

# Formation of Integrated Structures in Industrial Manufacturing Enterprises and their Regional Analysis

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## Abstract

In modern conditions, it becomes necessary to select and justify the methods and techniques of inter-regional economic integration during the formation of a new economy. At the stage of aggravation of the competitive environment, regional economic integration is the main factor in the development of regions. They significantly differ from those known in foreign practice by their substantive nature, focus on increasing the efficiency of such important sectors of the economy as industry and agriculture, achievements in close cooperation, strengthening integrated, integrated production relations, and the exchange of modern ICTs. At the same time, they contribute to the formation of positive and negative effects in the regional economy.

## 1 Introduction

An important direction of the state economic policy of the Republic of Azerbaijan is the development of industry, increasing the competitiveness of industrial enterprises in the domestic and foreign markets.

The effective orientation of the state to stimulate industrial development to a certain extent is determined by the adequacy of the measures implemented at the level of industrial enterprises and measures to increase the efficiency of their activities. Without a set of measures of industrial development at the macro and micro levels, the solution of the tasks of accelerating the pace of economic growth, ensuring production and technological independence, and increasing the competitiveness of domestic industrial production seems almost impossible. Therefore, the theoretical and applied task is the development of tools to improve the efficiency of industrial development management (Abramov R.A., 2016).

## 2 Methodology

Domestic experience indicates that a significant potential for increasing the effectiveness of managerial mechanisms for the development of industry is associated with a comprehensive consideration of the trends in the integration of production structures. The opportunities for productive application in the management of the opportunities that these tendencies provide are due to the fact that at the present stage of competition among manufacturers, objectively necessary is the activation of opportunities to increase business stability. Significant reserves in this area can be mobilized on the basis of the development of integration processes in the domestic industry that provide a significant synergistic effect in the regional context. It should be borne in mind that integration processes are closely related to the development of regions.

Existing problems cannot be solved without the necessary scientific and analytical justifications, which makes it important to conduct a special study of this problem related to the possibilities and directions of using integration tools in the regions in order to increase the organizational, economic and industrial-technical level of industrial enterprises.

Integration processes in industry are carried out on the basis of asset control and are characterized by a number of signs: economic; organizational; legal.

Domestic experience shows that in modern conditions in the industrial sector, integration transformations are not traditional vertical or horizontal, but more often mixed, integrating industrial structures simultaneously on several grounds with a variety of areas of interaction between participants. Integrated industrial structures have their positives and negatives, the main ones on the following approaches.

Positives	Negatives
Direct impact on selected sectors of the economy	The complexity of the management structure and the increase in AHR
Resource pooling	Reduced flexibility and responsiveness to the environment
Synergistic effect of close interaction	The difficulty of coordinating intra-integration interactions
The effect of the concentration of capital and production	Decrease in innovation activity
Cost reduction, primarily transactional and inter-technological. Diversification of production and increased competitiveness of the integrated industrial structure.	Decrease in effect due to incompetent production and commercial activities of individual integration participants
Sales growth due to lower product prices	Increased costs in the process of integration transactions
Systematic supply of raw materials through a single technological chain	Imperfect production structure in a single production process
Expansion of technical and technological capabilities of manufacturing enterprises	Increased tax burden due to legal process
Improving product quality through standardization of business processes	Increase in the number and intensity of interaction between integration participants
Continuity of existence, which is not associated with the transfer of assets between owners	Decreased independence in decision-making by participants in the integration process

