

Macroeconomic Importance and Evaluation of Agriculture in Nakhchivan Autonomous Republic

Nahçıvan Özerk Cumhuriyeti'nde Tarımın Makroekonomik Önemi ve Değerlendirilmesi

^aCavadxan QASIMOV

^aAssoc. Prof., Republic of Azerbaijan, Nakhchivan Autonomous Republic, Nakhchivan city, University Campus, AZ7012, Nakhchivan State University, ORCID: 0000-0002-3826-033X, E-Mail: cavadxan.yusifoglu@ndu.edu.az

ÖZET

Bu çalışmanın temel amacı, Azerbaycan Cumhuriyeti'nin ayrılmaz bir parçası olan Nahçıvan Özerk Cumhuriyeti'nin ekonomisinde tarım sektörünün makroekonomik öneminin bilimsel temellerine ışık tutmaktır. Elde olunan araştırma kaynakları şunları içerir: Nahçıvan Özerk Cumhuriyeti ekonomisinin mevcut potansiyelinin analizi, tarımsal bölümün kaynak sağlanması, tarımsal çiftçilik fırsatları, bölgelerin ekonomik kalkınmadaki rolü, tarımsal bölümün işgücü kaynaklarının kullanılma olanakları ve yerleşim politikasının etkinliği. Tarımsal bölünmenin ekonomik ve hukuki temellerinin güçlendirilmesi, bu alandaki reformların sistemleştirilmesi ve tutarlılığının sağlanması ve diğer konular araştırmada yer aldı. Burada geçmiş yılların karşılaştırmalı analizleri yapıldı ve ekonomik kalkınmanın yeni aşamasına ilişkin öncelikler tartışıldı. Sonuçlara göre Nahçıvan Özerk Cumhuriyeti'nin, Azerbaycan Cumhuriyeti'nin makroekonomik hedefleri kapsamında önemli hammadde, işleme ve sanayi potansiyeline sahip olduğu söylenebilir. Bu, Endüstriyel Parklar ve Mahallelerin oluşturulması sürecindeki önemli etkisi nedeniyle seçilmiştir. Doğal olarak bu durum ülkenin bölgesel ve ulusal ekonomik kalkınma süreçlerinde belirleyici bir faktör oluyor. Sonuç olarak, özerk cumhuriyetin ekonomik gelişiminde tarımsal göstergilerin etkisi büyüktür. Bölgelerin uzmanlaşmasının ve nüfusun yerleşmesinin burada önemli bir faktör olabileceğini düşünüyoruz.

Anahtar Kelimeler: Ekonomik Kalkınma, Tarımsal Bölüm, Ekonomik ve Yasal Düzenleme, Devamlı Reformlar

ABSTRACT

The main purpose of this study is to highlight the scientific basis of the macroeconomic significance of the agricultural sector in the economy of the Nakhchivan Autonomous Republic as an integral part of the Republic of Azerbaijan. The research resources obtained include: analysis of the existing potential of the economy of the Nakhchivan Autonomous Republic, resource provision of the agrarian sector, agrarian economic opportunities, the role of regions in economic development, opportunities for the use of labor resources of the agrarian sector, the effectiveness of the settlement policy. Strengthening of the economic and legal base of the agrarian division, ensuring the systematization and consistency of reforms in this area and other issues were involved in the research. At the same time, comparative analyzes were carried out on previous years and priorities for the new stage of economic development were discussed. Based on the results, it can be noted that the Nakhchivan Autonomous Republic has important raw material, processing and industrial potential within the macroeconomic goals of the Republic of Azerbaijan. This is chosen due to its important influence in the process of creation of Industrial Parks and Neighborhoods. Naturally, this acts as a decisive factor in the country's regional and national economic development processes. Consequently, the influence of the prospects of the agrarian division in the economic development of the autonomous republic is great. We think that specialization of territories and settlement of population can act as an important factor here.

