

# REPUBLIC OF AZERBAIJAN

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## ABSTRAKT

Of the dissertation for the degree of Doktor of Philosophy

### THE FOREIGN ECONOMIC RELATIONS OF AZERBAIJAN WITH GERMANY

Specialty: 5310.01 - World Economy

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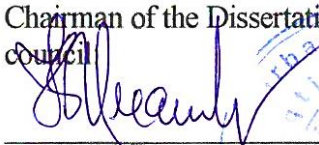
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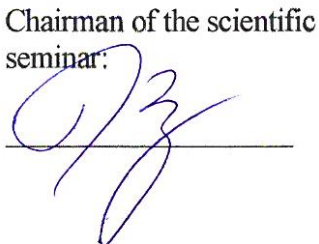
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## INTRODUCTION

**Relevance of the topic and level of study.** The actuality of the research is due to the fact that Germany has a great interest in supporting the European integration process. The development of foreign economic and trade relations between the European Union, especially Germany and Azerbaijan, and on this basis the effective integration of leading sectors of the economy into the global value chain can be considered one of the main directions of Azerbaijan's long-term development strategy. The expansion of foreign trade relations with Germany can play an important role in solving two problems that have become more urgent in recent years - the diversification of the economy in Azerbaijan, including foreign trade and the formation of sustainable economic growth. Also, the study of the German economy, which plays a leading role in the world economy, will allow us to more fully assess the opportunities for attracting German capital to Azerbaijan, which can accelerate economic growth, which is very important for our country in the current situation.

The fact that Germany is becoming the world's hegemon in the European region also determines the choice of the topic, goals and objectives of the dissertation. Thus, in the process of European integration, based on the study of the development of economic relations between Azerbaijan and Germany and the assessment of the current situation, the identification of problems of economic cooperation in this area, identification of opportunities and mechanisms to strengthen bilateral trade and economic relations requires important methodological solutions, which increase the theoretical-methodological and practical significance of the presented research work, as well as its actuality.

The role of the international economy has led researchers to take an interest in this problem. It is no coincidence that A. Smith and D. Ricardo, the founders of classical economics, developed special theories in the field of international trade, and later Hexer, Ohlin, Murdal, Porter, and Krugman further improved these concepts. Integration into the global economy, including the European region, theoretical and practical issues of development of foreign economic relations between the countries, the study of the prospects of development of Germany as a leading country in Europe in the global economy have been the subject of research by a number of domestic and foreign scientists. Thus, the issues of integration into the global economy can be found in the works of scientists such as E. Hassa, A.Splinelli, B.Hettne, K.Doyca, R.Boldvina, L.Lindberq, M.Kitingq, D.Vebbera, M.Strejnevoy, A.Ratner, A.Kuznetsov and etc. The works of modern researchers: J. Stiglitz, M. Porter, P. Samuelson, R. Prebish, R. Vernon, S. Javier, J. Marcusen and others attract attention.

The researches of modern Azerbaijani scientists such as S.H.Abasova, A.A.Eyvazov, Ganciyeu G.A., M.G.Gulaliyev, H.Haciyeu, R.H.Hasanov, A.H.Alakbarov, A.A.Alasgarov, E.V.Aliyeu, T.Aliyeu, I.A.Karimli, F.A.Qanbarov, M.Y.Quliyev, R.R.Quliyev, D.A.Valiyev, A.B.Sariyeu, Z.A.Samadzada, T.A.Yadigarov and others can be noted who work on the improvement of Azerbaijan's foreign economic relations with different countries in various fields. In addition, the World Bank supported the comparative advantage of Azerbaijani products, the US Agency for International Development calculated the domestic resource value of Azerbaijani agricultural products, and other similar studies were conducted to assess Azerbaijan's competitiveness in world markets. However, there are very few works that study the economic and trade relations between Germany and Azerbaijan. The research on this topic mainly covers aspects of Azerbaijan's integration into the world economy, as well as the expansion of Germany's economic ties with the post-Soviet space.

**The object of research** is the bilateral foreign economic and trade relations of the Republic of Azerbaijan with Germany in the process of world integration.

**The subject of the research** is the formation of economic relations of the Republic of Azerbaijan with Germany and the improvement of implementation mechanisms, taking into account the modern development trends of the world economy.

**The purpose of the study** is to determine the impact of Germany on the global economic integration of Azerbaijan and bilateral trade opportunities between Azerbaijan and Germany and the prospects for direct investment in Azerbaijan by successful German companies in world markets. The following tasks have been identified to achieve this goal:

- study of the theoretical foundations, main forms and features of foreign trade policy of countries with small open economies in the context of globalization;
- study of criteria determining the effectiveness of countries' participation in foreign trade policy;
- Analysis of key indicators characterizing the competitiveness of the Azerbaijani economy and the comparative advantage of local products and identification of groups of goods with export potential and prospects in Azerbaijan and potential opportunities for export promotion;
- Assess the benefits of expanding bilateral economic and trade relations with Germany for the economic development of Azerbaijan, increasing the efficiency of foreign trade relations and increasing the country's share in the global value chain;
- Realization of opportunities for sustainable development of Azerbaijan's economy, diversification of foreign trade, attraction of foreign direct investments

to Azerbaijan and establishment of joint ventures and increase of mutual investments;

- Identify areas and priorities for expanding business and economic cooperation between Azerbaijan and Germany on energy, assess the opportunities for Azerbaijan to meet Germany's energy needs and develop relevant proposals.

**Research methods:** Theoretical and statistical approaches, empirical and conceptual evidence, systematic observation and selection, comparison, analysis and synthesis, induction and deduction methods, as well as econometric models were used to solve the problems in the research process.

**The database of the research** are the State Statistics Committee of Azerbaijan, the United Nations Conference on Trade and Development (UNCTAD), the United Nations Economic Commission for Europe, the United Nations Comtrade Database, the Organization for Economic Cooperation and Development (OECD), the US Statistics Agency, as well as publications in magazines, Internet sites and other printed and electronic sources.

