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ANALYSIS OF THE DEGREE OF DEPENDENCE OF KAZAKHSTAN'S ECONOMIC SECTORS ON IMPORT AND ASSESSMENT OF THE POTENTIAL FOR REDUCING DEPENDENCE ON IMPORTS

A. Sagynayev[1]*, A. Aituar[1], Z. Adilkhanova[2]
[1]International School of Economics, Maqsut Narikbayev University, Astana, Republic of Kazakhstan
[2]Economic Modeling Development Center, NAC Analytica, Nazarbayev University, Astana, Republic of Kazakhstan

ABSTRACT

Purpose of the research. This article attempts to analyze the degree of import dependence of Kazakhstan's economic sectors and further defines product groups that import could be substituted by the local production.

Methodology. Quantitative research analysis is conducted by using dataset and contemporary methodology of the United Nations Broad Economic Categories classification. Calculations of the coefficients of the Rotterdam model were made using the apparently unrelated regression method. It was assumed that the cost reduction will lead to a significant increase in the production of goods, thereby defining import substitution economic activities.

Originality / value is confirmed and justified by the lack of in-depth research to determine specific types of economic activities for which Kazakhstan can replace imports. Furthermore, the practical value of this study also concerns government reforms to identify industries that require government support measures.

Findings. Key findings of the article include selected 29 economic activities, import of which can be potentially substituted by the domestic production. For these selected industries, the coefficients of cross-elasticity of the production of domestic goods at prices for imported goods turned out to be significant. Results of the Rotterdam model suggested that an increase in prices for imported goods by 1 % leads to an increase in demand for domestic products from 0.09 to 4.99 % in these selected industries.

Keywords: economic diversification, import substitution, trade policy, domestic production, Rotterdam model, industrialization.

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INTRODUCTION

Kazakhstan has been traditionally known for its significant role in the production and export of raw materials, particularly in the energy and mineral sectors. The country possesses vast reserves of natural resources, including oil, natural gas, minerals, and metals. Historically, Kazakhstan has played a crucial role in the global energy market as one of the largest oil and gas producers in the region, while importing a high share of finished products.

Kazakhstan relies on imports to meet its domestic demand for manufactured goods, machinery, and consumer products. This is a common pattern in economies where there is a strong emphasis on resource extraction and export.

The import of finished products includes a wide range of goods, such as machinery, electronics, vehicles, consumer goods, and more. The reasons for importing finished products can vary and may include factors such as a lack of domestic production capacity, cost considerations, and a focus on specific industries.

Efforts by the government of Kazakhstan to decrease dependence on imports and increase domestic production align with a common economic strategy aimed at enhancing self-sufficiency and economic resilience.

Government often pursues various measures to promote domestic industries and reduce reliance on imported finished goods.

Along with increasing local production for import substitution, increasing export potential is a priority for Kazakhstan. Due to the country's relatively small domestic market of twenty million people, companies that do not participate in export activities (in many sectors of the economy) cannot achieve the minimum efficient scale (Economies of Scale argument). Accordingly, without government support or market protection, non-exporting companies may not be competitive even in local markets. Exporting companies not only generate foreign exchange earnings for the country, but also, thanks to competition in foreign markets, improve the quality of goods and services in the local market (Learning by Trading argument). Increasing the competitiveness and quality of goods and services will reduce imports and improve the country's trade balance.

The growth in supply of the raw materials sector contributed to the strengthening of the tenge, with the nominal exchange rate remaining unchanged. The inflated value of the tenge has led to a loss of price competitiveness in the manufacturing industry. As a result, today outbound sales from the country are dominated by raw materials, and domestic demand for high value-added goods is satisfied through imports.

Thus, this study will attempt to define the product groups that can be potentially substitute the imported goods in the internal market. Prior to presenting the results of the deployed research methodology, the review of literature both international and local authors will be discussed the following section.

Literature review. The importance of domestic production in Kazakhstan and dependence on imports can have significant implications for the country's economy, security, and overall development. A strong domestic production base contributes to economic stability by fostering job creation, income generation, and business growth. Dependence on imports can make the economy vulnerable to external factors such as currency fluctuations, trade barriers, and supply chain disruptions.