Keywords: Economic Development, Agrarian Division, Economic and Legal Regulations, Consistent Reforms

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Introduction

Nakhchivan Autonomous Republic is an integral part of the Republic of Azerbaijan. The total length of the border line of the Autonomous Republic in the south-west of the Lesser Caucasus is 399 km (Babayev, 1999). Its area is 5.5 thousand sq. km (Nadirov et al., 2000), and the population is 462 thousand people (Gasimov, 2022). It can be noted that the Nakhchivan Autonomous Republic is an agrarian region due to the specialization of its territory and the settlement of its population. Being an agrarian region, in order to ensure sustainable productivity, it was possible to improve the supply of irrigation systems, strengthen infrastructure facilities and implement measures calculated on productivity.

68 percent of the territory of Nakhchivan Autonomous Republic is mountainous and foothills, 32 percent is dry steppe and plain areas. As a result of the research, it is clear that more than 80 percent of the arable land in the plain of the autonomous republic consists of irrigated lands (Gasimov, 2014). The above mentioned gives reason to note that the agrarian potential of the autonomous republic is high.

At the same time, it creates a reliable base for the systematic development of the leading sectors of the economy of the autonomous republic. Thus, the area's arable land constitutes 33.2 percent of the land suitable for agriculture (Nadirov et al., 2000). In addition, it can be stated that the main irrigation sources of agriculture are Araz and Arpa rivers (Bağirov, 2015). The production of cereals, fruits and berries, grapes, sugar beets, potatoes, and vegetables can be shown here.

Materials and Methods

Description of the Study Area

The completed research work was carried out at the Department of International Trade and Management of Nakhchivan State University. Nakhchivan State University, consisting of 10 faculties and 43 departments, continues the educational processes. Since 2020, a Technology Park has also been built on a 2-hectare section of the University territory (<https://ndu.edu.az>).

Researching the development prospects of the agrarian division, revealing the factors that will have a driving effect on the macroeconomic development in this area, justifying the possibilities of efficient use of labor resources in the area, and the rationalizing effects of this on the solution of the employment problem, are expressed as goals. The analyzes carried out in the research are presented through tables, diagrams, schemes. Agrarian relations, such as relations related to land ownership and land use, have also been considered in this work (Ahmedov, 2008).

At the same time, an analysis of the current state of the economic development of the Nakhchivan Autonomous Republic was carried out, its analysis was given for cities and regions, and specific conclusions were reached. The issues of full assessment of natural resources on economic regions of the Republic of Azerbaijan, consideration and proper coordination of resources of Nakhchivan economic region in this area were taken into consideration. The issues of substantiating the effectiveness of the prospects of the Nakhchivan Autonomous Republic in the agrarian sector for the national economy of the country as a whole, establishing reliable industrial parks and neighborhoods in the territory of the Autonomous Republic, as well as increasing its role in ensuring its activities have taken place (Gasimov, 2022).

Statistical Model

The reliability of the irrigation systems in the area is becoming an important factor for the product security of the agrarian unit. In the autonomous republic, as one of the important mechanisms in the field of effective provision of irrigation water demand of the lands, it is chosen due to the necessity of purposeful use of water reservoirs. It can be noted that for the purpose of providing sustainable irrigation in the Nakhchivan Autonomous Republic, one can get acquainted with the notes on the use of 31 Reservoirs together with the Araz Reservoir (1254.0 million cubic meters) (Gasimov, 2014). Those Reservoirs are divided according to the indicators of table 1 by regions of the autonomous republic:

Table 1. Distribution of water reservoirs by districts

<i>Names of Districts</i>	<i>Names of the Water Reservoirs</i>	<i>Project Power (million cubic meters)</i>
Sharur District	Arpaçay	150,0
	Tananam	0,2
Babek District	Heydar Aliyev (Vaykhir)	100
	Sirab	12,7
	Uzunoba	8,0
	Nehram	6,0
	Gahab	1,0
	Diza	0,24
	Jahri-1	0,8
	Jahri-2	1,2
	Jahri-3	0,6
	Mazra	1,0
	Payiz	0,6
Shahbuz District	Batabat-0	0,8
	Batabat-1	0,28
	Batabar-2 (Zor Bulag)	0,5
	Ganli Gol	0,85
	Salvarti	1,0
	Nursu	0,6
Julfa District	Diza	0,41
	Yayji	0,5
	Bananiyar	17,4
Ordubad District	Gilan	0,25
	Channab	0,05
	Dasta-1	0,4
	Dasta-2	0,05
	Aza	0,2
Kangarli District	Khok-1	3,0
	Khok-2	0,7
	Chalxangala	0,5