**The main provisions of the defense:**

1. Scientific interpretation of the main forms and features of foreign trade policy of countries with small open economies, study of opportunities to use international experience to improve Azerbaijan's position in this field;

2. Comprehensive systematic analysis and assessment of the geographical and commodity structure of German foreign trade relations, the impact of economic and trade relations with Germany on the economic development of Azerbaijan through the cost-output model;

3. Analysis of key indicators characterizing the competitiveness of the Azerbaijani economy and the comparative advantage of local products and identification of groups of goods with export potential and prospects in Azerbaijan and potential opportunities for export promotion;

4. Assess the benefits of expanding bilateral economic and trade relations with Germany for the economic development of Azerbaijan, increasing the efficiency of foreign trade relations and increasing the country's share in the global value chain;

5. Realization of opportunities for sustainable development of Azerbaijan's economy, diversification of foreign trade, attraction of foreign direct investments to Azerbaijan and establishment of joint ventures and increase of mutual investments;

6. Identification of directions and priorities for expanding business and economic cooperation between Azerbaijan and Germany on energy, assessment of opportunities for Azerbaijan to meet Germany's energy needs and development of relevant proposals.

**As a scientific novelty of the research,** the benefits and risks of expanding bilateral economic cooperation with Germany and, on this basis, European integration were identified, as well as the impact on the current situation was assessed. The main scientific innovations obtained in this framework are:

1. The main forms and features of foreign trade policy of small open economy countries, including Azerbaijan in the context of globalization, the development of the methodological basis of the system of indicators to assess this participation, the improvement of the situation and position of our country in this field;

2. The economic potential, place and role of Germany as a leading country in Europe were studied, the geographical and commodity structure of Germany's foreign trade relations, the current position of the German economy and the dynamics of development have been comprehensively and systematically analyzed and evaluated on the example of countries that have trade relations with it, including Azerbaijan, the impact of economic and trade relations with Germany on the economic development of Azerbaijan is described through the cost-output model and priorities are identified;

3. Opportunities for the development of export-oriented production of import-substituting products were explored to identify groups of goods with export potential and prospects in Azerbaijan, the main indicators characterizing the competitiveness of the Azerbaijani economy and the comparative advantage of Azerbaijani products were analyzed and the principles of rational choice were proposed, the main directions of the expansion of Azerbaijan's economic and trade relations with Germany were indicated;

4. Based on the calculation of foreign trade efficiency indicators and the value of domestic resources of import-substituting products in the domestic market, the benefits of expanding bilateral economic and trade relations with Germany were identified and potential opportunities to promote bilateral trade and exports with partner countries on goods with export prospects in Azerbaijan were assessed;

5. Opportunities for sustainable development of Azerbaijan's economy, diversification of foreign trade, establishment of joint ventures with Germany and increase mutual investment in the context of attracting foreign direct investment to Azerbaijan were assessed, existing problems were identified and solutions were indicated;

6. Areas of business and economic cooperation between Azerbaijan and Germany on energy, European energy security and Germany's energy needs and opportunities for Azerbaijan in its supply were studied, in order to form effective foreign investment activities of Azerbaijani companies, a set of proposals for the development of economic relations with Germany in a favourable direction for Azerbaijan has been developed.

**Theoretical and methodological significance of the research.** The study compares the research of local and foreign scientists on European integration, increasing the country's share in the global value chain, as well as the development of the German economy and the study of German-Azerbaijani economic relations, among the many conceptual approaches in this field, M. Porter's theory of competitive advantage, as well as the theory of scale effect, was preferred.

**The practical significance** of the dissertation is that the study will increase the efficiency of foreign trade relations with Germany and play an important role in solving two problems that have become more urgent in recent years - the diversification of the economy in Azerbaijan, including foreign trade and sustainable economic growth. In addition, the study of the German economy, which plays a leading role in the world economy, allows us to assess the opportunities for attracting German capital to Azerbaijan, which can accelerate economic growth.

**The main provisions of the dissertation and practical proposals** presented at the International Conference "The world economy in the XXI century: the era of biotechnology and digital technologies" (Moscow 2020); at the International scientific-practical conference "Economic growth and social welfare" dedicated to the 60th anniversary of the Institute of Economics of ANAS (Baku-2018); at the scientific conference "Heydar Aliyev and the model of national economic development of Azerbaijan" (AMU-Baku 2020). In the author's research work, the influence of foreign relations with Germany on the economic development of Azerbaijan, including diversification of foreign trade and an analysis of the possibilities of attracting German capital and **recommendations and suggestions** for evaluation establishment of economic relations of the Republic of Azerbaijan with foreign countries and government programs for improvement and its use in the documents on the expediency the No. 01/514 REFERENCE dated 12.02.2021 was received from the Institute of Economic Reforms of the Ministry of Economy of the Republic of Azerbaijan.

**The dissertation work was carried out at the Institute of Economics of the Azerbaijan National Academy of Sciences.**

**The content and main results of the dissertation** were published in 17 scientific articles with a total volume of 15.0 pages and theses.

**The dissertation consists** of 197 pages (178 pages with the main text of the dissertation), consisting of introduction, 3 chapters, conclusion and list of references, appendices, and abbreviations. Total volume of work with signs, including introduction: 320.8 thousand taking into account intervals, 363.0 thousand with intervals; Excluding Tables, Charts, Graphs and Figures, References, and Appendices, it is about 170,000 and 190,000 characters, respectively. Volume of work by Chapters: Chapter I - 65.6 and 75.1 thousand;

Chapter II - 85.1 and 96.3 thousand; Chapter III - about 90.1 and 102.2 thousand characters. There are 44 tables (20 Appendices), 54 Diagrams (12 Appendices), 24 graphs (1 Appendix), 4 figures (2 Appendices).

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### **Extras**

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## **MAIN CONTENT OF THE STUDY**

**In the introductory part**, the actuality of the topic is substantiated, the state of study of the problem, the goals and objectives of the research, the object and subject, scientific innovation, practical significance are explained.

