Journal of American Science

Websites:
http://www.jofamericanscience.org
http://www.sciencepub.net

Emails:
editor@sciencepub.net
sciencepub@gmail.com

MARSLAND PRESS
Multidisciplinary Academic Journal Publisher

An Economic Study of The Role of Internal Trade in The Availability of Agricultural Commodities and limiting the increase in their prices in Egypt

Elhusseini A. E. Elnefili and Emad-Eldin A. Elsherbini

Senior Researcher, Regional Studies Research Department, Agricultural Economic Research Institute, Agricultural Research Center, Egypt.
E. Mail: drnefili@yahoo.com

Abstract: The idea of internal trade is based on movement of goods from the areas of production to their markets or areas of consumption, and its importance increases with the increase in the concentration of production of these goods in areas without others, and with the increase in the importance of the commodity to human life. The main objectives of the study were to, estimate the amount of internal trade of the most important agricultural commodities, study the role of internal trade in limiting the increase in the agricultural commodities prices, identify the internal trade problems and propose mechanisms to solve them. The study reached to that, the total quantity of internal trade of onions, tomatoes, potatoes, rice, maize, oranges and grapes amounted to about 2381, 6540, 4440, 4100, 16354, 1115 and 1466 thousand tons, respectively., while the total quantity of internal trade of chicken meat, red meat, dairy and fish is about 1777, 988, 5267 and 2515 thousand tons, respectively, the analysis of the effect of the change in the quantity supplied of the rice on both its farm price and its consumer price showed that a 1% decrease in the quantity supplied of rice leads to an increase in its farm price by 1.66% and an increase in its consumer price by about 1.99% .

[Elhusseini A. E. Elnefili and Emad-Eldin A. Elsherbini **An Economic Study of The Role of Internal Trade in The Availability of Agricultural Commodities and limiting the increase in their prices in Egypt** *Am Sci 2021;17(7):1-14]. ISSN 15451003 (print); ISSN 23757264 (online). http://www.jofamericanscience.org* 1.doi:10.7537/marsjas170721.01.

Key words: Internal trade, availability, limiting, prices increase.

1. Introduction:

Agricultural production is based on specialization according to climatic, geographical, economic characteristics and others related to the practical experience of the farmers. In this context, the internal trade in agricultural commodities plays an important role in marketing the surplus and providing the deficit of those commodities, from the surplus areas to the other with deficits. Egypt is characterized by the diversity of its geographical and climatic characteristics, as well as the diversity of the economic level of its population and variety of farmers experiences in various fields of agricultural production, which resulted in a geographical specialization in agricultural production and production concentration of many products in governorates without others, and this concentration varies from a commodity to another. This clears when reviewing the agricultural production data in Egypt, which indicate that the governorates of Sharkia, Behera, Assiut, Minya, Dakahlia, Suhag, New Valley and Fayoum produced about 70% of wheat crop, the governorates of Dakahlia, Kafr El-Sheikh, Sharqia, Behera and Gharbia produced about 93.1% of rice crop, the governorates of Behera, Ismailia, Sharqiya, Qalyubia, Menoufia, and Nubaria region produced about 86.2% of orange crop and the governorates of Minya, Behera, Gharbia, and Nubaria region produced about 84.5% of the grape crop, in 2019[(5)].

The research problem:

The idea of internal trade is based on movement of goods from the areas of production to their markets or areas of consumption, and the importance of internal trade increases with the increase in the concentration of production of those goods in areas without others, and with the increase in the importance of the commodity to human life, The problem of the study is to ask about the amount of internal trade of the most important agricultural commodities and its impact on the prices of those commodities?

Objective of the research:

The research mainly aims to study the role of internal trade in the availability of agricultural

commodities and limiting their prices increase, through the following:

1- Studying the geographical dispersion and concentration in the production of the most important agricultural commodities.
2- Estimating the amount of internal trade of the most important agricultural commodities.
3- Studying the role of internal trade in limiting the increase of the agricultural commodities prices.
4- Identifying the internal trade problems and proposing mechanisms to solve these problems.

Method and data sources:

Both descriptive and inductive analysis were used to analyze the study data. Rapid rural research method was used to identify the problems of internal trade in rice crop. The study also relied on published secondary data that serve the purposes of research, which were obtained from the Ministry of Agriculture and Land Reclamation and the Central Agency for Public Mobilization and Statistics, in addition to the research and studies published in this regard.

