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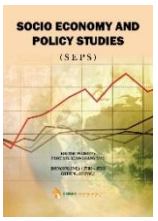

RESEARCH ARTICLE

THE IMPACT OF PRICING POLICY AND GOVERNMENT SUPPORT ON INCREASING WHEAT PRODUCTION IN IRAQ (2003–2023)

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ABSTRACT

This study aims to explore the role of pricing policy and support for agricultural inputs, including fertilizers, seeds, pesticides, loans, machinery, and equipment, in increasing wheat production. Data were collected from the archives of the Iraqi Ministry of Agriculture,Trade and Planning for the period (2003-2023) using the descriptive analytical approach and compared with the agricultural reality of the previous years (1980-2002) to identify the extent of development that occurred in the agricultural reality. The importance of this study stems from the shortage in the quantity of wheat grains produced by this sector, which forces the country to import them to meet the food shortage. Therefore, it was necessary to clarify government support and the impact of pricing policy on wheat productivity and production. The study concluded that despite the significant government support to raise the prices of wheat crops, the results were not satisfactory due to the high prices of production costs, including seeds , pest control, transportation costs, and fuel costs, which led to a decrease in profits for farmers , thus not achieving the desired goal of increasing the percentage of the agricultural sector's contribution to the gross domestic product, which was 2.4% in 2018 and did not exceed 6.9% in 2004 and 2005,While the agricultural sector's contribution was 29.73 % for the period1990- 2000, it declined to 19.95% for the period (2001-2010) then to 4.61% between (2011-2022)

KEYWORDS

Price policy, wheat, gap, government support, GDP

1. INTRODUCTION

Price is the monetary expression of the value of goods and services, and it is an effective tool in the distribution of economic resources between sectors (Emad and Saif, 2013). Pricing policy, on the other hand, is the set of principles, procedures, and foundations upon which prices are determined, adjusted, or influenced to achieve objectives. It is a means, not an end, to establishing a sound pricing system. It is a tool for improving productivity, increasing production, and increasing farmer income (Maha, 2021) .While government support means a financial or in-kind contribution or a waiver of a certain right provided by the state to be a reason for generating a benefit for the beneficiary, support takes the form of financial loans, tax exemptions, or price support (Al-Eisawi, 2001). Government support in Iraq, despite its high costs, has not contributed to achieving its intended purpose of improving the reality of agricultural activity.

Agricultural price support policy has an important place in the developed world and some developing countries. In Iraq, it used to support the prices of the final product without interest. However, after 1990 and during the blockade on Iraq, support stopped and was limited to supporting production requirements. However, after 2003, support was limited to product prices only.

Iraq has gone through a critical period with increased demand for food commodities, whose prices have risen globally, and the hostile deficit has increased with increased dependence on external sources to feed the population, and the per capita share of Iraqis in agricultural production has declined, which in turn has reduced its contribution to the gross domestic product (Ibrahim and Yasmine 2023).

So in 2008 the government returned to support farmers through the agricultural initiative by providing large interest-free loans (Al-Kaabi, 2025). The Iraqi government adopted the 2008 Agricultural Initiative to improve agricultural production and support the prices of agricultural inputs by providing soft loans. However, the problem remains the lack of seed and pest control support, the high prices of petroleum products, and the high costs of marketing and labor (Al-Dajili, 2016).

Wheat prices have been supported, but the price impact on wheat production remains weak. The imbalance is not in the price, but rather in the rise in production costs due to the weakness of government support for production requirements, which is limited to fertilizers, tractors, and harvesters. The lack of government support for the agricultural sector and the high costs of production have made farmers unable to compete with imported crops with low prices, in addition to the migration of farmers from the countryside to the cities in search of work, which requires the development of an urgent strategy, especially since the agricultural sector in Iraq contributes to the gross domestic product and economic growth, even if its percentage is low, as the government seeks to contribute the agricultural sector to achieve a greater percentage of the gross domestic product (Al-Ghazi 2010).

Agriculture in Iraq suffers from complex problems, including the lack of agricultural machinery, as there is a significant shortage of tractors and harvesters. The tractor's share is 61 km2, while in developed countries it is 19 km2. As for the harvester, its share was 533 km2, while it is supposed

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to be 171 km2 (Heba Ade 2024; Sabah Fayhan, 2022). The average cost of wheat cultivation was 23,000 dinars per dunum between 2000 and 2002, rising to 203,000 dinars per dunum between 2010 and 2012 (Balsam 2014), then the cost rose to 313,000 dinars per dunum in 2020 (Al-Kaabi, 2025). Finally, wheat is one of the most important crops in terms of production and consumption due to its nutritional importance, as it is the main food for people. This crop accounts for 47% of the total cultivated area in Iraq (Al-Ajili, 2020).