### **Commentary on the main provisions of the dissertation:**

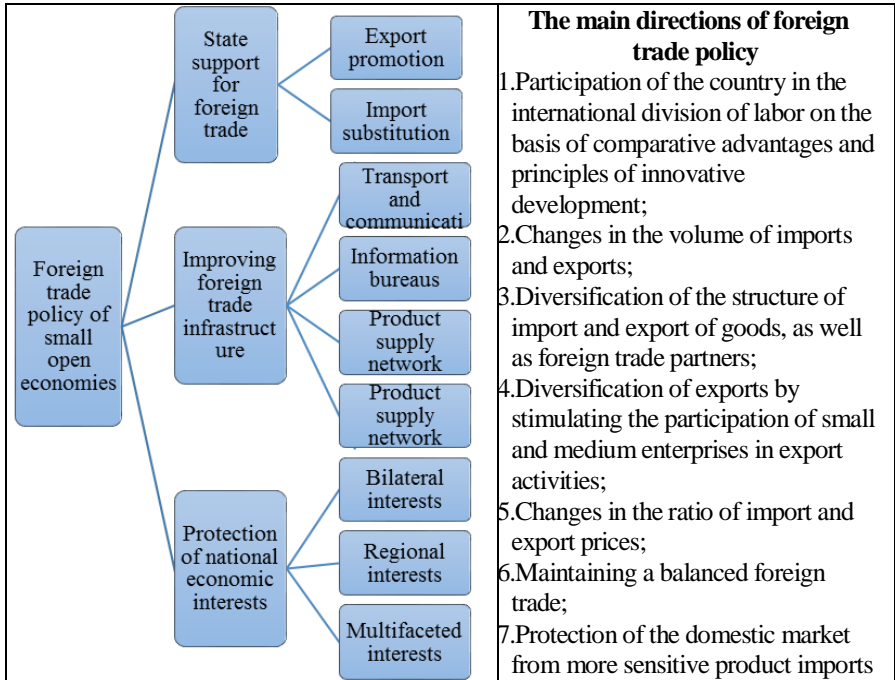
**1. Scientific interpretation of the main forms and features of foreign trade policy of countries with small open economies, study of opportunities to use international experience to improve Azerbaijan's position in this field;**

According to this provision, the sources and views on the main forms and features of the participation of small open economy countries in trade policy in the context of globalization, including Azerbaijan, are interpreted from a scientific and theoretical point of view, 3 main structural elements of foreign trade policy of small countries with open economy are distinguished, the methodological basis of the system of indicators for assessing the participation of countries in foreign trade policy is being developed, the impact of the liberalization of foreign trade in Azerbaijan on the development of trade and economic relations with DDCs, including Germany, is assessed on the basis of the ideas of Western economists. Also, the economic potential of Germany as a major leader in Europe, place in the modern system of global economic relations, Germany's position on the main problems in the eurozone, commenting on the economic policy pursued by the German government, the analysis shows the directions and priorities of Azerbaijan's expansion of trade and economic cooperation with foreign countries, opportunities to use international experience to improve the situation and position of our country. At the same time, opportunities for the development of export-oriented production, the potential for foreign trade and export promotion are identified in order to identify commodity groups with export prospects in Azerbaijan.

Within the theory of open economy, countries are usually divided into large and small openness models. Although the high level of openness of the economy provides significant benefits for the country (especially deepening specialization, rational allocation and use of resources, benefit from best practices, increased competition, etc.), it becomes a source of risk for the financial system and creates

a dilemma in determining the country's development priorities: participation in global trade or protection of the domestic market.

In general, the country's experience in foreign trade shows that export-oriented policies yield better economic results than those aimed at the domestic market. In such countries, the growth of exports formed the basis of economic development, and the growth rate was faster than in other countries. However, it should be borne in mind that exports are based on the volume of production, and there is a close relationship between these two indicators.



**Figure 1. Structure of foreign trade policy in countries with small open economies**

The development of exports requires a relatively stable and favorable exchange rate. The "miracle of East Asia" was not associated with trade liberalization, but with state support for exports in the context of a stable fiscal system. The creation of import-based industrial production that can compete with imports has been successful in a small number of countries. Thus, first of all, high protectionism, such as the depreciation of the national currency, becomes a

constraint on the growth of exports. Second, capital controls and import licensing limit access to imports at world market prices.

Taking into account what is shown in Figure 1 and the country's experience, we can note that the concept of "self-reliance" is the basis of import-substituting industrialization policy. Therefore, the participation of countries in free trade policy ensures the development of international trade in goods, services and factors of production, as well as supports the development of an open economy. The development of exports requires a relatively stable and favorable exchange rate. The "miracle of East Asia" was not associated with trade liberalization, but with state support for exports in the context of a stable fiscal system. The creation of import-based industrial production that can compete with imports has been successful in a small number of countries. Thus, first of all, high protectionism, such as the depreciation of the national currency, becomes a constraint on the growth of exports. Second, capital controls and import licensing limit access to imports at world market prices.

It is noted that the expansion and diversification of foreign trade, as well as joining the value chain created by the DDC from a geographical point of view, requires the development of trade infrastructure and liberal policies. At the same time, the policy of import substitution should take into account the export orientation. Although there are economic instruments to regulate imports and exports, the protection of the interests of national producers and consumers, the mutual benefits of bilateral economic and trade relations should be given priority. In foreign trade policy, developing countries such as Azerbaijan should prioritize high-tech markets in their trade operations. Therefore, the participation of countries in free trade policy ensures the development of international trade in goods, services and factors of production, but also supports the development of an open economy. In this context, the product, which specializes in the production of any country to one degree or another, is included in the global value chain through liberal trade. In a market economy, the country's accession to foreign trade requires an increase in export potential. However, the global competitive environment is becoming increasingly difficult. For this reason, maintaining competitiveness is considered a priority as part of the government's international trade policy.

It summarizes the existing theoretical approaches to the most commonly used methods for assessing competitiveness, noting that subsidies for industrial development in Germany have significantly reduced economic dependence on other countries and allowed to build the strongest economy in Europe. At present, Germany is the largest economy in Europe in terms of national economy, and the fifth largest in the world in terms of nominal and per capita GDP. Germany has achieved such a high figure due to its export-oriented economy. The country has been a world leader with a high trade surplus since 2016, and has achieved this

due to its high export potential. The country is the third largest exporter of goods and services in the world. Although the main role in the transformation of Germany into a major economic power belongs to the industrial sector, the service sector has a dominant role in the formation of GDP. Thus, up to 70% of GDP falls to the service sector. However, the service sector is more competitive and export-oriented, as it is based on industry, especially the processing industry. In Germany, this industry accounts for 30% of GDP and 24% of employment. Another reason for the stability and competitiveness of the country's economy is the existence of an inclusive infrastructure that serves this production and access to it. The country has maintained its competitiveness in the global economy, including Europe. Foreign trade, investment, budget, social, etc. between the countries of the Union. indicators are significantly affected by changes in similar indicators in Germany.

The economic development observed in Azerbaijan in recent years has created ample opportunities for integration into high-income countries, including the European market. Certain incentives have been created for the development of the non-oil sector, as a result of which the non-commercial part of the non-oil sector has grown much faster than the commercial (export) part, contributing to the growth of the non-oil sector as a whole. According to the analysis, only 36 out of 830 types of products exported by Azerbaijan have a comparative advantage. Although the 800 products are exported, they do not have a comparative advantage. According to estimates, over the past 10 years, Azerbaijan's export basket has included products with a PRODY index of more than \$ 20,000, such as ethylene polymer, petroleum resin, acyclic hydrocarbons, pharmaceuticals and metal pipes. In the main export products such as tea, vegetable oils, sugar and margarine, PRODY was less than \$ 10,000. In general, half of non-oil exports are products on the scale of \$ 5-15,000 PRODY. The share of non-oil exports below the world average PRODY was 61%.