3. Results:

1-The role of internal trade in the availability of agricultural commodities in Egypt:

This part aims to measure the importance of the movement of agricultural commodities between different regions, which is the main role of internal trade, through the following:

A- Studying the dispersion and concentration of the geographical distribution of the production of the most important agricultural commodities in Egypt.
B- Estimating the internal trade volume of agricultural commodities under study in the governorates of Egypt.

1.1- Dispersion and concentration of the geographical distribution of the production of the most important agricultural commodities in Egypt.

The study of the dispersion or concentration of agricultural commodities production is an essential access to highlight the importance of the internal trade of these commodities. This part is concerned with determining the intensity of the dispersion and concentration of agricultural commodities production in the Egypt in 2019, by estimating both the coefficient of geographical concentration and Gini coefficient of the fairness (uniformity) of the geographical distribution of the production of these commodities between the governorates.

1.1.1- Results of estimating the coefficient of geographical concentration for the production of the most important agricultural commodities in Egypt in 2019.

The coefficient of geographical concentration aims to determine the intensity of the dispersion or concentration of the phenomenon, through the proximity or distance of the frequency distribution of the phenomenon to any of the uniform frequency distribution or the concentrated frequency distribution, the closer the frequency distribution of a phenomenon is to the uniform frequency distribution, the more dispersed and less concentrated the phenomenon is, and conversely, the closer the frequency distribution of the phenomenon is to the concentrated frequency distribution, the less dispersed and more concentrated the phenomenon is. The values of the coefficient range from zero in the case of complete uniformity of the phenomenon distribution, and one in the case of complete concentration of its distribution. The coefficient of geographical concentration is calculated from the following equation:

The coefficient of geographical concentration (c g c) = (A – B) / (C – B)

Since, A is the sum of the cumulative percentage of production of the commodity in the governorates, B is the sum of the cumulative percentage of the uniform distribution of production of the commodity in the governorates, C is the sum of the cumulative percentage of the concentrated distribution of production of the commodity in the governorates.

The geographical coefficient of the agricultural commodities under study was estimated and the output was summarized in table (1), the table shows that the coefficient of geographical concentration of the onion crop was about 0.68, which indicates the concentration of the crop production in certain governorates, table (2) shows that the governorates of Gharbia, Dakahlia, Suhag, Sharqiya, Behera, Beni Suef, Fayoum, Qalyubia and Nubaria region produce about 83% of the crop.

The coefficient of geographical concentration of tomato production was about 0.63, which indicates the concentration of crop production in certain governorates, where the governorates of Alexandria, Sharqiya, Behera, Ismailia, Matrouh, Giza and Nubaria region produced about 67.6% of the crop.

The coefficient of geographical concentration of potato production was about 0.65, which indicates the concentration of crop production in certain governorates, where the governorates of Behera, New Valley, Dakahlia, Menoufia, Ismailia, Gharbia,

Alexandria, and Nubaria region produced about 77.2% of the crop.

The coefficient of geographical concentration of rice production was about 0.86, which indicates the intensity of the concentration of the crop production in certain governorates, where the governorates of Dakahlia, Kafr El-Sheikh, Sharqia, Behera and Gharbia produced about 93.1% of the crop.

For the production of the summer maize crop (white and yellow), the coefficient of geographic concentration was about 0.55, which indicates the simple concentration of the crop production, where the governorates of Minya, Behera, Sharqia, Menoufia, Beni Suef, Assiut and Suhag produced about 62.7% of the crop.

For the production of orange production, the coefficient of geographic concentration was about 0.79, which indicates the intensity of the concentration of the crop production in certain governorates, where the governorates of Behera, Ismailia, Sharqia, Qalyubia, Menoufia and Nubaria region produced about 86.2% of the crop.

The coefficient of geographical concentration of grape production was about 0.88, which indicates the intensity of the concentration of the crop production in certain governorates, where the governorates of Minya, Behera, Gharbia, and Nubaria region produced about 84.5% of the crop.

For livestock, the coefficient of geographical concentration of cows was about 0.49, which indicates a simple dispersion of its number in governorates, where the governorates of Behera, Sharqiya, Minya, Dakahlia, Menoufia, Beni Suef, Gharbia, and Nubaria. region had about 60.2% of cows.

