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ECONOMY OF KAZAKHSTAN IN COMPETITIVE DIMENSION

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Abstract. The article analyses the economic development of Kazakhstan in competitive dimension. The author made a conclusion that according to the classification of economic development stages, current level of Kazakhstan's economy allows to classify it as a mixed factor- and investment-driven type of development. For transition of Kazakhstan to an investment and innovation-driven stage and improvement of its competiveness, in the judgment of the author, it is necessary to intensify the influx of investments and scientific and technological progress to processing industry, directing accumulated financial recourses in country on innovation development of processing industry and cluster development of the national economy. At the same time for most of Kazakhstani enterprises the main goal of innovation development is the partnership with world producers, development of new technologies allowing to decrease the cost of production and to reduce the price of goods.

JEL Classification: O53
Keywords: competitiveness, factor-driven stage, investment-driven stage, innovations-driven stage, Kazakhstan.
Reikšminiai žodžiai: konkurencingumas, faktorių veikiama būklė, investicijų įtaka, inovacijų įtaka, Kazachstanas.

1. Introduction

For objective identification of economic development of a country in the system of the world competitive dimensions it is important to define the level and quality of national economy growth and development. Achieved economic rate and proportions of development create an inner base for future development and by this way create expected rates of development, which confines with a known share of integrity in the world typification of national economics development. Classification by the level of development is based on typification of competitive development characteristics and determined by differences among factors and mechanisms that provide them.

Success of competitive development policy mostly depends on stages of macroeconomic development, which actually creates starting conditions for transition to higher level of development of national economy.

2. Stages of Economic Development

The ability of a nation to compete and its priorities for development change as it passes through different stages of economic development proposed by the World Economic Forum. These can be categorized into three stages:

Factor-driven stage is applied to countries with the lowest level of development, for which mobilization of the primary production factors (land, commodities and unskilled labor) are basic conditions for macroeconomic development. On this stage government has to provide general political and macroeconomic stability and reasonably free marketplaces for effective utilization of raw material goods and unskilled labor both by domestic companies and through foreign investments. The economy has a low degree of integration into the world economy. Enterprises are mainly involved in primary production and occupy a small part of the value chain. The economy is particularly susceptible to fluctuations in the world

economic cycle, commodity prices, and exchange rates. For this category of countries price is the main asset in global competitiveness. In order for them to move into the second group of countries the assimilation of technologies through import, direct foreign investments and imitation are necessary.

Investment-driven stage is applied to countries with middle income, where growth depends on investments, and competitiveness is achieved through the use of world technologies in domestic production. The investment-driven economy relies heavily on the importation of global technology for local production processes. Funding of the capital imports increases dependency on foreign capital. Companies produce standard products and services and move up the value chain beyond basic manufacturing towards product design, distribution, and marketing. Productivity is improved through increased investment in infrastructure and a business-friendly environment. At this development stage, the economy becomes increasingly integrated into the global economy. The development of local financial markets for raising of debt and equity is important, as is the reduction of bureaucratic hurdles to development and the increase in labour market flexibility. Financial crises and external, sector-specific demand shocks can still impact the economy. On this stage, in order to increase attractiveness of the country and to integrate it into the global markets governments have to pay more attention to infrastructure (ports, telecommunications, roads) and to legal base (customs, taxes, legislation).

At the innovation-driven stage (countries with high level of economic development), the economy's focus is on continued technology generation rather than predominant reliance on foreign technology. High rates of innovation and commercialization of new technologies characterize this stage. Economies produce unique goods for the global market, driving advances in technology and business methods. Service industries play an increasingly important role and contribute significantly to GDP. Human resources and flexible organizations that can rapidly respond to a continually changing global environment are the key to continued innovation and maintenance of a position on the technology frontier. The innovation-driven stage requires flexible organizational structures, strong research institutions and a high degree of venture capital availability. Economies at this stage of development are more resilient in a volatile global economy.

In view of M. Porter, government plays a role of accelerator and initiator in transition to higher level of competitiveness. Authorities have to encourage the interest of private companies in increasing effectiveness, stimulate creation of demand for high-tech products, and concentrate their efforts on creation of specialized factors and stimulation of domestic competition through limitation of direct partnership and introduction of antitrust legal norms [1].