## **2.Comprehensive systematic analysis and assessment of the geographical and commodity structure of German foreign trade relations, the impact of economic and trade relations with Germany on the economic development of Azerbaijan through the cost-output model.**

This provision reveals the peculiarities of the formation of the geographical and commodity structure of German foreign trade relations, the current state of the German economy and the dynamics of development are assessed through a comprehensive and systematic analysis of countries with which it has trade relations, including Azerbaijan. It shows the current state and development dynamics of Azerbaijani-German trade relations, the main directions of Azerbaijan's foreign trade relations with Germany.

As it is known, diversified economy and export of high-tech goods allow to maintain the surplus in the trade balance. According to the World Bank, Germany

is among the top three countries in the world in terms of exports. Strong specialized industries have allowed the export of high-tech goods. 35% of exported products fell to the share of finished consumer goods and 38% to capital goods. An important part of exports were goods such as vehicles, equipment, electrical appliances, medical devices that require high-tech processing. More than 60% of export operations fell to European countries, 14% to the United States, 11% to China and 3% to Japan. The number of high-tech goods dominates in the structure of exports to these countries.

In the long run, there are potential reasons for the decline in the high surplus observed in the CAP. Under the current policy, the surplus in the CBA is expected to continue in the medium term. Increased aggregate demand from trading partners, especially the fiscal stimulus in the United States, will continue to stimulate German exports. Over time, rising wages and stronger domestic demand will reduce the trade surplus. According to analysts, wage growth is expected to continue as demand currently exceeds supply in the labor market. Wage growth is one of the important factors that can increase individual consumption. This, in turn, can reduce the current account surplus by stimulating imports. However, an increase in investment income may help maintain the surplus in the CBA.

The impact of the German economy on the economic growth of countries with which it has trade relations, including Azerbaijan, was analyzed through the cost-output model. According to the balance sheet of the cost-output model, the share of value added in total output in Germany is less than 50%. This indicates that Germany has a relatively large number of domestic resources and additional advantages for exports.

**Table 1. Production of final products and value added in Germany,%**

	Share of final products in total output,%	Share of value added in total output
Azerbaijan	68.3	68.1
Germany	49.7	49.7

According to the simulation results, a 1% increase in final demand in Germany increases the final demand in the world by 0.057% and the total output by 0.055%. Estimates show that change in Germany is most noticeable in the Belgian economy.

The other countries most sensitive to the release of the latest product in Germany are France, Italy, England and Spain. The level of change in final product output in these countries averaged 0.02%. In other countries, the impact is less than 0.01%. This suggests that Germany is more sensitive to change in neighboring countries. According to estimates, each dollar increase in aggregate

final demand in Germany has a multiplier effect, creating a gross domestic product of \$ 1.6 in Germany itself.

The results of the equilibrium price model (Table 2) show that a 5 percent increase in the value added rate in Germany raises the price level in the country by about 8%, and in France by 0.2%. This effect was later observed in the United States, France, Italy, England, China, Japan, Spain and Belgium. According to estimates, the final demand for each dollar in Germany is \$ 0.05 in the United States, \$ 0.04 in France, \$ 0.034 in Italy, \$ 0.028 in the UK, \$ 0.015 in China, \$ 0.011 in Japan, and \$ 0.013 in Belgium and Spain. The multiplier effect of recent demand costs per dollar in Germany is relatively weak.

In general, the multiplier effect of the last German demand for each dollar in the world was equal to 2. In Germany, the final demand expenditures of about \$ 24 billion can create 290,000 jobs in the country and 528,000 in the world.

In Germany, the 5% increase in value added was most affected in Belgium, France and Spain. Thus, the price level in these countries increased by 0.48 and 0.2 percent, respectively. A 5 percent increase in the value added rate in Germany would lead to a 5.3 percent rise in world prices. Thus, Germany is closely connected with the EU market and has a direct impact and dependence on the economies of the single market countries.

### **3. Analysis of key indicators characterizing the competitiveness of the Azerbaijani economy and the comparative advantage of local products and identification of groups of goods with export potential and prospects in Azerbaijan and potential opportunities for export promotion;**

According to this provision, opportunities for the development of export-oriented production of import-substituting products are being explored in order to identify groups of goods with export potential and prospects in Azerbaijan, the principles of rational choice are proposed by analyzing the main indicators characterizing the competitiveness of the Azerbaijani economy and the comparative advantage of Azerbaijani products. The impact of economic and trade relations with Germany on the economic development of Azerbaijan is also described through the cost-output model, calculating the domestic resource value

**Table 2. Impact of 1% change in final product in Germany on aggregate output in other countries**

	Model input variable - change of final product	Model results								
		New volume of final product	New volume of total output	Change of total output		Change of total output/change of final demand (expenses)	Change of value added		Change of number of employees	
	%	mln.\$	mln.\$	%	mln.\$	mln.\$	%	mln.\$	%	man/ year
Belgium	0	338876	783419	0.040	310	0.013	0.040	133	0.040	1678
Germany	1	2494953	5091954	0.795	40170	1.63	0.795	20039	0.795	290765
England	0	2090951	4105733	0.017	698	0.028	0.017	345	0.017	5235
France	0	1994635	3872555	0.027	1037	0.042	0.027	516	0.027	6562
Italy	0	1640265	3473696	0.024	850	0.034	0.024	391	0.024	5522
Japan	0	4538082	8528466	0.003	281	0.0113	0.003	149	0.003	2093
Canada	0	996565	2035588	0.004	80	0.0032	0.004	42	0.004	635
China	0	2512672	6767426	0.005	369	0.0149	0.005	126	0.005	41328
Total		43647617	91069017	0.055	50229	2.033	0.055	24074	0.025	528711

countries on goods with export prospects in Azerbaijan are assessed, directions of import-substituting products in the domestic market, the potential opportunities for the promotion of bilateral trade and exports with partner and priorities for expanding cooperation between our countries are being identified.