*Table 1. The Positives and Negatives of Integrated Industrial Structures*

Sphere	Integration Efficiency Growth Factors
Accommodation	Territorial proximity
	Local Resource Locations
Production	Getting economies of scale
	Strengthening the tightness of the interaction between the stages of the production process, R&D and the distribution process
	Improving the structure of fixed assets and inventories
	Production Services
Innovation	Building MTB, intensification of the exchange of NTD
	Modernization of the technological system and the pace of technology updates
Management	Increase Information Space
	ICT development of regional distributed management
	Increased sustainability through diversification of the income base
	Development of intercompany relations and the adoption of joint management decisions
Marketing and market position	Identification of target market segments
	Optimization of costs associated with market research and product promotion
	Increasing competitiveness in the regional market
	Risk Management Reduction
Investments	Reducing investment risks and increasing investment attractiveness
	Growth in investment attraction
	Increase return and reduce return on investment
Relationship with the state	Formation of new forms of partnership between the state and business in the development of industry
	Enhanced participation in the implementation of industrial and cluster policies

*Table 2. Factors for Industrial Integration*

As practice shows, the modern development of industry is characterized not only by the spread of various types of integration, but also by simultaneous disintegration processes. Gradually, with the development of technological capabilities and the diffusion of innovations in industry, they are not only trying to implement integration strategies aimed at economies of scale, but also “niche” strategies that satisfy seasonal, temporary or other needs.

In modern conditions, the main form of integrated structures is a large association of enterprises engaged in joint activities on the basis of voluntary centralization of the functions of scientific, technical and industrial development, investment, financial, foreign economic and other activities, self-supporting services for enterprises.

Included in these enterprises, producing individual goods located in different regions, retain commercial, industrial and legal independence (Anshin V.M., 2017).

The formation of large associations was an objective process for the survival of industrial enterprises in the conditions of the economic crisis, their desire to improve economic and financial indicators, stop the decline in production, and restore destroyed economic and cooperative ties. With their formation, additional opportunities appeared for the development of manufacturers, strengthening their positions in both external and domestic markets.

The methodological principles for creating integrated structures are: voluntary entry and freedom of exit of enterprises from the integrated structure; unlimited number of participants in an integrated structure; the ability to combine resources with a different number of participants in the integrated structure for investing in progressive projects for the development of production; creation of conditions for the formation of various integrated structures.

The main goal of the formation of integrated structures are:

- expand investment attractiveness due to the possibility of attracting investments on more favorable terms, as well as the concentration of own investment resources and their direction in the development and restructuring of production (Akberdina V.V, 2009).
- reduce costs per unit of production by expanding the scale of production and increasing the price competitiveness of goods.
- increase competitiveness through diversification of production, which allows the flexible use of resources in the environment.
- combine financial, material and labor resources with a view to their effective use.
- expand technical re-equipment and modernization of production through the consolidation of financial resources.

Despite the obvious positive results in industrial and commercial activities from the formation of integrated structures, a number of problems, in particular in relation to the specific conditions of problem regions, require a quick response. In order to identify and take into account industry and regional characteristics, there is a problem of continuous diagnosis of ongoing integration processes.

In our opinion, the unsolved problems of the formation of the effective functioning of integrated structures in industry include: the lack of a comprehensive state policy in the field of integration processes for the formation of integrated structures; low share of small industrial enterprises involved in the integration process; low technical level of production of most industrial enterprises; low volume of export of industrial products; poor investment and innovation in many industrial manufacturing enterprises.

The formation of scientific integrated structures in solving the problem of the optimal combination of the value of acquired assets with their production potential will create an effective integrated structure, the market value of assets of which will be significantly higher than the similar value of its constituent enterprises. Each enterprise gains economic interest in the effective activities of all market entities that are part of the joint venture.

Their functioning on the basis of industry sub-sectors will have a number of the following advantages:

- reduction of costs for trade, marketing and other services.
- introduction of the advantages of diversification of production, a single credit and financial policy.
- increased efficiency in the use of financial, investment and other resources.
- adoption of more effective management decisions in connection with the emergence of new opportunities caused by the pooling of resources included in the integrated structures.
- the emergence of opportunities in achieving goals that are difficult to achieve for a single enterprise.
- use of modern technology.
- direction in the necessary volumes of capital investments for the reorganization of enterprises.
- the formation of new foreign economic relations and others.