3. Factor- and Investment-Driven Type of Kazakhstan's Development

According to classification of economic development stages, the current economic level of Kazakhstan allows to classify it as mixed factor- and investment-driven types of development. A basic for this conclusion are substantial reserves of mineral resources, which cause on the first stage of entering the world market domination of raw materials direction through attraction of considerable investments in mining industry under inefficient development of processing industry. The economy remains heavily reliant on natural resources (indicative of a factor-driven economy).

Republic of Kazakhstan in a world economy is positioned as a country supplying to world markets a huge amount of oil, gas, ferrous, nonferrous, rare-earth and precious metals, uranium products and grain. In comparison with other CIS countries Kazakhstan has comparative factor advantages in the form of huge reserves of mineral resources, which became a locomotive of national economy establishment. In the future perspective they will also be the most important source for sustainable economic growth. Scarce mineral resources are factor competitive, as they take key positions in economic development of any country and are much in demand in the world market.

In-depth analysis of GDP rates for 16 years of independent development of Kazakhstan indicates that there are three important periods of country's development (1991-1994 – recession, 1995-1999 – economic stabilization and 2000-2007 – growth). General picture of development dynamics is quite regular for any country, which has passed through transformation, and is now creating sovereign economy and entering into world markets having the existing factors of development. The real GDP growth against the year 1990 (period of USSR directive system of economic management) indicates that economy of Republic of Kazakhstan by 2004 had passed the initial parameters of growth and came out to new parameters of development. At the same time in 2002-2006 there was observed the dynamics of decreased speed of annual growth and variability of real GDP growth rates in range of 13.5% in 2001 up to 9.4% in 2003-2006.

Against a background of general price growth on oil and other products of extractive sectors, decrease of growth rates and appearance of undesired variations are evidence of some internal problems of national economy development.

Analysis of structural changes and proportions of Kazakhstan's GDP in 1990-2006 also indicates the insufficient use of structural effects. Basically structural instruments did not became a source of self-development in development of industrial sectors, which are priority sectors in production of value added goods that provide dynamic balancing in development of economy and employment in the country. Decline in industrial sector share from 32.6% to 29.7% in 2000-2006 indicates important structural problems and defects in industrial politics implementation (table 1).

Table 1. **Structural changes and proportions of Kazakhstan's GDP by industries in 1990-2006, %**

Year	1990	1995	2000	2005	2006
GDP	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**
including:					
production of goods	66,5	42,3	45,9	44,0	44,6
agriculture, forestry and fish industry	34,0	12,3	8,1	6,4	5,4
industry	20,5	23,5	32,6	29,8	29,5
construction	12,0	6,5	5,2	7,8	9,7
services production	33,5	54,0	48,4	52,0	51,8
trade	8,2	17,2	12,4	11,8	11,7
transport	8,6	9,4	10,0	9,8	9,1
communication	0,8	1,3	1,5	2,0	2,2
other services	15,9	26,1	24,5	28,4	28,8

Source: [2, p. 115; 3, p. 120-125].

Although there were some positive structural changes in 1990-2006 (decrease of production of noncompetitive goods by 22%, growth of services production by 17%), at the same time share of construction and agriculture, forestry and fish industry decreased (from 12% to 6.3% and from 34% to 8.0%). Growth in volume of services (communication, transport, trade and other services) however was accompanied by increase in their prices which for the last eleven years increased by 6.3 times, prices for foods – by 2.6 times and non-foods by 2 times [2, p. 287; 3, p. 256; 4, p. 258].

Generally for the last 16 years structural changes in economy are corresponding with tendencies of transformation processes in CEE, Baltic States and CIS countries. However because of accumulative potential of raw material orientation Kazakhstan's economy trends to one-sided development with dominating development of extracting industries. Considerable profits from raw material sectors generate a "Dutch disease" in the country and their high profitability make investments in industry unattractive. As a result of it raw material specialization increases more and more what makes Kazakhstan a commodities adjunction of developed countries. Moreover it increases its economic vulnerability, import dependence, currency pressure on domestic financial system, and by this creates structural imbalance and decreases competitiveness of national economy.