Table 3. Azerbaijan's trade turnover with major partner countries, mln. Dollars

Countries	2005	Balance in 2005, +, -	2010	2015	2019	Balance in 2019, +, -
<b>Total</b>	<b>8558,4</b>	<b>136</b>	<b>27960,8</b>	<b>21945,8</b>	<b>33302,8</b>	<b>5967,7</b>
<i>CIS Countries</i>	2101,0	-707	4035,0	2487,5	4611,0	-2254,1
<i>In other countries</i>	2557,5	843	8145,8	7640,9	9285,8	8221,9
<i>Major partners countries</i>						
Italy	1410,3	1221,1	7162,5	2842,1	6008,5	5268,7
Turkey	589,0	-37	942,3	2648,6	4509,5	1215,8
Russia	1002,6	-431,8	1918,6	1855,7	3022,0	-1558,4
China	273,0	-74,6	926,5	565,1	2184,2	-680
Germany	291,1	-221,5	617,0	1914,0	1642,2	221,7

Source: <https://www.cbar.az/page-43/external-sector-statistics>

During 2005-2019, Azerbaijan's total trade turnover increased 3.9 times, while it increased 4.6 times with major partner countries. Germany will account for 4.9% of Azerbaijan's total trade turnover in 2019. In particular, 4% of exports and 5.8% of imports were made with Germany. Azerbaijan's trade turnover with Germany increased 5.6 times in 2005-2019 to \$ 1,642.2 million. dollars. In particular, imports from Germany increased 2.8 times and exports 112 times. The main increase in trade turnover was due to exports.

Azerbaijan's trade balance increased from a positive \$ 136 million in 2005 to 5,967.7 million in 2019. dollars. The balance with the CIS countries has been negative in all years, the highest positive balance from the main partner countries was obtained with Italy. We also have a positive balance with Turkey, Germany, Israel, France and the United Kingdom. In 2015 with Germany was -221.5 million a negative balance, but in 2019 was achieved \$ 221.7 million a positive balance. However, the negative balance with Russia, China, Switzerland, Israel and the United States remains, and this gap is also growing.

Germany accounts for about 4.6% of Azerbaijan's total trade turnover. In particular, 4% of exports and 5.8% of imports were made with Germany. In 2018, 11.2% of trade turnover with Europe was made with Germany. Azerbaijan's trade turnover with Germany increased 16.8 times in 2001-2018 and reached \$ 1,441



million. In particular, imports from Germany increased by 9 times and exports by 60 times. The main increase in trade turnover was due to exports.

About a third of Azerbaijan's imports from Europe fell to Germany. Germany's share in European exports has been declining. Imports from Germany are mainly finished products. Imports of intermediate products do not affect economic activity in the country due to their insignificant weight. Poor development of the non-oil sector limits the country's ability to join the global value chain as a whole. Being competitive in exports to a developed European country such as Germany requires stimulating foreign direct investment in the country's economy. The establishment of joint ventures and other forms is considered important in terms of increasing non-oil exports.

Goods currently imported from Germany can be classified into 4 groups: i) goods with very small production capacity in Azerbaijan in the medium term, although production is possible, but unlikely to be exported to developed countries. ii) goods that are currently exported from Azerbaijan to Germany or whose export can be increased. These include groups of goods currently produced in Azerbaijan or whose production can be easily organized in a very short period of time. iii) goods that can be exported from Azerbaijan to Germany in the short term. When we say short-term, we mean a maximum of five years. iv) Goods that can be exported from Azerbaijan to Germany in the medium term. By medium term, we mean a maximum period of 8-10 years. Unlike the previous groups (except for the first), relatively high-tech products are included in this category. In order to attract relatively high technologies to the country, it is first necessary to attract a successful multinational company to Azerbaijan. Second, it requires the training of professionals in this field, which may be possible after some time.

Later, the dissertation was evaluated in terms of the impact of foreign relations with Germany on the economic development of Azerbaijan. Bilateral economic relations between Azerbaijan and Germany have recently developed significantly and are considered promising for both countries. The macroeconomic stability observed in the country since 2017 and the deep structural reforms implemented must serve as a solid foundation for the development of long-term bilateral trade relations with Germany. In order to assess the development of bilateral trade prospects with Germany, the dependence of the country's economy on imports and the prospects for export development were studied.

**4. Assess the benefits of expanding bilateral economic and trade relations with Germany for the economic development of Azerbaijan, increasing the efficiency of foreign trade relations and increasing the country's share in the global value chain;**

According to this provision, potential opportunities for the development of Azerbaijan's economic and trade cooperation with Germany are being studied, based on the calculation of foreign trade efficiency indicators, the benefits of expanding bilateral economic and trade relations with Germany to increase the country's share in the global value chain are determined, potential expansion of economic and trade relations between Azerbaijan and Germany is assessed in accordance with the methodology of the trade situation developed by the International Trade Center.

Geographical analysis of imports shows that markets with low and weak technological structure dominate imports. During this period, the countries that increased the share of imports were China and Iran, while those whose import relations decreased significantly were mainly EU countries.

During 2005-2019, the total import of Azerbaijan increased by 3.2 times, while from Germany - by 2.8 times; From Italy - 3.9 times; From Switzerland - 46.0 times; From the United Kingdom it decreased by 39.6%.

Germany accounts for 7% of Azerbaijan's exports to Europe. The peak period of exports to Germany in 2014 was 1926 million. dollars (\$ 1,224 million in 1915). In 2019, the share of Germany in Azerbaijan's exports was 4.7%. Germany ranks 5th in terms of Azerbaijan's exports. However, despite such a high share, the structure of exports shows a different situation. Thus, according to statistics, 95% of exports are oil products. At the same time, non-oil products are mainly raw materials, not finished products. The prices of these products are sensitive to changes in their prices on the world market, and government subsidies also dominate in these areas. Under such conditions, even raw materials are not competitive in the German market. In general, the predominance of fuel and raw materials in exports is due to the structure of the country's economy. Thus, currently 90-95% of the country's exports are fuel and oil products. The volume of non-oil exports amounted to 1.7 billion. Georgia and so on. has a significantly lower volume compared to neighboring countries such as. Poor development of the non-oil sector limits the country's ability to join the global value chain as a whole.

Although the country has been implementing import substitution reforms since 2014, there is still ample opportunity to realize the domestic potential of the non-oil sector in this area. The share of intermediate goods imported by Azerbaijan in total imports (46%) is lower than in the FOB (65%) and OECD countries (52%), which have an export-oriented economic model. The share of investment-oriented capital goods in imports is 17%, which is lower than in oil-rich countries. In addition to the limited domestic production of capital goods, the low level of imports of such goods also contributes to the low capital capacity of the country's

economy. It is estimated that 89% of the processing sector is low and low to medium technological intensity.