Integration of resources in the basic areas will allow pursuing an investment policy at a qualitatively different level, providing loans with the necessary guarantees and other financial instruments, which in turn will make it possible to re-equip the complex and produce competitive products that are not inferior to world analogues.

A positive feature of the functioning of integrated industry structures is that their activities practically exclude intermediary enterprises that essentially do not create real added value.

Foreign practice of integration in small business confirms that the merger of capital, even small enterprises, is rightly considered the least expensive way to expand industrial production and increase markets.

The formation of interregional integrated structures created the conditions for the revival of industrial enterprises, and allowed to obtain the following positive results:

- find favorable conditions and conditions for technical re-equipment, the development of new technologies and advanced forms of organization of production.

- ensure the financial stability of enterprises.
- create a favorable climate for domestic and foreign investment.
- increase the production of competitive products in enterprises.

### 3 Results

The role of the state in regulating integration processes is growing, since it is able to create favorable conditions for integration, take actions to form integrated structures in cases where it is possible and expedient. Close interweaving in the integrated structures of private and state forms of ownership will allow the state to more effectively solve the problems of forming the republican budget and its use in the most priority areas, taking into account the country's social, economic, scientific and technical interests. Moreover, the size of the centralized resources of the state must constantly exceed the capabilities of integrated structures (Akberdina V.V, 2009).

The main measures to regulate integration processes in industry, taking into account the priorities of economic development, can be considered:

- the formation of the necessary conditions for the creation of corporate structures and the realization of their economic potential on the basis of improving the system of state regulation.
- direct participation in the development of integration processes through the use of state-owned property and shares of privatized enterprises.
- assistance in the formation of private enterprises that meet the interests of the development of the country's economy.
- determination of the strategic interests of the state and private business on the basis of mutual obligations, guarantees for their implementation.

The mechanism of interaction between government and integrated industrial enterprises should include:

- conclusion of a long-term strategic agreement defining the ways and time frames for the achievement of the goals by the concerns.
- the signing of special investment agreements providing for the obligations of the parties, in the case of the concern's implementation of large investment projects that solve large-scale tasks of industrial development.
- providing guarantees of the republic for attracting foreign investment and product purchases within the framework of the state order, allocation of funds from the budget for development, etc.

Next, we identify the main prerequisites for the formation of integrated structures in the industry of the Republic of Azerbaijan. It should be emphasized that in recent years certain positive and negative changes have occurred in this area. So, for example, for 2011-2016. in Baku, the number of industrial enterprises decreased from 1215 to 1153; respectively, in the Aran economic region - from 336 to 329; Nakhichevan Autonomous Republic - from 135 to 135.

An increase in the number of industrial enterprises is observed in the following economic regions: Absheron - from 215 to 236; Ganja-Kazakh - from 270 to 288; Sheki-Zakatalsky - from 107 to 141; Lankaran - from 84 to 95; Guba-Khachmaz - from 76 to 95; Verkhne-Karabakh - from 28 to 38; Nagorno-Shirvan - from 40 to 44.

	2011	2012	2013	2014	2015	2016
Baku city (with settlements)	1215	1219	1249	1225	1170	1153
Absheron economic region	215	213	218	235	253	236
Ganja-Gazakh economic region	270	269	264	271	297	288
Sheki-Zagatala economic region	107	113	113	116	132	141
Lankaran economic region	84	75	76	77	90	95
Guba-Khachmaz economic region	76	79	75	79	91	95
Aran economic region	336	339	323	321	329	329
Upper Karabakh economic region	28	29	30	31	37	38
Mountainous Shirvan economic region	40	40	40	39	44	44
Nakhchivan Autonomous Republic	135	135	135	135	132	134

*Table 3. Number of Enterprises Operating in the Regions*

Except in Baku from 2011 to 2016. in all economic regions of the country there is an increase in industrial production. So, in the Ganja-Kazakh economic region, this indicator increased from 263.6 million manats to 615.7 million manats; Absheron - from 475.9 to 977.3; Sheki-Zakatalsky - from 75.7 to 193.2; Lankaran - from 65.9 to 102.0; Guba-Khachmaz - from 89.3 to 94.3; Aransky - from 797.1 to 1145.6; Upper Karabakh - from 11.6 to 29.3; Nagorno-Shirvan - from 9.7 to 19.6; Nakhchivan Autonomous Republic - from 680.9 to 942.9 (Bendikov M.A, 2002).