Results and Discussion

The role of the agricultural sector in the macroeconomic development of the Nakhchivan Autonomous Republic is important. Taking this into account, in the early 90s of the last century, the beginning of the stage of transition to modern market relations was determined here (Nadirov, 2001). In 1992, in the autonomous republic, the decisions "On loss-making collective

farms and state farms" and "On privatization of public livestock of loss-making collective farms and state farms" were adopted (Ahmedov, 2008). At a later stage, important steps began to be taken, in particular, the measures taken in 1994, agrarian reforms in the Republic of Azerbaijan, problems in this area and ways to solve them (Bagirov et al., 2017). Naturally, with all this, the prospects of the agrarian division in the conditions of the new economic system in the Nakhchivan Autonomous Republic were determined (Valiyev et al., 1999).

As a result of the research, it is clear that the dynamic indicators of the development of the agrarian division of the autonomous republic were established even during the time of the former Soviet Union, and to be more precise, during the years 1970-1985. So, as a result of our calculations (Bagirov, 2015), it is clear that during these years, the area of vineyards in the autonomous republic has increased by almost 2 times, the area of orchards by 1.4 times, and the area of fodder plants has increased by 1.5 times in order to strengthen the fodder base of livestock (Ahmedov, 2008). This can also be seen in the data of Figure 1, which we compiled based on research materials (Nadirov, 2001).

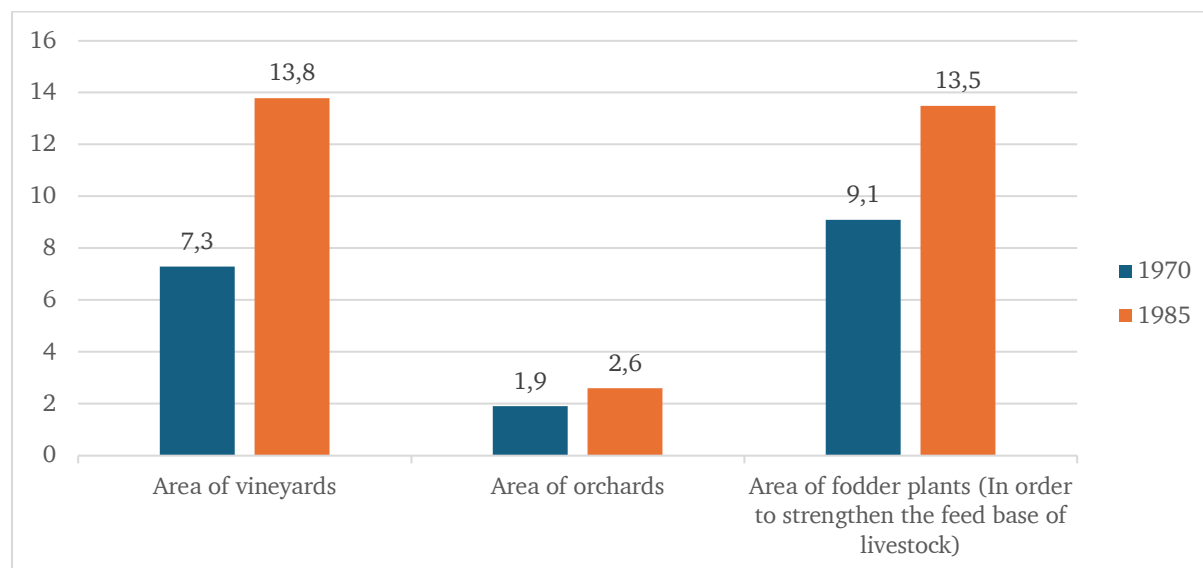


Figure 1. Productivity indicators (thousand hectares) in the agricultural division of Nakhchivan Autonomous Republic in 1970-1985.