By conducting trade analysis, scholars 1] defined that increasing imports has a less positive effect on the national income than that of exports. Supporting arguments to the previous study can be found in prominent research by Felipe & Hidalgo [2] who provide quantitative analysis advocating a low diversification of the economy of Kazakhstan. Analyzing the degree of Kazakhstan's dependence on imports and assessing the potential for reducing import dependence may include a number of aspects, such as economic structure, foreign trade turnover, trade policy, investment and others.

Considering it as a common feature for the most developing countries, some research highlighted the role of government programs and public policies for an effective import substitution action [3]. Governments can employ a variety of strategies and policy measures to promote import substitution, which refers to the strategy of replacing foreign goods and services with domestically produced alternatives.

A seminal study by Aksenov identified key import substitution instruments for CIS countries including Kazakhstan namely are: imposing import duties, applying non-tariff approaches to govern international trade, and employ domestic policy tools to booster the efforts of domestic producers [4]. Relying heavily on imports can result in an economy that is heavily dependent on a few key industries or commodities. Developing a robust domestic production sector allows for economic diversification, reducing the country's vulnerability to fluctuations in global markets. In order to substitute import with domestic production some authors rely on trade policy development. Implementing trade policies that support domestic industries, such as quotas and other trade barriers that make domestically produced goods more competitive. Negotiating trade agreements that encourage the development of domestic industries and protect them from unfair competition in the light of EAEU and WTO commitments [5].

Tasbulatova analyzed the development of processing in Kazakhstan and made a conclusion that about 50 % of processed products consumed in the country are imported ones [6]. The study notes that a high level of import dependence can lead to trade imbalances, where a country is importing more than it is exporting. This can result in a negative impact on the balance of payments and foreign exchange reserves.

Following the industrialization policy, the country has been implementing policies and state programs to foster machine building, car and equipment manufacturing, high-end petrochemical production. Projects in these industries getting continuous financial and institutional support to enhance production, thus affecting to import substitution [7].

Amongst manufacturing industries, automotive production stands out as a key direction for import substitution during the last two decades. Key factors that typically contribute to the growth of the automotive industry in the country include government initiatives, investments, partnerships with international automotive companies and infrastructure development [8].

It has to be noted that in the context of import substitution for Kazakhstan, a number of authors analyze agriculture and food production [9; 10]. In the light of the food security perspectives, some researchers provide analysis on dependance from imports for food and agriculture industries [11; 12]. A reliance on imports for critical goods, especially those related to national security, can pose risks in times of geopolitical tensions or disruptions in the global supply chain.

Increasing competitiveness in the local market (import substitution) can only be an intermediate goal of the overall long-term goal - increasing exports (international competitiveness). Export-oriented industrialization and import substitution are not mutually exclusive strategies and require similar support from the state (in import substitution, tariff and non-tariff protection measures for the local market may additionally be applied). Export diversification strategies may start with import substitution (Infant Industry argument), but in order for the industry to become competitive and no longer require protection and subsidies from the state, the ultimate goal of support must be competitiveness in foreign markets [13].

The majority authors studying Kazakhstan find a consensus that government regulations have key role in import substitution measures to develop and upgrade infrastructure, including transportation and communication networks, to support efficient domestic production and distribution. Provide subsidies or financial incentives to domestic industries to make their products more competitive compared to imports. It can be highlighted that strengthening domestic production and its quality pave the way for the export promotion as well.

A balancing domestic production and import dependence is a complex task that requires careful economic planning and strategic decision-making. It is important to note that successfully substituting imports with domestic production requires a coordinated and long-term effort involving government, private sector, and other stakeholders [14]. Additionally, it is crucial to carefully balance protectionist measures with the need to maintain a competitive and open economy.

This study goes further and define the imported goods for which an increase in prices leads to an increase in demand for domestic products, thus increasing the production.

Government reports and relevant studies generally discuss about the role of imported goods in economic structure of Kazakhstan. While some trade data analyses are conducted, the gap in a literature exist for Kazakhstan since a few studies accomplished on considering the import substitution via national production and the price of goods. Therefore, this article deploys internationally recognized methods to assess the potential for reducing dependence of import of certain products.

MAIN PART

Research methodology. The objective of this section is to identify industries at the level of 4-digit codes of General classifier of types of economic activities (GCEA), where national production increases due to rising prices for imported goods. The sensitivity of production to price shows that local goods can replace imported ones in the consumer basket. To study the demand for goods, a modified Rotterdam model is used, which assumes that the demand for goods depends on income, the price of imports and the price of goods produced domestically. Calculations of the coefficients of the Rotterdam model were made using the apparently unrelated regression method, since the model assumes that the errors in the regression coefficients are correlated.