The coefficient of geographical concentration of buffaloes was about 0.62, which indicates the concentration of its number in certain governorates, where the governorates of Sharkia, Menoufia, Dakahlia, Behera, Gharbia, Assiut and Minya. had about 68.6% of buffaloes.

For broilers, the coefficient of geographical concentration was about 0.55, which indicates the simple concentration of broilers in certain governorates, where the governorates of Sharkia, Behera, Dakahlia, Qalyubia, Gharbia, Minya and Nubaria region produced about 71.9% of broilers.

For red meat, the coefficient of geographical concentration was about 0.41, which indicates a simple dispersion of its production in many governorates, where the governorates of Cairo, Giza, Aswan, Qalyubia, Behera, Menoufia and Gharbia produced about 55.5% of the republic's production of red meat.

The coefficient of geographical concentration of dairy milk was about 0.44, which indicates a simple dispersion of its production in many governorates, where the governorates of Behera, Sharkia, Menoufia, Minya, Dakahlia, Suhag, Giza and Nubaria region produced about 62.6% of the republic's production of dairy.

Table (1): The estimated geographical concentration factor for the production of the most important agricultural commodities in Egypt in 2019.

commodity	The estimated geographical concentration factor
Onion (for all seasons)	0.68
Tomato (for all seasons)	0.63
Potatoes (for all seasons)	0.65
Rice	0.86
Maize	0.55
Orange	0.79
Grapes	0.88
Number of cows	0.49
Number of Buffalo	0.62
Number of broilers	0.55
Red Meat	0.41
Milk	0.44
Fish	0.83

Source: Collected and calculated from: 1- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.
2- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Statistics of Livestock, 2019.
3- Central Agency for Public Mobilization and Statistics, Annual Bulletin of Statistics fish production, 2019.

Table (2): The most important governorates producing agricultural commodities under study and their relative importance in 2019.

Commodity	Governorate	%	Commodity	Governorate	%	Commodity	Governorate	%
Onion (for all seasons)	Gharbia	25	Follow maize	Sharkia	9.6	Number of broilers	Sharkia	18
	Dakahlia	12.1		Menoufia	8.8		Behera	11.4
	Noubaria	9.6		Beni Suef	8.1		Noubaria	11.2
	Suhag	8.5		Assuit	7.6		Dakahlia	10.5
	Sharkia	6.6		Suhag	6.3		Qalyoubia	9
	Behera	5.6		Total	62.7		Gharbia	7.2
	Menia	5.3	Orange	Noubaria	23.6		Menia	4.6
	Beni Suef	5.2		Behera	20.7		Total	71.9
	Fayoum	5.1		Ismailia	15.5	Red Meat	Cairo	12.6
	Total	83		Sharkia	10.4		Giza	8.9
Tomato (for all seasons)	Noubaria	17		Qalyoubia	9.4		Aswan	7.9
	Alexandria	14.2		Menoufia	6.6		Qalyoubia	7.5
	Sharkia	13		Total	86.2		Behera	6.3
	Behera	6.2	Grapes	**Noubaria**	**60.7**		Menoufia	6.2
	Ismailia	6		Menia	11.1		Gharbia	6.1
	Matruh	5.7		Behera	6.8		Total	55.5
	Giza	5.5		Gharbia	5.9	Dairy Milk	Behera	10.6
	Total	67.6		Total	84.5		Sharkia	9.1
Potatoes (for all seasons)	Behera	14.6	cows	Behera	11.9		Menoufia	8.9
	New valley	13.9		Sharkia	10.2		Noubaria	8.6
	Dakahlia	11.6		Menia	8.2		Menia	7
	Menoufia	8.6		Noubaria	6.4		Dakahlia	6.5
	Noubaria	8.1		Dakahlia	6.3		Suhag	6.1
	Ismailia	7.1		Menoufia	6.3		Giza	5.8
	Gharbia	6.8		Beni Suef	5.7		Total	62.6
	Alexandria	6.5		Gharbia	5.2	Fish	Kafr_ElSheikh	42.5
	Total	77.2		Total	60.2		Damietta	13.7
Rice	Dakahlia	29.2	Buffalo	Sharkia	16.6		Behera	10.5
	Kafr_ElSheikh	22.1		Menoufia	12.9		Port Said	9.8
	Sharkia	20.1		Dakahlia	10.2		Sharkia	9
	Behera	14.4		Behera	8.7		Total	85.5
	Gharbia	7.3		Gharbia	7.1			
	Total	93.1		Assuit	6.6			
Maize	Menia	11.2		Menia	6.5			
	Behera	11.1		Total	68.6			

Source: Collected and calculated from: 1- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.
2- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Statistics of Livestock, 2019.
3- Central Agency for Public Mobilization and Statistics, Annual Bulletin of Statistics fish production, 2019.