There were considerable changes in structure of industrial production in 1990-2006. On a background of general decrease in share of processing industry from 81.8% to 36.7% in this period there was a drastic increase (almost in 5.2 times) in share of mineral resource industry. Accelerated development of mineral recourse industry was caused mainly by unlimited demand on energy resources and increase in prices on the world market. Accordingly it caused a rapid upsurge of crude oil extraction and accompanying gas in Kazakhstan in the last years; their share in GPD increased from 21.2% in 1990 to 85.4% in 2006 or increased almost by 4 times (table 2).

Table 2. **Structure of mineral resource industry of Kazakhstan, %**

Year	1990	1995	2000	2005	2006
Extraction of crude oil and oil gas	21,2	39,9	85,4	84,7	85,4
Extraction of natural gas	2,1	1,7	1,2	0,9	0,9
Extraction of coal and lignite	27,0	27,5	3,3	2,1	1,7
Extraction of iron-stones	12,6	12,9	2,9	3,7	2,5
Extraction of base metal ores	19,5	11,6	3,9	3,0	3,6
Other mineral resource industries	17,5	6,4	3,3	5,6	5,9

Source: [2, p. 128; 3, p. 148-150].

In the environment of high demand on energy resources and prices growth, policy of raising of the crude oil and accompanying gas extraction is a sound argument for growing Kazakhstani economy as it also could serve as an important source for accelerating modernization of national economy. Financial means from energy resources may and must play a key role in creation of competitive national economy. However the existing lag of other sectors (extraction of carbons and lignite, iron and non-fer-

rous ores, natural gas) indicates that there is an unbalanced industrial policy in the country.

In the structure of processing industry there were also considerable structural changes in the last 16 years, as production of oil products increased almost by 2.5 times, ferrous metallurgy – by 2.3 times and production of non-ferrous metals – almost by 3 times. However there was a considerable decrease in share of textile industry and sewing industry from 13.5% in 1990 to 1.5% in 2006, and in share of machine-building industry – from 15.9% to 9.4% accordingly (table 3). It was a result of decrease in demand and insufficient competiveness of the products.

Table 3. **Structure of processing industry of Kazakhstan, %**

Year	1990	1995	2000	2005	2006
Production of foodstuffs, including beverages	29,6	21,8	26,1	23,2	22,1
Textile and sewing industries	13,5	3,7	4,3	1,8	1,5
Production of oil products	2,6	9,9	7,2	8,5	6,5
Chemical industry	5,5	5,4	2,1	3,0	2,3
Ferrous metallurgy	5,1	15,9	18,4	15,2	11,8
Production of non-ferrous metals	10,0	17,7	25,4	21,5	29,5
Machine-building industry	15,9	11,5	5,5	9,4	9,4
Production of other non-metal mineral products	6,3	6,1	1,6	5,8	5,6
Other processing industries	11,5	8,0	9,6	11,6	11,3

Source: [2, p. 132; 3, p. 148-150].

Thus, the performed analysis of Kazakhstani economy allows us to make a conclusion that despite the economic growth it was impossible to overcome the systematic backwardness and degradation of industrial production powers in the last 16 years. The main source of GDP growth is still export of commodities and products with weak degree of industrial processing.

Some pockets of the Kazakhstani economy remain in the factor-driven stage and others are pushing forward into the investment-driven stage of economic development. The country is investing in its infrastructure, encouraging and capitalizing on foreign economic participation, and producing basic goods and services. The economy remains heavily reliant on natural resources (indicative of a factor-driven economy), but this is offset by economic activity in other value-adding areas such as banking and other services. The oil and gas sector itself, traditionally factor-driven, is evolving to reflect the Kazakhstan's movement into more advanced stages of economic development. Increasingly, oil and gas activities are being developed downstream which have, for example, spawned important industry players in the petrochemical sector. Furthermore, new technologies are being applied in oil extraction and recovery, suggesting emergent, innovation-driven activity.

In order for Kazakhstan to move to the next stages (investment-driven and innovation-driven stages) there is a need to change economic mechanism, enhance investments inflow and scientific-and-technological progress into processing industry, directing accumulated financial recourses in country to innovation development of processing industry and cluster development of economy in order to export competitive value added goods of processing industries instead of raw material products. This will allow solving other problems associated with high deterioration of assets and attraction of new technologies, as well as reinforcing processes of interindustrial and interregional economic integration in the country.