When assessing demand, data on the volume of imports, industrial production, personal income, producer and importer price indices were used as initial data. Information on production and prices for domestic goods is limited, and data before 2014 is not available, so this analysis uses monthly data from 2014 to 2019. Data is taken from UN Comtrade Database [15]. Lack of data before 2014 may lead to Type II errors (omission of events) in regressions, that is, it increases the likelihood of finding an insignificant effect when the actual effect is large. The smaller the sample, the higher the likelihood of not detecting a significant effect if it exists.

Moreover, the international production data for Kazakhstan beyond 2019 is currently unavailable. Yet, the impact of the COVID-19 pandemic could introduce distortions in the data for the period following 2019. The

global pandemic may have influenced various economic factors, making it challenging to accurately assess and analyze production trends in Kazakhstan during this period. Due to data limitations, this analysis can only serve as an illustration of general trends.

In order to calculate the income effect and the substitution effect, it is necessary to estimate the income elasticity of demand for domestically produced goods and imported goods and the price elasticity of demand for these goods. Then, based on the Slutsky equation, decompose the total effect of price changes into the import substitution effect and the income effect. In our work, to estimate the system of demand functions for domestically produced goods and imported goods, we use the Rotterdam model:

$$\Delta \log X_{it} = c_{i0}^{X} + c_{i1}^{X}\left(\Delta \log I_t - w_i^{X}\Delta \log p_{it}^{X} - w_i^{Im\,log\,p_{it}^{Im}} + c_{i2}^{X}\Delta \log p_{it}^{X} + c_{i3}^{X}\Delta \log p_{it}^{Im_{it}^{X}}\right)$$

$$\text{G}\log \text{Im}_{it} @ c_{i0}^{\text{Im}} \text{ . } c_{i1}^{\text{Im}} \text{+G}\log I_t \text{ 0 } w_i^{X}\text{G}\log p_{it}^{X} \text{ 0 } w_i^{\text{Im}}\text{G}\log p_{it}^{\text{Im}} \text{ , . } c_{i2}^{\text{Im}}\text{G}\log p_{it}^{\text{Im}} \text{ . } c_{i3}^{\text{Im}}\text{G}\log p_{it}^{X} \text{ . } \varepsilon_{it}^{\text{Im}}$$

where,

Δ – change in indicator over time (increase in indicator at time *t* compared to time *t-1*);

Log – natural logarithm;

X_{it} – is the volume of industrial production in *the i*- th industry;

Im_{it} – volume of imports of products of the *i*- th industry;

It is the average nominal monetary income of the population;

p^{X}_{it} is the price index for products in *the i*- th industry (price indices are the ratio of industry production volumes in tenge *i* to the IFI of this industry);

p^{Im}_{it} is the price index for imported products *of the i* -th industry (price indices are the ratio of the volume of imports of industry *i* to the physical volume of imports of this industry);

w^{X}_{i} and w^{Im}_{i} are the cost shares of domestically produced products and imported products in the total cost of products of *the i* -th industry ($w^{X}_{i} + w^{Im}_{i} = 1$ for all *i*);

e^{X}_{it} and e^{Im}_{it} are the unexplained residuals of the regression equation for domestic products in *the i* -th industry and imported products of *the i* -th industry;

c^{X}_{ik} and c^{Im}_{ik} – coefficients of the model equations for domestic products in *the i*- th industry and imported products *in the i*- th industry.

It is not entirely correct to evaluate the demand equations for imports and domestically produced goods separately. Therefore, the demand equations for domestic and imported goods will be estimated as a system of apparently unrelated equations (Seemingly Unrelated Regression), since the model assumes correlation of errors in regression coefficients.

The main hypothesis about the presence of import substitution, tested in this work, in terms of the above model means the significance and positive sign of the coefficient reflecting the cross elasticity of demand for the prices of substitute goods (c_{i3}^{Im} change in import price). The positive and significant relationship between industrial output and import prices in this industry shows that local goods can replace imported goods in this industry.

In industries where domestic producers, if supported by the state, will be able to replace imports within the country, they were also checked for dependence on imports (import dependence coefficient $= \frac{\text{Import}}{\text{Production}}$).). Also, the calculation of the degree of dependence on imports was carried out in the context of product groups (food, non-food consumer goods, intermediate goods and capital goods) according to the United Nations Broad Economic Categories (UN BEC) classification. Thus, the practical value of the current research will contribute to identification of industries that should potentially get government support measures.

