to all segments of the population, the programme encourages lifelong learning among Singaporeans.

As for Uzbekistan, the republic is implementing comprehensive measures for the active development of digital human capital and the digital economy, as well as the widespread introduction of modern information and communication technologies in all industries and sectors. The 'Digital Uzbekistan-2030' strategy has been adopted, which aims to ensure a successful transition to the digital economy, taking into account modern trends. According to the strategy, the network of information systems and software products for the automation of management, production and logistics processes at enterprises in the real sector of the economy is being dynamically expanded. Systematic work is also being carried out on the further development of the e-government system, the expansion of the market for software products and information technologies, the organisation of local IT and technology parks, and the training of qualified personnel<sup>8</sup>.

Many new universities are opening, including in cooperation with foreign countries (branches of prestigious universities). The quotas for those wishing to enter higher education are increasing. As a result, the number of universities in the republic has increased by 2.5 times - to 198, and enrolment in higher education has increased from 9.0 to 38.0%.

Uzbekistan and Singapore have successful experience of interaction in education and science. Countries are

establishing close links between educational institutions. A striking example of cooperation is the Management Development Institute of Singapore (MDIS), which opened in Tashkent in 2008. Over the years, the university has trained thousands of professionals in banking, business management, tourism and other industries.

The Tashkent Institute of Technology, Management and Communications (TMC), a branch of the TMC Academy in Singapore, will also open in 2021. Under the current agreement, the Institute contributes 1% of its total income to the Multi-Partner Trust Fund for Human Security in the Aral Sea Region. The second campus of the university was opened last year. This will allow the number of students to increase by 12.5 times (from 400 people in 2021 to 5,000 in 2022).

Cooperation in education is developing rapidly. Uzbekistan and Singapore are implementing a number of joint projects. For example, in recent years, the Singaporean company SixClouds has launched an interactive online English learning programme for 300 schools in the Republic of Karakalpakstan and 14 presidential schools in Uzbekistan. The A-Level educational programme, which is recognised in 130 countries, has been introduced in the presidential schools and is already showing results. Each student studies specific areas in depth according to their abilities, and their chances of getting into the best universities in the world are increasing. The Singaporean side is also actively helping to modernise the programmes of pre-school educational institutions in our country. For example, an agreement was signed with the Singaporean company Modern Montessori International to establish a pre-school educational institution in Tashkent.

In the next five years, the coverage of children in pre-school educational institutions will reach 80.0%, while another 600,000 places need to be created. The private sector has an important role to play here. There will also be a major effort to build new schools and expand existing ones. One hundred schools will be built at the expense of private investors, and in the next five years the number of such educational institutions will increase to one thousand.

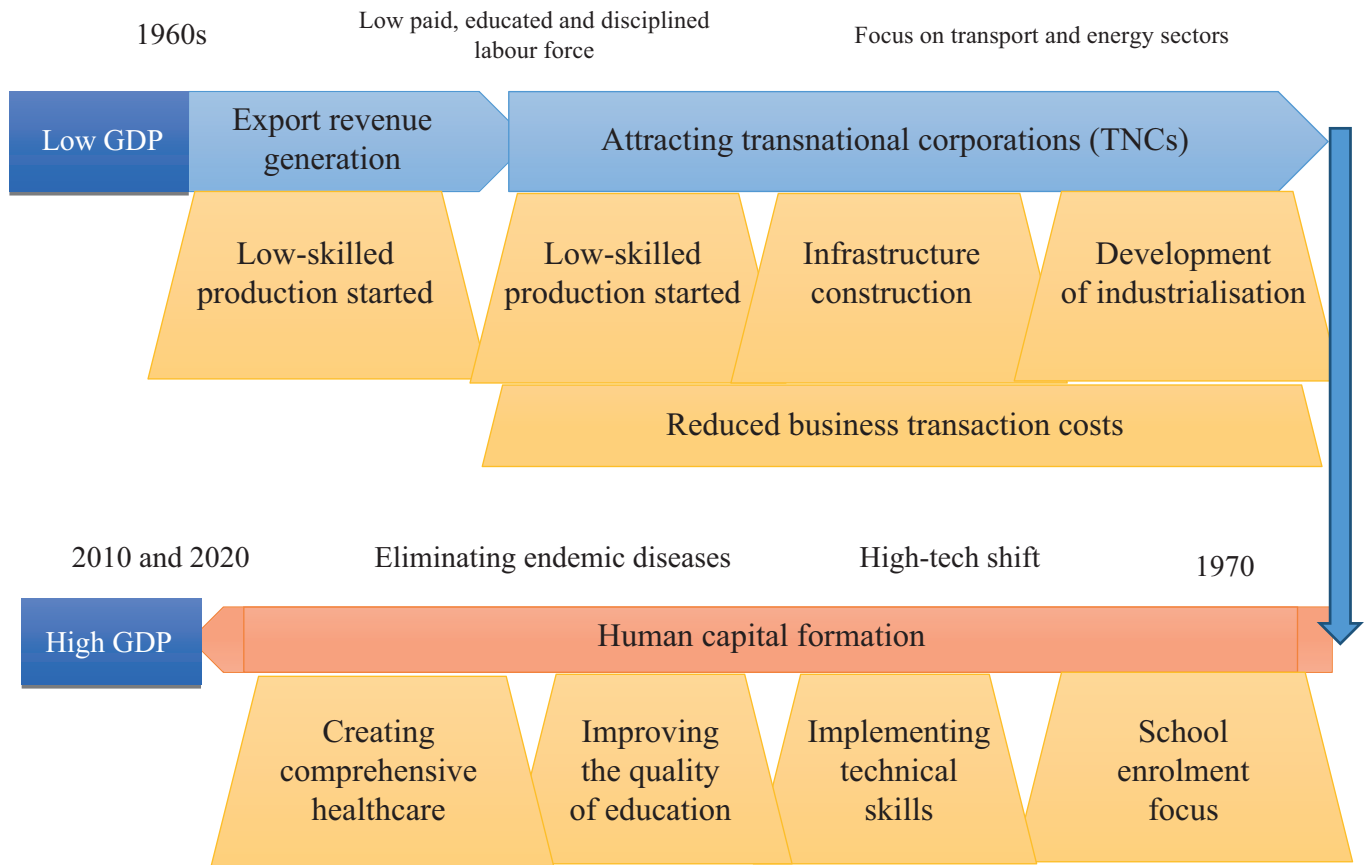
What positive results will the development of the private education system and the creation of equal opportunities for state and non-state educational institutions bring? First of all, there will be competition between them, which will open the way to the development of the sphere and improvement of the quality of education. Secondly, the number of children in classes will be reduced. Thirdly, corruption, which is deeply rooted in the education sector, will decrease. Fourthly, the number of knowledgeable, competent teachers will increase, as the need for qualified personnel in society will grow, wages will increase depending on the rating, and as a result, the status of the teaching profession will rise.