High deterioration of fixed assets is typical not only for processing industry but also for extracting sectors where the most part of foreign investments flows in, which leads not only to slow down of labor productivity but also to worsening of products quality. For example, Kazakhstan by energy expenses per 1 dollar of GDP and labor productivity is more than 7-10 times behind the industrially developed countries. If per 1 dollar of GDP 2.8 kilowatt-hour is used in Kazakhstan, then in Great Britain, Germany, Italy, Japan only 0.4-0.6, and in Canada and China – 0.8-1.2 kilowatt-hour are used.

High cost of domestic goods production limit their price competiveness, and obsolete technologies and depreciated equipment reduce the attractiveness of local goods and demand on the domestic market, not to mention foreign markets. Presently, extractive industries are weakly integrated both between each other and with processing industry. However without this integration it will not be possible to achieve a sustainable economic development, increase competiveness of Kazakhstan and ability of domestic companies to successfully compete with foreign enterprises either on domestic or on foreign markets.

4. Position of Kazakhstan in the Global Competiveness Rating

In order to increase the competiveness of Kazakhstan according to the Industrial-innovation program it was planned to create new enterprises, which are equipped with high technologies (imported or

using local know-how). Presently the second stage of industrial-innovative strategy is realized. Some efforts are made for development of processing industry, and creation of techno parks, clusters and incubators.

Adaptation process of Kazakhstan to the world tendencies of scientific-technological and industrial integration is on the beginning stage, even though it is completely clear that integration into global innovation sphere is the main factor of national sectors development of high technologies. International scientific and technological partnership contributes to the increase of companies' competiveness and promotion of high technologies on domestic market.

For most of Kazakhstani enterprises the main goal of innovation development is a partnership with world producers. One of the most effective strategies is a long-term cooperation and alliance with world leaders. The partnership of Kazakhstani companies with foreign partners shows that the further they advanced by the way of understanding problems and advantages of entering world markets, the more stable is their financial and economic position. Development of national science and innovation activities follow more and more economic advisability.

In conditions of globalization no country can put aside tendencies of the world development as connection and comparable evaluation in a system of the world economic relations turn into one of the most important factors determining competiveness of national economy.

In 2005 Kazakhstan was ranked for the first time in Growth Competitiveness Index (GCI). The World Economic Forum's GCI is the most widely recognized assessment of competitiveness, covering 125 countries. The GCI evaluates 103 parameters, a mixture of hard data (facts and statistics) and management perceptions (collected through executive opinion surveys), to assess the quality of the macroeconomic and microeconomic environment. These parameters are organized into nine "pillars" of competitiveness: institutions, infrastructure, macroeconomic framework, health and primary education, higher education and training, efficient markets, ability to harness benefits of existing technologies, sophistication of production processes, and innovation.

Kazakhstan took the leading (61st) position among all CIS countries. Comparative analysis shows that by Microeconomic environment index (MEI) Kazakhstan takes 41st place in the world, passing ahead Czech Republic (46th place in the world), Slovakia (49th place), Poland (53rd place), Bulgaria (62nd place), Hungary (63rd place) and all CIS countries. However, two other components – Technological index (77th place) and Index of public institutions (76th) – are the most vulnerable for Kazakhstan. These indicators show an urgent need to strengthen the innovation, as well as information and communication components of national economic growth, to decrease the corruption level and to increase the level of law compliance in Kazakhstan.

Regarding the dynamics it is necessary to mention that in 2005 Kazakhstan took 61st place in the world by Index of competiveness growth and 51th place by Index of global competiveness, but in 2006 by this indicator (IGC) Kazakhstan was on 56th place and in 2007 – on 61st place [4].

Note: At that time when President of Kazakhstan posed a problem to join 50 the most competitive countries of the world, WEF had used Growth Competiveness Index, which was later substituted by Global Competiveness Index.

One of the leading creators of the of Global Competiveness Index, chief economist and the head of WEF's global competiveness network A. Lopes-Klaros proposed to evaluate country's position on the basis of some subindexes ('pillars'). More detailed description of Kazakhstan's position according to main subindexes is presented in the table 4.