For fish, the coefficient of geographical concentration was estimated at about 0.83, which indicates the intensity of its production in certain governorates, where the governorates of Kafr El-Sheikh, Damietta, Behera, Port Said and Sharqia produced about 85.5% of the republic's production of fish.

1.1.2 The results of estimating Gini coefficient :

Geographical distribution coefficient focuses the geographical distribution of the commodity without exposure to the demographic concept of the distribution of the commodity, that is, its relationship to the population distribution, which is included in both the "Lorenz" curve and the "Gini coefficient", which can be presented as follows:

To identify the degree of the fairness (uniformity) of the commodity distribution, the graphic display of "Lorenz curve" is used, which is based on drawing the relationship between the cumulative percentage of the population in a particular governorate, on the horizontal axis, and the cumulative

percentage of production of the commodity in that governorate, on the vertical axis, and the diagonal axis represents the equality line, as any point on this line represents a certain percentage of the population with the same percentage of production.

Thus, the degree of inequality can be measured by how far the Lorenz curve is from the line of equality, the part between the realistic (Lorenz curve) and optimal (equality line) commodity distribution lines is called the area of inequality, which is inversely proportional to the distributive justice. That is, the larger that area, the greater the concentration of production owned by a small number of the population, and the more it decreased, the closer the actual commodity distribution to the optimum distribution (distributive justice).

To give a numerical measure of the level of justice, the Gini coefficient was used, which is a relative number that represents the difference between half of the Lorenz square and the area of inequality, the value of this coefficient ranges from zero in the case of equality to one in the case of inequality, This means that the closer its value is to zero, the closer the distribution is to equality and vice versa. Gini coefficient is known as a measure of the relative dispersion of the distribution, and it can be calculated from the following equation.

$$\text{Gini coefficien t} = \frac{\sum \left[(X_i \bullet Y_{i+1}) - (X_{i+1} \bullet Y_i) \right]}{10000}$$

Since, X_i is the cumulative percentage of the population in the governorate i, Y_i is the cumulative percentage of production of a commodity in the governorate i.

The following part provides an analysis of the fairness of the distribution of production of the agricultural commodities under study in the governorates. What is meant by the fairness of the distribution of production here is the fairness of the relationship between the quantity of production and the population between the governorates.

Gini coefficient was calculated for the agricultural commodities under study and the results have been depicted in table 3, which indicates that, the value of the coefficient for onions, tomatoes and maize crops was about 0.36, 0.39, and 0.33, respectively, which indicates the relative fairness in the relationship between the population and the quantity of production from those crops between the governorates, while the coefficient for crops of potatoes, rice, grape was about 0.53, 0.69 and 0.66, respectively, which indicates unfairness in the relationship between the population and the quantity of production of those crops between the governorates.

For livestock, the estimated Gini coefficient for of cows and buffaloes was about 0.24 and 0.30, respectively, which indicates relative fairness in the relationship between the population and the numbers of those animals between governorates. As for animal products, the estimated Gini coefficient of production of chicken, red meat and dairy products was about 0.41, 0.18, and 0.23, respectively, which indicates the relative fairness in the relationship between the population and the production of those commodities between governorates, while the value of the estimated coefficient of fish production About 0.75, which indicates an inequity in the relationship between the number of population and the quantity of fish production between governorates.

Table (3): Estimated Gini coefficient of the fairness of the production distribution of the agricultural commodities in 2019.

commodity	Onion	Tomato	Potatoes	Rice	Maize	Orange	Grapes
estimated Gini coefficient	0.36	0.39	0.53	0.69	0.33	0.61	0.66
commodity	cows	Buffalo	broilers	Red Meat	Milk	Fish	
estimated Gini coefficient	0.24	0.3	0.41	0.18	0.23	0.75	

Source: Collected and calculated from: 1- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.
2- Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Statistics of Livestock, 2019.
3- Central Agency for Public Mobilization and Statistics, Annual Bulletin of Statistics fish production,2019.