Naturally, the agrarian sector is chosen for the macroeconomic development of the autonomous republic, as well as for its specialization. As a result of the relevant analysis, it becomes clear that when expressing the specialization of the territory of the Nakhchivan Autonomous Republic, it can also be distinguished in terms of zones. Thus, the Low mountainous zone, which accounts for 29.8% of the territory, has a land area of 159.8 thousand hectares, the Middle mountainous zone, which accounts for 28.4% of the Autonomous Republic, has a land area of 152.3 thousand hectares, and the High mountainous zone, which accounts for 9.7% of the territory of the autonomous republic, has a land area of 52 thousand hectares. (Babayev, 1999).

Table 2. Characteristics of agricultural areas in Nakhchivan Autonomous Republic by area

Elevation Zones	Area (m ²)	Specific Gravity (%)	Assessment of the Placement of Household Plots
Arazlong plain zone (600-1000-1200 m)	1720	32,1	It is suitable for growing tobacco, melon-vegetables, fruits, grapes, grain and fodder plants.
Low mountainous zone (1200-1800 m)	1600	29,8	It is suitable for the development of tobacco, fruit, grapes, vegetables, grain crops and beekeeping.
Middle mountainous zone (1800-2500 m)	1523	28,4	It is suitable for growing horticulture, meat-dairy livestock and fodder plants.
High mountainous zone (2500-3000 m and higher)	523	9,7	It is suitable for use as a trend for summer pastures in animal husbandry.

This specialization made it possible to purposefully use the agrarian potential formed in the territories of the Nakhchivan Autonomous Republic for macroeconomic development and create a basis for the formation of the total agricultural product in an increasing dynamic (Gasimov et al., 2017).

At the same time, the development of the agrarian division complements the regional development features of agrarian security (Gurbanzadeh, 2004). This has expressed the important aspects of economic security. In a number of literatures, the concept of economic security includes economic freedom, the stability of the national economy, and the ability to develop itself (Digrich, 1998). Naturally, this concept assumes that the state has full control over all national resources and production and can make free economic decisions (Smith, 1999). As a result of research, it is clear that agrarian security can be connected with efficient economy, internal stability, balanced development of the economy, degree of management of foreign economic relations, opportunities to apply technological innovations (Rojkov, 2000). In that sequence, it can be seen as the removal of the destructive effects of international factors on the country's economy (Shahin, 1999).

The determination of the directions of development of the agrarian sector also brings purposefulness in the processes of intensification of agriculture, which can be made possible by accelerating scientific and technological progress (Sinyukov, 1988).

Table 3. Characteristics of agricultural areas in Nakhchivan Autonomous Republic by area

	Qualitative improvement of the means of production
Intensification of agriculture on the basis of acceleration of scientific and technical progress	Application of progressive technologies and forms of labor organization The main form of extensive reproduction, characterized by the more efficient use of the potential created in rural areas in order to increase the output per hectare and reduce the public labor costs per unit of output

The development of the agrarian sector can also result in the creation of agrarian market institutions, taking into account advanced forms of management based on the laws of the modern economic system and ensuring accessibility to meet the growing needs of society members through reliable infrastructure organization. In a number of literatures, as an important stage in the organization of the agrarian market according to territorial characteristics, the formation of the market in the hub regions for the mass production of certain

types of products is considered, which allows them to be called regional markets (Salahov, 2002). The development of the agrarian division allows taking into account the regional characteristics of the agrarian market, which reveals the importance of the concept of the regional market. Regional markets can be selected based on the characteristics of operating in the territory of several states from a scientific and theoretical point of view (Hensholl, 1995).

Naturally, passing such an organizational stage of the agrarian unit is also an expression of its infrastructural provision. Because this division expresses itself not as an organizational structure in the conditions of market economy, but rather as a territorial field structure formed and developed according to the functional market demand (Abbasov, 2006). In the conclusions of some researchers, infrastructure is perceived as a structure-creating complex of economic fields (Bağirov, 2015). The concept of infrastructure was used in the West in the 40s of the last centuries and was treated as a set of areas that serve the activity of material production (Valiyev, 2000). Some researchers have looked at the concept of infrastructure as a set of areas that serve it in order to improve the performance of the production process (Mammadov, 2017). In this sense, a favorable ground is created for the formation of the productivity indicators of the agrarian unit in increasing dynamics. This is also stated by the determination of the indicators of the total product of the agrarian division in the economy of the Nakhchivan Autonomous Republic in Figure 2.