Table 4. **Kazakhstan's position in the Growth Competitiveness Index based on main subindexes (2006)**

Subindex	Place	Value of subindex
Institutions	75	3,59
Infrastructure	68	3,33
Macroeconomic framework	10	5,57
Health and primary education	86	6,08
Higher education and training	51	4,28
Efficient markets	44	4,39
Ability to harness benefits of existing technologies	66	3,23
Sophistication of production processes	72	3,90
Innovation	70	3,13

Source: [5].

Table 4 shows that Kazakhstan has only two worthy positions in the international rating: Macroeconomic framework (10th place) and Efficient markets (44th place). Infrastructure, Higher education and training, Ability to harness benefits of existing technologies (accordingly 68th, 51st and 66th place) take average positions. Besides the Index of global competiveness (IGC) the competiveness of the country can be evaluated with the help of other indica-

tors. For example, by technological competiveness, evaluated by index of network readiness (index also developed by WEF), in 2005 Kazakhstan took 60th place (after Salvador), and in rating of countries on human development in 2006 – 79th place; and with a rating grade of 0.774 Kazakhstan is placed amongst countries with average level of development [6, p. 79].

5. Transition of Kazakhstan to an Industrial-Innovative Development Stage

While solving strategic aim of increasing national economy competiveness, first tasks are to develop science, innovations, social sphere and to create a favorable business environment.

Comparative analysis of macroeconomic parameters of Eastern Europe, Baltic States and CIS countries and structural changes in their economies allows making a conclusion that transformation reforms in Kazakhstan despite on some difficulties have positive results. However, in order to join 50 the most competitive countries of the world, it is necessary to make a surge in development of productive forces and production technologies.

Existing productive forces of many countries with transit economy continue to keep economic structure with inherent territorial and sector structure of location, specialization and unbalanced settling of population. In conditions of passing Kazakhstan to industrial-innovative stage of development it has to be reconsidered the basics of national economy organization in light of the world tendencies, where cluster approach to industry development must be dominant. That implies polarized concentration in one or several regions of critical mass of production factors and accompanying sectors for achievement of high competiveness of produced goods.

Transition of Kazakhstan to an industrial-innovative development stage increases a role of its regions during processes of structural and spatial organization of production forces. Development of Kazakhstani regions is one of priority tasks as dynamically developing and competitive regions create the main source of growth and development of the whole country, decrease of regional disproportions and assistance to more balanced development.

New realities while positioning Kazakhstan on the world market need cardinal reconsideration of out of date system of productive forces placement. It has to be transformed into a space system of productive forces, based on principles of polarized "focused" development, which comes to substitute policy of leveling the level of regional development and assumes special focusing of financial, administrative and managerial, human and other recourses in "supporting regions" ("poles", "locomotives" of growth), also further distribution of innovation activities in other regions.

Transition of Kazakhstan economy from a factor-driven stage (mostly, natural resources) to a stage of competitive development assumes development of some measures on its technological adaptation and integration into world reproduction processes by the way of developing a process of the world division of labor.

Need in steady raising of technological component is a mandatory condition for increasing competiveness of any country as modern economic development depends mostly on possession of more advanced technological structure and provision of participation level in the world market. In these conditions the accelerated dynamics of technological renewal characterizes flexibility and adaptability of economy, also serves as the most important pattern of provision and support of global competiveness of national economy.

According to the goods classification of OECD, Republic of Kazakhstan has a status of country that produces mostly average – and low technological traditional goods. By the level of economic development the country is on the level of pre-industrial and industrial development stage in group of other developing countries.

Most of used technologies became obsolete; there is no motivation for introduction of new high-tech production and spending funds for their creation and disbursement. By this parasitical approach lagging in innovation development could raise and psychology of uncertainty in technological breakthrough of some goods and economic spheres will strengthen. Radical turn from existing innovation apathy is only possible in case of increasing technological capacity of produced goods through the wide use of new knowledge and scientific developments in the process of their creation, adaptation and promotion on a market. The main goal of new technologies creation is a breakthrough of products on the world market and suppression of competition. At the same time the special value have new technologies that allow decreasing costs of production and making cheaper products; it is equal to increase of production potential and growth of other factors of production.