Results. Based on a comprehensive assessment of demand for goods across economic sectors in Kazakhstan, 29 specific economic activities were defined. These industries were identified because the coefficients of cross-elasticity between the production of domestic goods and the prices of imported goods were statistically significant for them (higher than 0.09 %).

In Table 1 (results of the Rotterdam model), it is demonstrated that an increase in prices for imported goods by 1 % leads to an increase in demand for domestic products from 0.09 to 4.99 % in selected industries. This indicates that higher relative prices for imported goods, primarily due to the depreciation of the tenge, significantly boost the production of domestic goods, thereby promoting import substitution.

The table highlights the import dependence coefficient for each of these industries. The relatively high coefficients across all selected industries suggest that reducing production costs could significantly enhance domestic production. Industries ranked based on the greatest change in the import dependence coefficient between 2010 and 2019 (Figure 1). This reinforces the rationale for focusing on these 29 industries, as they exhibit substantial potential for import substitution and can greatly benefit from targeted government support measures.

Table 1 – Industries where cost reduction will lead to a significant increase in the production of goods

GCEA	Name	Coefficient of cross elasticity	Coefficient of dependencies from import			
			2010	2014	2019	Change since 2010, p.p.
1413	Production of other outerwear (coats, short coats, capes, raincoats, jackets, windbreakers	2.12	65%	85%	100%	35%
1101	Distillation, rectification and mixing of alcoholic beverages	0.53	23%	39%	55%	31%
1032	Production of fruit and vegetable juices	1.53	23%	33%	50%	27%
1412	Production workwear	1.70	55%	78%	79%	23%
2223	Production of construction plastic products	0.88	35%	44%	51%	17%
1520	Production of footwear	1.93	75%	95%	91%	16%
2222	Production of plastic packaging for goods	0.35	47%	60%	63%	16%
2815	Production of bearings, gears, gear elements and drives	1.07	57%	78%	72%	16%
1082	Production of cocoa, chocolate and sugar confectionery	0.64	39%	52%	54%	15%
1041	Production oils and fats	0.29	18%	27%	32%	15%
0729	Production others metal ore	0.09	3%	17%	17%	14%
1395	Production of non-woven products, excluding clothing	1.92	84%	91%	94%	10%
2399	Production of other non-metallic mineral products not included in other groups (bitumen mixtures, artificial graphite, slag wool, asphalt, and asbestos fiber)	0.67	47%	53%	53%	6%
2221	Production of plastic sheets, tire tubes and profiles	0.93	42%	44%	48%	5%

2391	Production of abrasive products	3.00	91%	95%	96%	5%
1439	Production of other knitted and knitted products	2.83	92%	98%	97%	5%
1011	Processing and canning meat	0.28	29%	23%	33%	4%
2814	Production of other taps and valves	4.99	90%	90%	93%	4%
1729	Manufacture of other paper and cardboard products	0.41	62%	62%	65%	3%
2712	Production of electrical distribution and control equipment	2.03	81%	72%	83%	2%
1084	Production spices and seasonings	0.55	43%	57%	45%	1%
2711	Production of electric motors, generators and transformers	2.24	92%	90%	93%	1%
2042	Production of perfumes and cosmetics	2.17	99%	99%	99%	0%
1102	Production of wine from grapes	1.22	60%	71%	60%	-1%
2732	Production of other types of electrical wires and cables	0.70	73%	72%	71%	-2%
2720	Production of batteries and accumulators	3.14	52%	54%	50%	-2%
2013	Production of other basic inorganic chemicals (fluorine, chlorine, sulfuric acid, non-metal sulfides, silicates)	0.14	44%	35%	42%	-2%
1722	Production of paper products for household, sanitary and hygienic purposes	0.64	86%	86%	83%	-3%
1610	Sawmill production	0.17	74%	58%	66%	-8%
Note – Compiled by authors based on UN Comtrade [15]						