Despite the formation of such a technological structure of the country's exports, Germany ranks 6th in exports. The current structure of exports suggests that there is a great potential for Azerbaijan to enter the European market. Access to the European market will gradually diminish the importance of Turkey, the Czech Republic and Israel, the main trading partners in exports, and Germany, a more developed market, may become a major trading partner in non-oil exports. The study shows that Germany, as well as developed and emerging markets in Europe and other regions, demand a wide range of goods, and Azerbaijan, which has great potential, has the opportunity to implement these plans.

#### **5. Realization of sustainable development of Azerbaijan's economy, diversification of foreign trade, attraction of foreign direct investments to Azerbaijan and identification of opportunities for establishment of joint ventures and increase of mutual investments;**

According to this provision, the implementation of sustainable development of the Azerbaijani economy, diversification of foreign trade, areas of business and economic cooperation between Azerbaijan and Germany on energy, Europe's energy security and Germany's energy needs and opportunities for Azerbaijan to meet them are being studied, in order to form effective foreign investment activities of Azerbaijani companies, a set of proposals for the development of economic relations with Germany in a favorable direction for Azerbaijan is being developed.

The development of the country's foreign economic and trade relations with the European Union, especially with Germany, and on this basis the effective integration of leading sectors of the economy into the global value chain is one of the main directions of Azerbaijan's long-term development strategy. Assessing the limits of potential expansion of economic and trade relations between Azerbaijan and Germany requires important methodological solutions.

Taking into account Germany's position in the world market in these areas, the potential for expanding trade between the two countries was assessed on the basis of Azerbaijan's trade performance. Azerbaijan acts as a net importer in the areas covered in the dissertation and has a very small share in the world market. However, the country has great potential to expand production in these areas and join the global value chain. Low diversification in both product and market, weak external justification and dependence on imports are associated with poor development of similar industries. As a result, the country's competitiveness in the world market is limited and it has a very weak position.

Taking into account Germany's position in the world market, the potential for expanding trade between the two countries was assessed on the basis of

Azerbaijan's trade performance. It was found that Azerbaijan acts as a net importer in these areas and has a very small share in the world market. However, the country has great potential to expand production in these areas and join the global value chain. Low diversification in both product and market, weak external justification and dependence on imports are associated with poor development of similar industries. As a result, the country's competitiveness in the world market is limited and it has a very weak position.

Unlike Azerbaijan, Germany is naturally concentrated in larger regional and continental markets due to its larger and more complex technological structure. Germany is a market that focuses on both imports and exports to the European Union, Eastern Europe, as well as the United States and the Commonwealth of Independent States.

Thus, these countries have a higher advantage in the markets, and at the same time have a discount of up to 15% on mutual trade. Measures should be taken to eliminate these problems. One of the important issues for Azerbaijan's entry into the European market, including Germany, is the issue of geographical location and transport. Recently, the country's major international transport projects have created significant potential opportunities to enter European markets. By rail, Azerbaijan will have direct access to international transport corridors and Europe. The Baku-Tbilisi-Kars railway will further increase Azerbaijan's access to global markets and make it more competitive after the Baku-Tbilisi-Ceyhan oil pipeline.

The main goal of the Azerbaijani economy in the medium and long term is to develop the non-oil sector and increase access to foreign markets for this purpose. It should take into account the prospects that the high-income Western European countries, including Germany, can create for the country's economy. Our research shows that Azerbaijan's relations with European countries, including Germany, have had unequal dynamics.

#### **6. Identification of directions and priorities for expanding business and economic cooperation between Azerbaijan and Germany on energy, assessment of opportunities for Azerbaijan to meet Germany's energy needs and development of relevant proposals.**

According to this provision, Azerbaijan, as a source of energy, is in a favorable position to meet the energy needs of Germany and the industry, which has a leading position in its economy, to ensure energy security in Europe as a whole. Also, the establishment of joint ventures with Germany in the context of attracting foreign direct investment to Azerbaijan and identifying solutions to existing problems to increase mutual investment, prospects for the establishment of joint ventures in the form of joint investment were assessed and ways to implement these opportunities in relevant areas are shown. Chemical and metallurgical industries, machine-building industry and production of construction materials,

strengthening the material and technical base of the food and light industry, the agricultural sector, establishment of a joint venture with Germany in terms of technological support and development prospects for non-oil sectors such as ICT or FDI was considered acceptable to increase involvement.

In our opinion, the expansion of relations between the two countries in the field of increasing trade requires, first of all, the improvement of the legal framework, which can be an incentive to increase business agreements between entrepreneurs on both sides. In order to accelerate trade relations between the two countries and the establishment of joint ventures, the flexibility of the Joint Commission for Cooperation between the two countries should be increased. At the same time, the formation of a legislative framework "On the regulation of joint relations" between the two countries will contribute to the development of trade relations.

Germany, which has become the strongest state in the world in modern times, also plays an important role in the process of European integration. Given the recent Brexit process, Germany's role in shaping the EU budget is growing. The analysis shows that the main goal of Germany's development strategy is to develop economic freedom, support competition and achieve high living standards by providing full employment. Within the newly developed theory of "global regulation", countercyclical measures are integrated with economic growth policies based on the concept of production potential. In the long run, economic dynamics is seen as an increase in potential output. In the short run, what is typical for a market economy is a fluctuation around the trend of actual GDP, or rather, a change in potential GDP and thus the aggregate output deficit.

Based on the results of the research, the following important aspects of the German model of economic policy can be noted:

- Focus on the structural nature of modern crises, while prioritizing employment, stimulating competition and stability priorities
- Long-term problems of economic development should be explored, the spheres and rates of influence of regulatory instruments should be taken into account: economic growth should be stimulated mainly through fiscal instruments, and monetary policy should meet the goals of low-stable inflation, low interest rates and low volatility.
- Direct market intervention should be limited, economic deregulation and effective governance are necessary in terms of diversification and competition.

Economic development in Germany is taking place under the influence of globalization. This can create serious problems for economic stability and future development. Particular attention should be paid to strengthening growth in the industrial sector, increasing state support for small and medium enterprises and increasing investment in promising areas.

In the medium term, the main challenge for Germany is to ensure rebalancing in the foreign sector. Policies aimed at this goal will strengthen potential economic growth, while growth in labor and investment will neutralize the effects of long-term living standards and population aging. Therefore, a comprehensive approach to the use of the entire fiscal space is required to support economic policy.

As a leading European country, Germany is an interested party in global energy projects implemented by Azerbaijan. At the same time, Azerbaijan, as a source of energy, is in a favorable position for the energy security of Europe as a whole, to meet the energy needs of Germany and industry, which has a leading position in its economy.