Transition of Republic of Kazakhstan to the industrial-innovative development stage puts forth new requirements for scientific potential, which are connected with creation of conditions for sustainable

economic growth, entering innovation products on domestic and foreign markets, substitution of import products on domestic market with new high-tech competitive domestic products.

Thus, in order to decrease economic, technological and social gap with developed countries it is necessary to develop some adequate measures of national reproductive system development. These measures should provide quality changes primarily in scientific, technological and educational field, directed on increase of technological capacity of produced goods for average- and advanced technology products' market development through realization of tasks of the Strategy of joining 50 the most competitive countries of the world, as well as Strategy of industrial-innovation development of Kazakhstan.

Conclusions

For objective identification of economic development of a country in the system of the world competitive dimensions it is important to define the level and quality of national economy growth and development. According to classification of economic development stages, the current economic level of Kazakhstan allows to classify it as mixed factor- and investment-driven type of development. A basic for this conclusion are substantial reserves of mineral resources, which cause on the first stage of entering the world market domination of raw materials direction through attraction of considerable investments in mining industry under inefficient development of processing industry. The economy remains heavily reliant on natural resources (indicative of a factor-driven economy).

Generally for the last 16 years structural changes in economy are corresponding with tendencies of transformation processes in CEE, Baltic States and CIS countries. However because of accumulative potential of raw material orientation Kazakhstan's economy trends to one-sided development with dominating development of extracting industries. Considerable profits from raw material sectors generate a "Dutch disease" in the country and their high profitability make investments in industry unattractive. As a result of it raw material specialization increases more and more what makes Kazakhstan a commodities adjunction of developed countries. Moreover it increases its economic vulnerability, import dependence, currency pressure on domestic financial system, and by this creates structural imbalance and decreases competitiveness of national economy.

The main source of GDP growth is still export of commodities and products with weak degree of industrial processing. Some pockets of the Kazakhstani economy remain in the factor-driven stage and others are pushing forward into the investment-driven stage of economic development. The country is investing in its infrastructure, encouraging and capitalizing on foreign economic participation, and producing basic goods and services. The economy remains heavily reliant on natural resources (indicative of a factor-driven economy), but this is offset by economic activity in other value-adding areas such as banking and other services.

In order for Kazakhstan to move to the next stages (investment-driven and innovation-driven stages) there is a need to change economic mechanism, enhance stimulating inflow of investments and scientific-and-technological advance to processing industry, directing accumulated financial recourses in country for innovation development of processing industry and cluster development of economy in order to deliver for export competitive finished goods of processing industries instead of raw material goods. Transition of Kazakhstan economy from stage of factor advantages (mostly, natural) to the stage of competitive development naturally assumes development of system measures on its technological adaptation and integration into world reproduction processes by the way of developing a process of the world division of labor.

In order to join 50 the most competitive countries of the world within the next few years it is necessary for Kazakhstan to make a surge in development of productive forces and technologies of production, to solve a problem of strengthening of innovative and information and communication components of economic growth, and also considerable decrease the corruption level and increase level of law compliance.

References

1. Porter, M. (1993). International competition. Moscow: International relations.
2. Kazakhstan during the years of independence. Analytical Information Journal. Almaty: Statistical Agency of the Republic of Kazakhstan, 2006.
3. Short statistical year-book. Almaty: Statistical Agency of the Republic of Kazakhstan, 2006.
4. Kazakhstan falls file places to 56th rank in the world economic forums 2006 global competitiveness rankings. Word Economic Forum press release. Geneva, Switzerland 27 September 2006. www.weforum.org
5. Executive Summary. Global Competitiveness Report 2006. www.wefo-ru.org
6. Sabden O. (2007). Competiveness of national economy: evaluation criteria and methods of its improvement. Almaty: Economics.

KAZACHSTANO EKONOMIKOS KONKURENCINIAI METMENYS

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Santrauka. Apžvelgiamos Kazachstano ekonomikos plėtros stadijos. Dabartinė stadija apibūdinama kaip orientavimasis į investicijų plėtrą ir inovacijas, siekiant didinti konkurencingumą. Autorė siūlo investicijas, mokslo ir technines naujoves diegti į perdirbamąją pramonę, skiriant būtinus finansinius išteklius bei plėtojant bendradarbiavimą su pasaulio gamintojais.

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