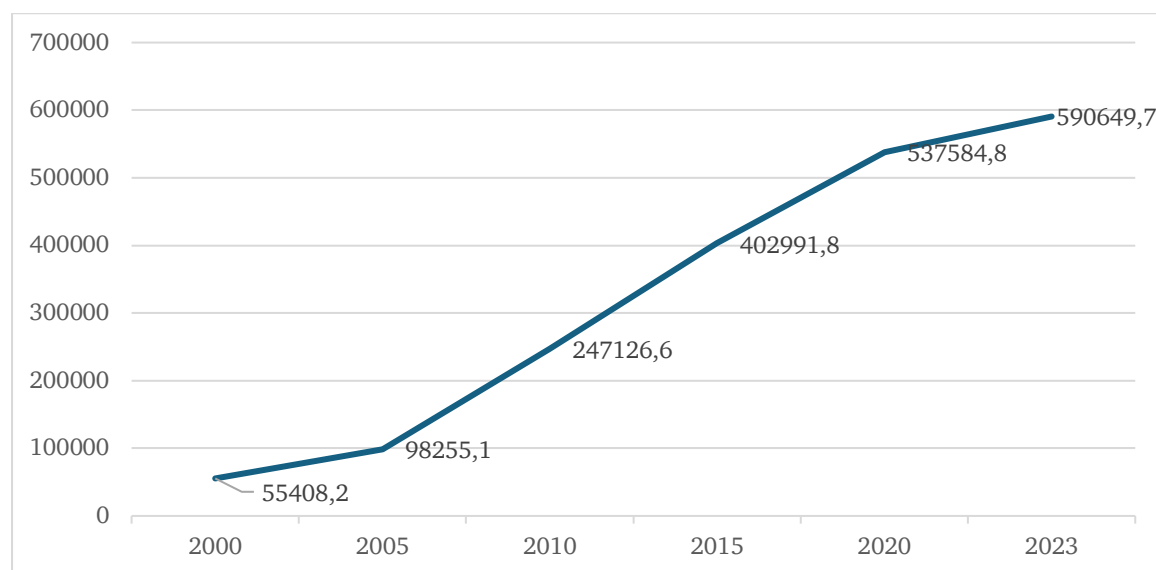


Figure 2. Information on agricultural products produced in Nakhchivan Autonomous Republic (thousand manats)

As a result of the analysis of the data of Figure 2, it is clear that during the years 2000-2023, an 11-fold increase in the volume of agricultural products was recorded in the Nakhchivan Autonomous Republic. The same dynamics increased 2 times during the years 2000-2005, more than 2.5 times during the years 2005-2010, more than 1.6 times during the years 2010-2015, more than 1.3 times during the years 2015-2020, and 1.1 times during the years 2020-2023.

Conclusion

The scientific and theoretical research conducted in the field of macroeconomic development of the Nakhchivan Autonomous Republic, issues of forming a long-term perspective in the conditions of market relations, measures in the field of creating necessary infrastructure

institutions also reveal the relevance and importance of the agrarian sector in all its aspects. Because at the macroeconomic level, the agrarian sector is included in the reliability indicators of factors such as settlement, employment, diversification. The agrarian sector is also of great importance in the field of new economic realities of the country. Thus, in the field of continuous economic reforms of the Nakhchivan Autonomous Republic, it reveals the very high importance of industry in the formation of mesoeconomic potential and, thus, in macroeconomic development. It can be noted that there are broad conditions and prospects for the production of agricultural products in the territory. This potential is also distinguished by its important results in the field of creating agricultural products. In particular, since 90 percent of agricultural products in the territory of the autonomous republic fall on the Araz-Boyu plain, there are also significant economic opportunities here. In this sense, the agrarian sector expresses very important aspects of state regulation. Strengthening the resource provision of agriculture and further enhancing access to financial resources stands out for its effective results in this area.

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