Then, in this chapter, the prospects for the establishment of joint ventures in the form of joint investment were assessed and the implementation of these opportunities in relevant areas was emphasized. Chemical and metallurgical industries, machine-building industry and production of construction materials, strengthening the material and technical base of the food and light industry, the agricultural sector, establishment of a joint venture with Germany in terms of technological support and development prospects for non-oil sectors such as ICT or FDI was considered acceptable to increase involvement.

**The results and suggestions obtained in the research process can be grouped as follows:**

1. Access to foreign markets is important for countries with small open economies.

- Otherwise, it will not be possible to take advantage of the scale effect, and as a result, the economy will become more dependent on imports. Also, a country with a small economy has a limited domestic market and is highly dependent on external risks.

2. Expansion and diversification of foreign trade, as well as joining the value chain created by the DDC geographically, requires the development of trade infrastructure and liberal policies.

- Although there are economic tools to regulate imports and exports, mutual concessions should be given priority in bilateral economic and trade relations to protect the interests of domestic producers and consumers. In foreign trade policy, developing countries such as Azerbaijan should prioritize high-tech markets in their trade operations.

3. Although Germany's foreign trade turnover has a stable growth trend, Azerbaijan's mutual foreign trade turnover with Germany has been unstable.

- This is due to the fact that Azerbaijan's economy is highly sensitive to external shocks. Thus, the share of oil, the country's main source of income, in exports is high, and government demand dominates in the formation of aggregate demand, and its main source of funding is oil revenues. That is why changes in world oil prices affect imports through the budget and exports through oil prices.

4. Although Azerbaijan's imports from Germany had an upward trend, they had unstable dynamics in 2007-2016.

- This is due to the characteristics of the Azerbaijani economy, as well as the sharp changes in the behavior of economic entities. Analysis of the commodity structure of imports from Germany and its technological capacity shows that about 10% of imports from Germany are food, animals, beverages and tobacco. However, such an import structure cannot be considered acceptable in terms of the sustainability and sustainability of long-term economic growth in the country. The predominance of technological, especially industrial, products in imports has a more significant impact on economic activity.

5. In 2019, 23% of imports in Azerbaijan were mainly machinery and equipment, where Germany also has a significant share.

- However, such products are more consumer products and are sensitive to changes in domestic demand, in which case changes in domestic demand in the country also affect the import of these products. At the same time, the high share of imports of such products is considered negative in terms of impact on the foreign exchange market. Because the predominance of imports of consumer goods is one of the main factors leading to a chronic balance of payments deficit.

6. The analysis shows that only 36 out of 830 types of products exported by Azerbaijan have a comparative advantage.

- Although the remaining 800 products are exported, they do not have a comparative advantage. According to estimates, over the past 10 years, Azerbaijan's export basket has included products with a PRODY index of more than \$ 20,000, such as ethylene polymer, petroleum resin, acyclic hydrocarbons, pharmaceuticals and metal pipes. In the main export products such as tea, vegetable oils, sugar and margarine, PRODY was less than \$ 10,000. In general, half of non-oil exports are products on the scale

of \$ 5-15,000 PRODY. The share of non-oil exports below the world average PRODY level in 2018 was 61%.

7. Analysis of the impact of the German economy on the economic growth of countries with which it has trade relations, including Azerbaijan, through the cost-output model shows that the share of value added in total output in Germany is less than 50%.

- This indicates that Germany has a relatively large number of domestic resources and additional advantages for exports. According to the simulation results, a 1% increase in final demand in Germany increases the final demand in the world by 0.057% and the total output by 0.055%. The results of the equilibrium price model show that a 5 percent increase in the value added rate in Germany increases the price level in the country by about 8%.

8. Germany accounts for about 1/6 of Azerbaijan's trade turnover with Europe and 7% of its exports, and these figures have a positive role in terms of the country's orientation to developed markets.

- Analysis of export-import operations shows that there are favorable economic grounds for further increase of these indicators. However, 95% of exports are oil products. At the same time, non-oil products are mainly raw materials, not finished products. These products are sensitive to changes in their prices on the world market, and government subsidies also dominate in these areas. Under such conditions, raw materials are not competitive in the German market.

9. About 1/3 of Azerbaijan's imports from Europe belong to Germany. Germany's share in European exports is declining.

- Mainly finished products are imported from Germany. Imports of intermediate products do not affect economic activity in the country due to their insignificant weight. In terms of technological structure, the import of high-tech products is an important factor in terms of revitalization of production and competitiveness in the world market. Therefore, in the future, taking into account the structure and structure of the German economy, the import of industrial products with intermediate and high-tech structure can provide significant support to economic activity in our country.

10. Poor development of the non-oil sector limits the country's ability to join the global value chain as a whole.



- Being competitive in exports to a developed European country such as Germany requires stimulating foreign direct investment in the country's economy. Joint and so on. The establishment of enterprises in the form of is important in terms of increasing non-oil exports.

11. There are many goods in the groups of goods formed on the basis of German imports that have potential competitiveness for Azerbaijan, which can be taken into account in the selection of products for export.

- It is not enough to be satisfied with groups of goods when choosing goods or services. These groups contain a large number of products and should be the result of a special study on which of these products Azerbaijan will specialize. For example, the production of all pharmaceutical products in Azerbaijan does not seem realistic, even in the medium term. In the same way, it is necessary to study which of the inorganic chemical products Azerbaijan has a competitive advantage.

12. Although the country has implemented import substitution reforms, there are still significant opportunities to realize the domestic potential of the non-oil sector in this area.

- The share of intermediate goods imported by Azerbaijan in total imports (46%) compared to FOB (65%) and OECD countries with an export-oriented economic model; The share of investment-oriented capital goods in imports is 17% lower than in oil-rich countries. In addition to the limited domestic production of capital goods, the low level of imports of such goods also contributes to the low capital capacity of the country's economy. It is estimated that 89% of the processing sector is low and low to medium technological intensity.

13. The technological structure of the processing industry is dominated by resource-based goods (66.4%), while the share of high-tech goods in exports of the processing industry is only 2.2%.

- High-tech exports are dominated by electrical machinery and equipment, electronic devices and other mechanical devices. The process of relative substitution is observed in the technological structure of exports. In recent years, exports of resource-based goods that do not require serious technological processing decreased by 6%, while exports of low, medium and high-tech goods increased. The current structure of exports suggests that there is a great potential for Azerbaijan to enter the European market. Access to the European market will gradually diminish the importance of

Turkey, the Czech Republic and Israel, the main trading partners in exports, and Germany, a more developed market, could become a major trading partner in non-oil exports.