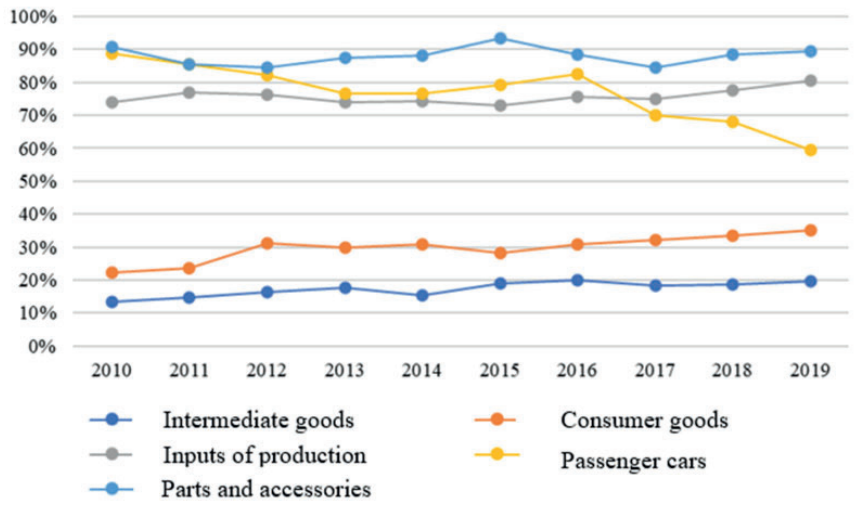

Figure 1 – Share of imports from the production of these goods by type of goods for the period 2010-2019 according to the UN BEC classification

Note – Compiled by authors based on UN Comtrade [15]

As shown in the table 1 and figure 1, enterprises in Kazakhstan are profoundly dependent on imports of capital goods and parts for them. As can be observed from Table 1, the coefficient of dependencies from import for the majority of identified industries increased in 2019 compared to 2010.

The highest share of imports in 2010 was observed in «Parts and accessories» – 91 %. However, this category of goods showed a slight decrease in the share of imports by 2019 – 90 %, i.e., a decrease of 1 percentage points. «Production of bearings, gears, gear elements and drives» according to Table 1 illustrates that a decrease in the cost of a given product by 1 % will lead to an increase in production by 1.07 %. This industry probably could have not received sufficient support and dependence on imports increased by 15 percentage points (from 57 % to 72 %).

The peak coefficient of cross elasticity among the products under study is credited to «Production of other taps and valves», meaning that a 1 % reduction in the cost of these products will result in a corresponding 4.99 % increase in production. Dependence from import for this category also showed a high degree resulting above 90 % from 2010 to 2019.

«Inputs of production» remained a category of goods with a high share of imports (74 % in 2010), showing an increase in the share of imports by 7 percentage points (p.p.) by 2019 (81 %). The most suitable candidates for government support in order to reduce dependence on imports are the following goods: «Manufacture of electric motors, generators and transformers», «Production of electrical distribution and control equipment», «Production of other taps and valves». According to Table 1, a decrease in the cost of these goods by 1 % will lead to an increase in production by 2.24 %, 2.03 % and 4.98 %, respectively. The dependence on imports of the industry «Production of other machinery and equipment for special purposes, not included in other groups» decreased from 86 % to 83 %, while the dependence on imports of the other 3 industries increased.

«Passenger cars» in turn, showed a significant decrease in the share of imports from 89 % in 2010 to 59 % in 2019, i.e., the decrease in the share of imports is equal to 30 percentage points. This idea supports the results of the literature review claiming that people began to purchase more cars assembled in Kazakhstan.

The smallest share of imports was occupied by products related to «Intermediate goods» and «Consumer goods» in 2010 – 13 % and 22 %, respectively. These categories of goods also showed an increase in the share of imports in 2019- «Intermediate goods» increased by 7 p.p. (20 %), while in «Consumer goods» – by 13 p.p. (35 %).

«Consumer goods» are represented with the following industries – «Production of other outerwear», «Distillation, rectification and mixing of alcoholic beverages», «Production of fruit and vegetable juices», «Production of workwear», «Production of footwear», «Production of cocoa, chocolate and sugar confectionery products», «Production of other knitted and knitted products», «Processing and canning of meat», «Production of spices and seasonings», «Production of perfumes and cosmetics», «Production of wine from grapes», « Production of batteries and accumulators», as well as «Production of paper products for household and sanitary purposes». At the same time, the dependence of the last 3 industries has decreased over the past 9 years, namely «Production of wine from grapes» by 1 p.p., «Production of batteries and accumulators» - 2 p.p., as well as «Production of paper products for household and sanitary and hygienic purposes» by 3 p.p.