In the city of Baku for the study period, there is a decrease in industrial production from 31,782.8 million manat to 27432.4 million manat.

It should also be noted that according to 2016, the index indicators of industrial production compared with the previous year are very high, and in the economic regions of the republic it ranges from 102.2% to 135.7%.

	2011	2012	2013	2014	2015	2016	Indices for 2016, compared to the previous year, %
Baku city (with settlements)	31782850	30876683	30225126	28178874	22408874	27432370	98,5
Absheron economic region	475 918	512 819	501 009	543 829	614 994	977 296	115,9
Ganja-Gazakh economic region	263 569	332 819	304 754	329 262	413 521	615 676	119,3
Sheki-Zagatala economic region	75 686	75 735	74 835	87 246	109 025	193 190	135,9
Lankaran economic region	65 920	65 844	65 170	70 995	74 709	101 997	132,7
Guba-Khachmaz economic region	89 284	77 136	81 720	77 683	77 689	94 265	107,2
Aran economic region	791 090	821 524	858 935	963 014	881 897	1 145 653	106,2
Upper Karabakh economic region	11 640	14 529	18 112	23 913	24 169	29 346	112,5
Mountainous Shirvan economic region	9 733	13 234	15 039	18 672	17140	19 631	102,3
Nakhchivan Autonomous Republic	680 921	799 492	862 871	891 486	916 818	942 945	101,7

**Table 4.** Cost and Indices of Industrial Products (works, services) by Regions, in Actual Prices (thousand manats)

If we take a longer period (2010 = 100), then the indices of industrial production are even higher (see Table No. 2.11): Absheron - 188.1%; Ganja-Kazakh - 243.4%; Sheki Zakatal'sky - 211.1%; Lenkoran - 224.8%; Khachmaz Bay - 117%; Aransky - 111.1%; Upper Karabakh - 179.4%; Nagorno-Shirvan - 220.9%; Nakhchivan AR - 270.1%.

From this we can conclude that the accelerated pace of development of industrial production in the economic regions of the country can be the main basis for the introduction of integrated structures in order to increase their effective activity (Bedakova M.S., 2016).

	2012	2013	2014	2015	2016
Baku city (with settlements)	89,4	90,9	89,7	92,2	90,4
Absheron economic region	144,8	143,5	155,3	162,3	188,1
Ganja-Gazakh economic region	154,6	158,8	173,9	204,0	243,4
Sheki-Zagatala economic region	117,7	117,7	139,9	155,3	211,1
Lankaran economic region	204,7	179,9	176,1	169,4	224,8
Guba-Khachmaz economic region	111,0	116,9	107,0	109,1	117,0
Aran economic region	109,3	110,8	119,3	104,6	111,1
Upper Karabakh economic region	124,4	138,7	148,4	159,5	179,4
Mountainous Shirvan economic region	176,5	195,6	236,7	215,9	220,9
Nakhchivan Autonomous Republic	238,9	254,0	260,4	265,6	270,1

**Table 5.** Industrial Production Indices by Regions, in Constant Prices, 2010 = 100, in percent.

## 4 Conclusions

The development of the non-oil sector, whose share is growing from year to year, can be considered a positive trend in the production of industrial products in the republic. So, for 2011-2016, this indicator in the economic regions increased: Baku - from 81.4% to 81.7%; Absheron - from 57.6% to 61.4%; Ganja-Kazakh - from 49.0% to 59.8%; Sheki-Zakatal'sky - from 62.5% to 83.0%; Lenkoran - from 59.8% to 67.4%; Guba-Khachmaz - from 43.0% to 44.7%; Upper Karabakh - from 8.5% to 24.6%; Nagorno-Shirvan - from 23.4% to 40.2%; Nakhchivan AR - from 91.8 to 95.6%. The exception is the Aran Economic Region (Bautin V.M., 2017).