14. The development of the country's foreign economic and trade relations with the European Union, especially with Germany, and on this basis the effective integration of leading sectors of the economy into the global value chain should be considered one of the main directions of Azerbaijan's long-term development strategy.

- Assessing the limits of potential expansion of economic and trade relations between Azerbaijan and Germany requires important methodological solutions. For this purpose, the trade methodology developed by the International Trade Center should be used.

15. Azerbaijan acts as a net importer in the areas under consideration and has a very small share in the world market.

- However, there is great potential for expanding production in these areas and joining the global value chain. Low diversification in both product and market, weak externalization and dependence on imports are associated with poor development in these areas. As a result, the country's competitiveness in the world market is limited and its position is low. Quantitative parameters of the potential for expanding trade relations between Germany and Azerbaijan show that in its foreign trade relations, Azerbaijan is focused not on Europe, but on the low-income CIS market. The main reason for this is the low technological complexity of production and concentration on the export of raw materials.

16. Unlike Azerbaijan, Germany is concentrated in larger regional and continental markets due to its larger and more technologically structured economy.

- Germany is a market focused on both imports and exports to the European Union, Eastern Europe, as well as the Americas and the CIS. These countries have a higher advantage in the German market, with a discount of up to 15% on mutual trade. Measures should be taken to eliminate these problems.

17. One of the important issues for Azerbaijan's entry into the European market, including Germany, is the issue of geographical location and transport.

- The large international transport projects that our country has recently implemented have created significant potential opportunities to enter European markets. By rail, Azerbaijan will have direct access to international transport corridors and Europe, and the Baku-Tbilisi-Kars railway will further accelerate Azerbaijan's access to global markets and make it more competitive after the Baku-Tbilisi-Ceyhan oil pipeline;

18. The main goal of the Azerbaijani economy in the medium and long term is to develop the non-oil sector and increase access to foreign markets for this purpose.

- Here, the prospects that the high-income Western European countries, including Germany, can create for the country's economy must be taken into account. In order to expand mutual economic and trade relations between the two countries, to encourage German entrepreneurs to conclude new business agreements, first of all, it is necessary to improve the existing legal and regulatory framework.

- The activities of the Joint Commission established to accelerate the establishment of trade relations and joint ventures between our countries should be strengthened and increased flexibility. In this regard, the formation of the legislative framework "On the regulation of joint economic relations" between the two countries can contribute to the development of trade relations.

19. One of the main challenges facing the Azerbaijani economy since 2015 is the decline in foreign direct investment.

- In particular, the decline in foreign direct investment in the non-oil sector, manufacturing, processing industry and agriculture can be cited as a major obstacle to achieving the goals of economic diversification, sustainable development of the non-oil economy, reducing dependence on imports and increasing export potential.

- The analysis shows that the areas that still seem attractive to foreign investors in terms of attracting FDI to the non-oil sector are mainly non-trade sectors (construction, warehousing), manufacturing, especially processing industry and agriculture. could not attract.

- Azerbaijan's macrostructure with great potential in the Caucasus and Caspian region is the most favorable economic sectors for exports and investments - hydrocarbon resources, renewable energy, real estate, petrochemical and chemical industry, short metal profile, transport and

construction industry, major steel companies offers investors ample opportunities for investment.

- Azerbaijan's natural healing resources - mineral waters, therapeutic muds, especially Naftalan oil, saline lakes, therapeutic climate, beaches, which are suitable for the treatment, prevention and recreation of various diseases, may be important for German investors to invest in or establish new resorts and sanatoriums.

20. Although the majority of non-credit investments in the country are directed to the oil sector, investments in other areas - construction, transport and communications, trade and services are also promising.

- Strengthening the technical base of direct foreign investment in transport, information and communication, utilities infrastructure to improve the quality of production infrastructure of the non-oil sector in the country and focus on improving the quality of service provided is considered expedient. German investors with considerable experience in these areas can use these opportunities to invest in Azerbaijan or establish new companies.

Being competitive in exports to a developed European country such as Germany requires stimulating foreign direct investment in the country's economy. Joint and so on. The establishment of enterprises in the form of is considered important in terms of increasing non-oil exports.

- We believe that Azerbaijan's exports should be diversified. Germany's potential must be used to the maximum - first of all, new equipment, application of technologies, establishment and operation of tourism business, etc. Work should be intensified to apply the experience in such areas as:

21. There are opportunities for the development of the tourism sector in the liberated Karabakh region, as well as for the establishment of an agro-industrial complex. There is a need to attract European, especially German, entrepreneurs to Karabakh, and to establish industrial enterprises engaged in the processing of local agricultural products there.

- To this end, legislation should be improved on issues such as investment repatriation, conditions for foreign investors, free competition and business environment, property inviolability, tax and customs benefits, finance, and exchange rates. The interest of local and foreign companies

must be ensured for the formation of joint investments and enterprises with Germany in Karabakh.

22. It is very important to expand international economic cooperation with Germany and joint ventures, which are an important form of it.

- The limited number of joint ventures between Germany and Azerbaijan shows the problems in attracting foreign direct investment in the non-oil sector. While service industries such as construction and trade are attractive to foreign investors in terms of joint ventures and foreign investment, promotion of this form of activity in manufacturing should be a priority. Given the need for technological innovation and the formation of competitive production for the sustainable development of the non-oil sector in the country, the development of bilateral economic relations with Germany can make an important contribution to this.

23. In order to increase the competitiveness of the Azerbaijani economy, foreign direct investment in new machinery and technology, machinery and equipment, etc. should be preferred to the country.

- It should be taken into account that transnational corporations of industrialized countries do not make much effort to organize the production of new machinery and technologies, technical devices, machinery and equipment. International corporations and companies that invest directly in the territory of Azerbaijan, at best, prefer the production of components for machinery and technological equipment or the organization of semi-finished products.

24. The joint venture with Germany and the significant inflow of foreign capital into the country should be closely linked to the measures taken to maintain a fertile investment climate.

- To establish a joint venture with Germany in terms of technological support and development prospects for non-oil sectors or to increase the involvement of FDI - chemical and metallurgical, mechanical engineering and construction materials, food and light industry, strengthening the material and technical base of the agricultural sector, ICT - In terms of technological support and development prospects, the oil sector can be considered promising for the establishment of a joint venture with Germany or increasing the involvement of FDI.

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