Intermediate goods are presented with these industries where cost reduction will lead to a significant increase in the production of goods: «Production of construction plastic products», «Production of non-woven products, excluding clothing», «Production of other non-metallic mineral products not included in other groups» , «Production of plastic sheets, tubes for tires and profiles», «Production of abrasive products», «Production of other paper and cardboard products», «Manufacture of other types of electrical wire and cable», «Manufacture of other basic inorganic chemicals», «Sawmilling production», as well as «Production of perfumes and cosmetics». At the same time, the dependence of the last 4 industries has decreased over the past 9 years, namely «Production of other types of electrical wire and cable» by 2 p.p., «Production of other basic inorganic chemicals» - 2 p.p., «Sawmilling and planing production» - 8 p.p., as well as «Production of perfumes and cosmetics» by 9 p.p.

As justified in a methodology section, the results of the identified production groups are analyzed via the import dynamics trade data as shown in the following table 2. The lack of international production data beyond the year 2019.

Table 2 – Imports of Kazakhstan by Harmonized System (HS) codes by years including 2022

	HS codes	Description	2010	2014	2019	2022
1413	61	Production of other outerwear (coats, short coats, capes, raincoats, jackets, windbreakers)	56 856	400 502	318 058	849 205
1101	2208	Distillation, rectification and mixing of alcoholic beverages	45 885	108 735	82 003	149 326
1032	2009	Production of fruit and vegetable juices	33 887	50 289	41 964	59 448
1412	62	Production workwear	86 875	520 233	352 517	813 160
2223	3918, 3922, 3925	Production of construction plastic products	60 988	132,997	107 685	148 417
1520	64	Production of footwear	48 532	634 661	367 316	454 414
2222	3923	Production of plastic packaging for goods	57 532	137 769	137 203	233 449
2815	7315, 8482, 8483	Production of bearings, gears, gear elements and drives	118 219	192 912	258 861	343 467
1082	1704, 1803, 1804, 1806	Production of cocoa, chocolate and sugar confectionery	150 140	305 974	258 360	344 587
1041	1503, 1504, 1506-1516	Production of oils and fats	102 071	134 416	130 619	202 186
0729	2613-2617	Production others metal ore	7 522	244 083	414 436	457 437
1395	5603	Production of non-woven products, excluding clothing	11 274	27 117	25 291	42 123
2399	2818, 3801, 6806, 6811-6815	Production of other non-metallic mineral products not included in other groups (bitumen mixtures, artificial graphite, slag wool, asphalt, and asbestos fiber)	30 022	50,879	41 226	73 704
2221	3916, 3917, 3920, 3921	Production of plastic sheets, tire tubes and profiles	190 857	359 617	284 854	468 338
2391	6804, 6805	Production of abrasive products	11 136	19 300	18 974	28 749
1439	6110	Production of other knitted and knitted products	16,538	75 942	59 167	183 701
1011	0201-0209	Processing and canning meat	159 502	252 394	271 766	269 823
2814	8481	Production of other taps and valves	335 355	597 911	818 479	385 117
1729	4821-4823	Manufacture of other paper and cardboard products	15 809	27 802	27 588	43 406
2712	8535-8538	Production of electrical distribution and control equipment	586 995	538 753	713 455	390 792
1084	0904, 0910, 2103, 2209	Production of spices and seasonings	37 026	75 053	81 987	113 300

2711	8501-8504	Production of electric motors, generators and transformers	334 750	610 010	1 072 455	679 039
2042	3303-3307	Production of perfumes and cosmetics	240 014	337 340	322 869	458 403
1102	2204	Production of wine from grapes	32 373	55 455	36 190	48 853
2732	8544	Production of other types of electrical wires and cables	249 073	320 317	280 237	257 109
2720	8506, 8507	Production of batteries and accumulators	57 371	87 050	67 846	103 552
2013	2801-2813, 2826-2853	Production of other basic inorganic chemicals (fluorine, chlorine, sulfuric acid, non-metal sulfides, silicates)	132 645	189 349	234 861	302 079
1722	4818, 9619	Production of paper products for household, sanitary and hygienic purposes	100 630	164 329	155 893	219 983
1610	4403-4407, 4409	Sawmill production	66 339	71 849	64 027	72 036
Note – Compiled by authors based on ITC Trade Map [16]						

As it can be seen from the table, almost all product groups had a considerable growth dynamic in import values up to 2022 except for «Production of other taps and valves», «production of other types of electrical wires and cables» and «production of electric motors, generators and transformers» that had their maximum import level in 2019. This tendency shows that the industrial policy with an accent to manufacturing might have some positive effects on import substitution.