2. Study Methodology

To achieve the study's objective, we relied on the descriptive analytical approach, which focuses on collecting data and information about the agricultural sector for use in analysis and identifying the challenges facing the sector, and then developing a method for addressing the problem.

2.1 Area, Production, and Productivity

Data on wheat crops were collected in terms of area, production, and productivity. The prices received for wheat crops from the Iraqi Ministry of Trade from 1980 to 2023 were also reviewed, and this data is arranged as shown in Table 1.

Table 1: Shows the area, production and productivity of wheat crops (1980-2023)

Wheat	1980-1991	1992-2002	2003--2013	2014-2023
Area 1000 dunums	5957	4406	6183	5427
Grain yield 1000 ton	918	1074	2631	3936
Average Yield Kg/Donum	150	240	420	720
Price 1000dinnar |ton	145*	78	418	580

* One Iraqi dunam equals one quarter of a hectare

An economic blockade was imposed on Iraq. Therefore, the government turned to relying on the agricultural sector to secure food. It initiated the method of supporting wheat cultivation for the period from 1990 to 2002, and spent large sums, as shown in Table 2.

Table 2: Shows government support for the agricultural sector until 2002.

Government support: one million dinars	1990 -1995	1996 - 2002
	113130	6030010

Table 3 shows the tractors and harvesters equipped by the General Company for Agricultural Equipment in Iraq for the period (2010-2021)

Table 3: Harvesters and tractors supplied by the Iraqi Ministry of Agriculture

Statement	2010 - 2015	2016 - 2021
Dractor	603	1041
Harvester	82	425

2.2 Agricultural Imports and Agricultural Production

Agricultural imports and agricultural production were calculated for the period (2004–2019). This data helps us determine the extent to which the agricultural sector is dependent on local production or imports.

Table 4: Agricultural imports and Agricultural production (2004-2019)

Years	Agricultural imports	Agricultural output	%	years	Agricultural imports	Agricultural output	%
2004	2302	3693	62	**2012**	1354	10484	50
2005	3056	5064	60	**2013**	2652	13043	10
2006	3224	5568	58	**2014**	1310	13138	20
2007	3295	5494	60	**2015**	5272	8160	16
2008	5849	6042	96	**2016**	1354	7832	18
2009	5023	6832	74	**2017**	1424	6592	22
2010	6101	8366	73	**2018**	1449	7572	19
2011	4573	9918	46	**2019**	1470	10411	14

3. Results

Table 1. Shows that the average wheat production rate during (1980-1991) reached 918,000 tons, increasing to 1,074,000 tons during (1992-2003) and continuing to rise. The reasons for this increase are the adoption of a successful agricultural policy, supporting the price of the product and increasing it to match global prices, and expanding the horizontal cultivated area. Both cultivated area and the size of loans were directly related, but we see that the cultivated area fluctuates from year to year. There are reasons behind this fluctuation, including the Iran-Iraq War (1980-1988), the US embargo on Iraq (1990-2002) and the US occupation after 2003. The findings of this study were consistent with those of the Ministry of Planning and the Central Bureau of Statistics, as shown in Table 5.

Table 5: Area, production and productivity of wheat crops (1990-2020)

Required data	1990	1995	2000	2005	2010	2015	2020
Average area 1000duum	4783	3702	4305	6411	6342	4147	5951
Production 1000 ton	1196	1092	1041	2225	2809	2645	5007
Average Yield Kg/Donum	250	191	242	348	429	638	736

3.1 The Agricultural sector's contribution to (GDP)

It is noted that the percentage declined after 2003 and has continued to decline despite state support. In 1996, it was 48.5%, in 1998, it was 10.8%,

and in 2002, it fell to 8.5%. The reason is the Iraqi economy's dependence on oil production. Another reason is the abolition of protectionist measures, the opening of foreign trade, and the reduction of customs duties on imported agricultural products. This has led to intense competition between local products, which have high production costs, and imported products.

Table 6: Contribution of the Agricultural sector to the GDP (1990-2022)

Agriculture's contribution to GDP 1990 - 2000	Agriculture's contribution to GDP 2001 - 2010	Agriculture's contribution to GDP 2011 - 2022
% 29.73	% 19.95	% 4.61

3.2 The average fertilizer requirement for wheat crops during the period 2008-2014

It was 365,000 tons per year, while the amount prepared during that period was 322,000 tons for crops, orchards, and vegetables. Therefore, there are areas of wheat that were not fertilized or were fertilized with an amount less than 60 kg/dunam (Al-Dajili 2016).