A branch of the Singapore Institute of Management Development's Service Quality Centre, which is highly regarded in Singapore and specialises in improving the skills

<sup>7</sup> Decree of the President of the Republic of Uzbekistan "On the development strategy of New Uzbekistan for 2022-2026" dated 28.01.2022 No. UP-60.

<sup>8</sup> Decree of the President of the Republic of Uzbekistan "On approval of the strategy "Digital Uzbekistan-2030" and measures for its effective implementation" dated 10.05.2020 No. UP-6079.

Fig. 2. Elements of Singapore's development strategy



Source: compiled by the author.

of managers and middle managers in the service sector, will be established in the Republic. Established in 1990, the centre is currently the training and development arm of the Singapore Human Resources Development Agency and provides short-term intensive training (bootcamp training) to employees in various industries on behalf of the government and industry.

Singapore's higher education system is recognised as one of the most developed in the world. The study of Singapore's experience is necessary for Uzbekistan, as the republic's universities are in the stage of large-scale transformation. Domestic specialists are actively working on developing measures to implement Singapore's experience. An important partner in this area is one of Singapore's leading universities, TMC Academy. At present, the parties intend to expand the activities of the Academy's branch in Tashkent in two stages. In the first phase, two educational buildings will be constructed over the next two years at a total cost of up to \$10 million. In the second stage, university buildings will be built in the regions of the republic, particularly in the Tashkent region. Work will be organised to train personnel

in areas in demand on the Uzbek labour market (information technology, financial technology, cybersecurity).

In 2023, the funds allocated to preferential educational loans for university students will double, reaching a total of 1.7 trillion soums.

In 2022, 1.5 trillion soums were allocated for the development of science and innovation - almost 6 times more than in 2017. The salaries of scientists have also increased by 4.5 times. Thanks to the measures taken, 18 new scientific fields have been organised, such as nano and biotechnologies and digital geology. In 2023, 1.8 trillion soums will be allocated to science and innovation.

According to N.S. Ziyadullaev, the development of education has been elevated to the level of state policy in Uzbekistan over the past six years. A great deal of work is being done to raise the younger generation as physically strong people, creating conditions for the manifestation of skills and talents [Ziyadullaev, 2021].

Singapore's experience has shown how upgrading human capital can accelerate development and dramatically reduce poverty in a resource-constrained economy, and



this experience has been confirmed by other economies in East Asia. Can Singapore's models of quality education and health care be replicated in other middle- and lower-middle-income countries?

As noted above, some elements of these models were supported by conventional wisdom. Providing universal primary education, emphasising the quality of teacher training, focusing on teaching, especially in STEM subjects, collecting data for decision-making, strengthening school management, systematically assessing school and student performance, and controlling costs are integral to most countries' education strategies. Similarly, eradicating disease, focusing on prevention and primary care rather than acute care, and sharing the cost of health care between the

population and the government are among the main goals of other countries. Many developing countries have made steady progress in building and improving their human capital, but few are fully satisfied with their performance, and strengthening their delivery capacity is a recognised priority.

This leads us to seven factors that have contributed to Singapore's success in implementing its education and health human capital strategies, factors that may be difficult to replicate elsewhere (Fig. 2).

Firstly, policy development requires the development of digital technologies that facilitate the collection and analysis of data and its use to formulate targeted policies.

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The article was submitted on 28.08.2023; revised on 23.09.2023 and accepted for publication on 08.10.2023. The author read and approved the final version of the manuscript.

文章于 28.08.2023 提交给编辑。文章于 23.09.2023 已审稿，之后于 08.10.2023 接受发表。作者已经阅读并批准了手稿的最终版本。