«Production of electrical distribution and control equipment» is the only product group that was more imported in 2010 with the value of 587 million US dollars than in 2022 when their import data was just below 400 million US dollars.

Another point to mention is the fact that Kazakhstan experiences generally increasing dynamic for import and a relatively high values of import of the items listed in the table counted in hundred of million US dollars, supporting the ideas of scholars that mention a noticeable dependence of the country from processed products.

Overall, the data reflects varying import trends across different product categories, with some experiencing significant increases over the years. To summarize, it should be noted that due to limited data, the above analysis can only serve as an illustration of general trends. It is important to consider that reducing dependence on imports can be a long-term process that requires an integrated approach and concerted efforts on the part of the state, entrepreneurs and other stakeholders.

CONCLUSION

In conclusion, Kazakhstan's historical reliance on the import of processed goods and export of raw materials, particularly in the energy and mineral sectors, has shaped its economic landscape. The country's role as a significant player in the global energy market, combined with a high dependence on imported finished products, has prompted the government to strategize for greater economic self-sufficiency and resilience. It was revealed in a literature review that due to low diversification of the economy and continuous demand for processed goods from overseas import, Kazakhstan attempts to implement substitution policy measures such as production support incentives and trade tariff regulations. Apart from manufacturing sectors including automotive production, scholars generally focus on the status of import dependence for food production.

This study deployed a comprehensive modified Rotterdam model for analyzing imported product groups that potentially could be substituted with local production considering production volumes and price indexes.

Results identified 29 key product groups which import could be substituted with a domestic production. «Parts and Accessories» stood out as a major category with the highest import dependence over 90 %. While the majority of product groups showed an increase in coefficient of dependencies from import up to 2019, the category of «passenger cars» experienced a noteworthy decline in the import share, dropping from 89 % in 2010 to 59 % in 2019, representing a decrease of 30 percentage points.

While the prevailing part of products depicted in Table 1 illustrate the increasing tendency for import dependence, some industries such as «Production of other basic inorganic chemicals», «Production of paper products for household, sanitary and hygienic purposes» and «Sawmill production» showed reducing the level of dependence on imports. Trade value data in Table 2 highlighted an aspect that Kazakhstan is witnessing a generally rising trend in imports, with relatively high values for the items listed in the table, measured in hundreds of million US dollars.

Although it faced limitations in data access, general results of this study could be applied in the implementation of import substitution policy for fostering domestic production and effective state support measures.

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ҚАЗАҚСТАН ЭКОНОМИКАСЫ САЛАЛАРЫНЫҢ ИМПОРТҚА ТӘУЕЛДІЛІК ДӘРЕЖЕСІН ТАЛДАУ ЖӘНЕ ИМПОРТҚА ТӘУЕЛДІЛІКТІ ТӨМЕНДЕТУ ӘЛЕУЕТІН БАҒАЛАУ

А. Р. Сағынаев[1]*, А. Н. Айтуар[1], З. М. Адилханова[2]
[1]Халықаралық экономика мектебі, Мақсұт Нәрікбаев Университеті, Астана, Қазақстан Республикасы
[2]Экономикалық модельдеуді дамыту орталығы, NAC Analytica, Назарбаев Университеті, Астана, Қазақстан Республикасы

АҢДАТПА

Зерттеу мақсаты. Бұл мақалада Қазақстан экономикасы салаларының импортқа тәуелділік дәрежесіне талдау жүргізіліп, импорты жергілікті өндіріспен алмастырылуы мүмкін тауарлар топтары қосымша айқындалсын.

Әдіснамасы. Сандық зерттеу талдауы деректер жиынтығын және Біріккен Ұлттар Ұйымының кең экономикалық категорияларын жіктеудің заманауи әдістемесін қолдану арқылы жүзеге асырылады. Роттердам моделінің коэффициенттерін есептеу айқын байланыссыз регрессия әдісін қолдана отырып жүргізілді. Шығындарды азайту тауарлар өндірісінің едәуір өсуіне әкеледі, осылайша импортты алмастыратын экономикалық қызметті анықтайды деп болжануда.