Table 7: Quantities of 1,000 tons of fertilizer distributed by the Iraqi government to farmers 2004-2020

Years	2004 -2014	2015 –2020
Fertilizer 1000 ton	3631	2646

The prices of agricultural supplies are constantly increasing from year to year, which has affected revenues, as shown in the table.

Table 8: Shows the rise in the cost of Agricultural inputs between 2000 and 2010.

Agricultural Supplies	Year 2000	year - 2010 2020	% Increase rate
Tillage	2000	25000	1250
Seeds	10	1000	1000
Fertilizers			
Urea	60000	800000	1333
NPK	80000	1200000	1200
Pesticides	1000	20000	1000
Harvesting	2500	25000	1000
Fuel (Liters)	10	1000	1000
Darker	8000000	60000000	750
Harvester	15000000	75000000	500

3.3 Tractors and Harvesters

The rate of tractor or harvester utilization = cultivated area | Number of equipped tractors or harvesters. It appears that these rates are still low compared to developed countries. This means that Iraq is expected to increase mechanization in the future, in a manner comparable to its use in developed countries. This is to advance the agricultural sector through intensive use of agricultural mechanization to achieve the desired agricultural and food abundance. One tractor is allocated for every 220 dunams and one harvester for every 1,200 dunams (Waddah, 2021).

Table 9: Shows the need for harvesters and tractors and the actual availability.

Statement	Existing 2013 - 2015	Need	Difference
Tractor	63480	118620	55140
Harvesters	4671	8829	4158

After 2003, Iraq witnessed a decline in the provision of agricultural production requirements, and this was reflected in the productivity per dunum. The tables reflect the decline in the quantities supplied of fertilizers and tractors. Although the government is equipping harvesters, every 1,273 dunums still receives one harvester, while the global average is 500 dunums per harvester (Yahya and Nabil, 2023). As for improved wheat seeds supplied by the state to farmers, the shortage reached 197,000 tons between 2003 and 2014, which forced farmers to turn to commercial markets to purchase seeds at high prices (Al-Dajili, 2016).

3.4 Sprinkler Irrigation Systems

Iraq has witnessed a development in sprinkler irrigation systems. There were 241 systems in 2005, which increased to 2,392 in 2008. The number then increased to 11,204 in 2013, but these numbers remain below demand (Blassam, 2014). Therefore, a contract was signed with the Ministry of Industry within the 2023 emergency support allocations to purchase 475 sprinkler irrigation systems at a cost of 33 billion. Within the 2024 allocations, 3,000 systems were purchased (Hadeel, 2024).

3.5 Financial Support for Wheat Cultivation

After 2002, the level of support for the agricultural sector decreased, including the policy of subsidizing the final wheat product due to the high prices of agricultural production inputs. This led to the emergence of inflation. Furthermore, some producers purchased inputs from the government at low prices and sold them on the commercial market (Sarmed, 2007; Salam, 2016).

3.6 Ratio of Imported Inputs to Production

As an indicator within the concept of agricultural productivity efficiency, or the "ratio of imported inputs to production," this ratio is used to measure the extent to which the agricultural sector relies on imported inputs to generate its production. This gives an idea of the sector's sustainability and the need to improve reliance on local inputs. The higher the ratio, the closer it gets to 100%, the more it reflects the absolute dependence of agricultural production on foreign markets. From the table, we note that from 2009 to 2011, this indicator declined to 14 in 2014, reflecting that agricultural production in Iraq has begun to improve and is meeting a large portion of demand. The self-sufficiency rate in wheat production for the period 2004 to 2019 reached approximately 47%, while 2011 saw the highest contribution of local wheat production to total demand, at 65%, and the lowest contribution was 30% in 2008 (Yahya and Nabil, 2023).

4. Conclusions

The cost per acre of wheat production has increased due to the high prices of production inputs, despite continued state support. The increase in wheat production and productivity has not reached the desired level, despite the significant increase in purchase prices by the state. This indicates that the policy of subsidizing production input prices is more effective than the policy of subsidizing final product prices. The increase in production in recent years has resulted from horizontal expansion, not vertical expansion, reflecting the weak use of agricultural technology package components. One of the problems with subsidizing final product prices for wheat has led some traders to import quantities of wheat from neighboring countries and market them to the Ministry of Trade.

Recommendations

- Directing postgraduate research into agricultural problems and increasing production and productivity, especially of strategic grains.
- Expanding vertical wheat cultivation through the use of improved seeds and modern irrigation techniques.
- The government must address the problem of dumping of imported and locally produced agricultural products by imposing high customs duties.

Statement On Competing Interests

The authors hereby declare that they have no competing interests.

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