1.2 The internal trade volume of agricultural commodities under study in 2019.

The internal trade includes, Conceptually, both the local trade within each governorate and the regional trade between governorates. Mathematically, the internal trade is the sum of the local trade within the governorates, where the local trade is the sum of the local production in the governorate plus the intra-regional trade with other governorates. The local trade of the governorate was calculated by multiplying the average per capita share of the commodity by the governorate's population, the volume of regional trade for a governorate with other governorates can be

represented by the volume of the deficit or surplus of the commodity in that governorate, noting that the difference between the total surplus and the total deficit represents the volume of foreign trade of the crop. The volume of the surplus and the deficit of agricultural commodities under study was estimated for the governorates by calculating the difference between local production and local trade (consumption) in each governorate. The results have been depicted in table 5.

Table (5): Production, consumption, surplus and deficit of agricultural crops under study in the governorates of the Republic in 2019.thousand tons

Governorates	Population	Onion			Tomato		
		Production	Local trade	Surplus or Deficit	Production	Local trade	Surplus or Deficit
Alexandria	5299.7	2.6	128.6	-126	962.9	353.3	609.6
Behera**	6404.2	458.7	155.4	303.3	1574.8	426.9	1147.9
Gharbia	5146.4	751.5	124.9	626.6	9.8	343.1	-333.3
Kafr El_sheikh	3478.3	34.9	84.4	-49.5	274.2	231.9	42.3
Dakahlia	6679.4	364.6	162.1	202.5	104.1	445.3	-341.2
Damietta	1539.1	21.4	37.4	-16	20	102.6	-82.6
Sharkia	7401.7	199.4	179.6	19.8	880.3	493.4	386.9
Ismailia	1352.6	5.2	32.8	-27.6	407.2	90.2	317
Port Said	764.5	0	18.6	-18.6	4	51	-47
Suez	749.7	7	18.2	-11.2	35.3	50	-14.7
Menoufia	4441.7	18.4	107.8	-89.4	1.5	296.1	-294.6
Kalyoubia	5792.1	150.4	140.6	9.8	10.3	386.1	-375.8
Cairo	9788.7	0	237.6	-237.6	3	652.6	-649.6
Giza	8915.2	61	216.4	-155.4	374.4	594.3	-219.9
Beni Suef	3288.2	155.6	79.8	75.8	277.5	219.2	58.3
Fayoum	3747.9	153.4	91	62.4	285.3	249.9	35.4
Menia	5745.2	159.3	139.4	19.9	348.6	383	-34.4
Assuit	4587.6	77.9	111.3	-33.4	155.9	305.8	-149.9
Suhag	5193.1	254.5	126	128.5	287.1	346.2	-59.1
Qena	3302.9	58.2	80.2	-22	127	220.2	-93.2
Luxor	1296.5	11.9	31.5	-19.6	232.9	86.4	146.5
Aswan	1532.4	19.2	37.2	-18	11.1	102.2	-91.1
New Valley	622.3*	36.4	15.1	21.3	3.2	41.5	-38.3
Matruh	461.9	6.8	11.2	-4.4	388	30.8	357.2
North Sinai	464	0.5	11.3	-10.8	14.7	30.9	-16.2
South Sinai	106	0.2	2.6	-2.4	0.6	7.1	-6.5
Total	98101	3009	2381		6793.7	6540	

*Includes the population of the New Valley and Red Sea governorates

Behera Governorate includes Nubariya area, the positive sign represents the surplus and the negative sign represents the deficit.

*** local trade = population. average per capita market supply (available for consumption).

Source: Collected and calculated from: Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.

Onion:

Table 5 shows that, the estimated volume of the total internal trade of onion was about 2381 thousand tons, the volume of local trade of onion crop varied between governorates, reaching its highest in the governorates of Cairo, Giza and Sharqia, which represent the largest governorates in terms of population, by about 237.6, 216 and 179.6 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai, which represent the smallest governorates in terms of population, by about 11.3, 11.2 and 2.6 thousand tons, respectively.