Зерттеудің бірегейлігі / құндылығы. Қазақстан импортты алмастыра алатын экономикалық қызметтің нақты түрлерін айқындау бойынша терең зерттеулердің болмауымен расталады. Сонымен қатар, бұл зерттеу практикалық тұрғыдан мемлекеттік қолдау шараларын қажет ететін салаларды анықтау бойынша септігін тигізеді.

Зерттеу нәтижелері. Мақаланың негізгі тұжырымдары импорты отандық өндіріспен алмастырылуы мүмкін анықталған 29 экономикалық қызметті қамтиды. Бұл таңдалған салалар үшін импорттық тауарлардың бағасы бойынша отандық тауарлар өндірісінің айқас икемділік коэффициенттері маңызды болды. Роттердам моделінің нәтижелері импорттық тауарлар бағасының 1 % - ға өсуі осы анықталған салаларда отандық өнімге сұраныстың 0,09-дан 4,99 % - ға дейін артуына әкелетінін көрсетті.

Түйін сөздер: экономиканы әртараптандыру, импортты алмастыру, сауда саясаты, ішкі өндіріс, Роттердам моделі, индустрияландыру.

Алғыс: Жұмыс Қазақстанның Ұлттық Банкі бөлген зерттеу гранты шеңберінде жүргізілді.

АНАЛИЗ СТЕПЕНИ ЗАВИСИМОСТИ ОТРАСЛЕЙ ЭКОНОМИКИ КАЗАХСТАНА ОТ ИМПОРТА И ОЦЕНКА ПОТЕНЦИАЛА СНИЖЕНИЯ ЗАВИСИМОСТИ ОТ ИМПОРТА

А. Р. Сагынаев[1]*, А. Н. Айтуар[1], З. М. Адилханова[2]
[1]Международная школа экономики, Maqsut Narikbayev University, Астана, Республика Казахстан
[2]Центр развития экономического моделирования, NAC Analytica, Назарбаев Университет, Астана, Республика Казахстан

АННОТАЦИЯ

Цель исследования. В данной статье проведен анализ степени импортозависимости отраслей экономики Казахстана и дополнительно определить группы товаров, импорт которых может быть замещен местным производством.

Методология. Количественный исследовательский анализ проводится с использованием набора данных и современной методологии классификации широких экономических категорий Организации Объединенных Наций. Расчеты коэффициентов Роттердамской модели проводились с использованием явно несвязанного метода регрессии. Предполагается, что снижение издержек приведет к значительному увеличению производства товаров, тем самым определив импортозамещающую экономическую деятельность.

Оригинальность / ценность исследования подтверждается и оправдывается отсутствием глубоких исследований по определению конкретных видов экономической деятельности, по которым Казахстан может заменить импорт. Кроме того, практическая ценность данного исследования также касается государственных реформ по выявлению отраслей, требующих мер государственной поддержки.

Результаты исследования. Основные выводы статьи включают выявленные 29 видов экономической деятельности, импорт которых потенциально может быть замещен отечественным производством. Для этих выбранных отраслей значимыми оказались коэффициенты перекрестной эластичности производства отечественных товаров по ценам на импортные товары. Результаты Роттердамской модели показали, что рост цен на импортные товары на 1 % приводит к увеличению спроса на отечественную продукцию с 0,09 до 4,99 % в этих выявленных отраслях.

Ключевые слова: диверсификация экономики, импортозамещение, торговая политика, внутреннее производство, Роттердамская модель, индустриализация.

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ABOUT THE AUTHORS

Sagynayev Aibek Rollanuly – PhD Candidate, Teaching Professor, International School of Economics, Maqsut Narikbayev University, Astana, Republic of Kazakhstan, email: aibek.sagynayev@gmail.com, ORCID: http://orcid.org/0009-0004-3072-9481*.

Aituar Azat Narimanuly – Associate Professor, International School of Economics, Maqsut Narikbayev University, Astana, Republic of Kazakhstan, email: a.aituar@kazguu.kz, ORCID: http://orcid.org/0000-0002-7625-8783.

Adilkhanova Zarina Muratovna – Senior Researcher, Economic Modeling Development Center, NAC Analytica, Nazarbayev University, Astana, Republic of Kazakhstan, email: zarina.adilkhanova@alumni.nu.edu.kz, ORCID: https://orcid.org/0000-0002-7206-6290.