	2011	2012	2013	2014	2015	2016
Baku city (with settlements)	81,4	80,5	81,9	79,9	77,4	81,7
Absheron economic region	37,6	52,4	44,2	40,4	48,6	61,4
Ganja-Gazakh economic region	49,0	66,0	59,0	54,2	57,5	59,8
Sheki-Zagatala economic region	62,5	58,5	61,0	67,5	74,1	83,0
Lankaran economic region	59,8	58,6	59,9	58,7	60,6	67,4
Guba-Khachmaz economic region	43,0	35,4	45,0	31,9	34,2	44,7
Aran economic region	62,5	60,3	60,9	55,5	45,7	58,4
Upper Karabakh economic region	8,5	13,9	14,6	11,3	12,4	24,6
Mountainous Shirvan economic region	23,4	40,8	46,6	51,2	44,2	40,2
Nakhchivan Autonomous Republic	91,8	92,6	92,6	92,6	95,4	95,6

**Table 6.** *The Share of the Private Sector in the Volume of Industrial Output by Region, in percent*

Naturally, labor resources occupy a significant place in the formation of integrated structures in industrial enterprises. Only for 2011-2016. the growth of workers in industrial enterprises of the republic by region was as follows: Baku - from 92311 to 94722; Absheron - from 17982 to 19754; Ganja-Kazakh - from 13117 to 12363 (decrease); Sheki-Zakatala - from 4556 to 5312; Lenko ransky - from 3913 to 5978; Guba-Khachmaz - from 4287 to 4254 (decrease); Aransky - from 22412 to 23008; Upper Karabakh - from 1440 to 1720; Nagorno-Shirvan - from 1721 to 2249; Nakhchivan Autonomous Republic - from 14454 to 16525.

	2011	2012	2013	2014	2015	2016
Baku city (with settlements)	92 311	96 420	102 338	102 571	97 521	94 722
Absheron economic region	17 982	17 241	20 899	21 985	21 834	19 754
Ganja-Gazakh economic region	13 117	12 505	15 035	13 359	11 642	12 363
Sheki-Zagatala economic region	4 556	4 992	5 348	5 345	4 255	5 312
Lankaran economic region	3 913	4 363	5 560	5 827	5 537	5 978
Guba-Khachmaz economic region	4287	4 810	4 999	4 875	3 967	4 254
Aran economic region	22 412	22 267	24 085	23 922	21315	23 008
Upper Karabakh economic region	1 440	1303	1 485	1 597	1 447	1 720
Mountainous Shirvan economic region	1 721	1 826	1 955	2 054	2 002	2 249
Nakhchivan Autonomous Republic	14 454	15 095	15 385	15 551	17 404	16 525

**Table 7.** *Number of Employees in Industrial Enterprises by Regions, people*

Thus, the analysis of industrial enterprises in the regions of the republic showed that at present there is a need to form integrated structures in industrial enterprises of manufacturers.

## References

- Abramov R.A. Interregional cooperation in the integration processes of the union state // Spatial Economics. № 4, 2016, p. 153-173.
- Anshin V.M. The project approach to the implementation of the concept of sustainable development in the company. M.: INFRA-M. 2017, -266p.
- Akberdina V.V. Innovative - technological potential of the region: issues of assessment and dynamics // Regional Economics. – 2009, - №23 (116), p.41.
- Bautin V.M. The mechanism for the development of integration processes in the region.// Vestnik. №2, 2017.
- Bedakova M.S. Management of integration and disintegration processes of industrial enterprises and complexes. 2016, - 24 p.
- Bendikov M.A., Frolov I.E. The trend and role of integration processes in industry. // Management in Russia and abroad. 2002, №4, p. 3-22.