The governorates of Behera, Gharbia, Dakahlia, Sharqia, Qalyubia, Beni Suef, Fayoum, Minya, Suhag and New Valley achieved a surplus of onion,

totaling about 1469.8 thousand tons, where this surplus reached the highest in Gharbia Governorate by about 626.6 thousand tons and the lowest in Qalyubia Governorate by about 9.9 thousand tons, while the governorates of Alexandria, Kafr El-Sheikh, Damietta, Ismailia, Port Said, Suez, Menoufia, Cairo, Giza, Assiut, Qena, Luxor, Aswan, Matrouh, North Sinai and South Sinai had a deficit, totaling about 841.9 thousand tons, where this deficit reached the highest in Cairo governorate by about 237.6 thousand tons and the lowest in South Sinai Governorate by about 2.4 thousand tons.

Tomato:

The estimated volume of the total internal trade of tomato was about 6540 thousand tons, the volume of local trade of tomato crop reached its highest in the governorates of Cairo, Giza and Sharqia by about 652.6, 594.3 and 493.4 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai by about 11.3, 11.2 and 2.6 thousand tons, respectively.

The governorates of Alexandria, Behera, Kafr El-Sheikh, Sharkia, Ismailia, Beni Suef, Fayoum, Luxor and Matrouh achieved a surplus of tomato, totaling about 3101 thousand tons, where this surplus reached the highest in Behera governorate by about 1147.8 thousand tons and the lowest in Fayoum governorate by about 35.4 thousand tons, while the governorates of Gharbia, Dakahlia, Damietta, Port Said, Suez, Menoufia, Qalyubia, Cairo, Giza, Minya, Suhag, Qena, Assiut, Aswan, New Valley, North Sinai and South Sinai had a deficit, totaling about 2847,2 thousand tons, where this deficit reached the highest in Cairo Governorate by about 649.6 thousand tons and the lowest in South Sinai Governorate by about 6.4 thousand tons.

Potatoes:

The estimated volume of the total internal trade of potato was about 3910 thousand tons, the volume of local trade of potato reached its highest in the governorates of Cairo, Giza and Sharqia by about 390.1, 355.3 and 295 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai by about 18.5, 18.4 and 4.2 thousand tons, respectively.

The governorates of Alexandria, Behera, Gharbia, Dakahlia, Damietta, Ismailia, Menoufia, Beni Suef, Minya, New Valley and Matrouh achieved a surplus of potato, totaling about 2979.2 thousand tons. where this surplus reached the highest in Behera governorate by about 924.5 thousand tons and the lowest in Damietta governorate by about 15.6 thousand tons, while the governorates of Kafr El-Sheikh, Sharqia, Port Said, Suez, Qalyubia, Cairo, Giza, Fayoum, Qena, Suhag, Luxor, Assiut, Aswan, North Sinai and South Sinai had a deficit, totaling about 1689 thousand tons, where this deficit reached the highest in Cairo governorate by about 390 thousand tons and the lowest in South Sinai governorate by about 4.2 thousand tons.

Rice:

The estimated volume of the total internal trade of rice was about 4022 thousand tons, the volume of local trade of rice reached its highest in the governorates of Cairo, Giza and Sharqia by about 401.3, 365.5 and 303.5 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai by about 19, 18.9 and 4.3 thousand tons, respectively.

The governorates of Behera, Gharbia, Kafr El-Sheikh, Dakahlia, Damietta, Sharqia and Port Said achieved a surplus of rice, totaling about 3425.5 thousand tons, where this surplus reached the highest in Dakahlia governorate by about 1127,1 thousand tons and the lowest in Port Said governorate by about 42.8 thousand tons, while the governorates of Alexandria, Ismailia, Menoufia, Suez, Qalyubia, Cairo, Giza, Beni Suef, Minya, Fayoum, Qena, Suhag, Luxor, Assiut, Aswan, New Valley, Matrouh, North Sinai and South Sinai had a deficit, totaling about 2649.2 thousand tons, where this deficit reached the highest in Cairo governorate by about 401.3 thousand tons and the lowest in South Sinai governorate by about 4.3 thousand tons.

Maize:

The estimated volume of the total internal trade of maize was about 15352.6 thousand tons, the volume of local trade of maize crop reached its highest in the governorates of Behera, Sharqia and Dakahlia by about 1528.5, 1478 and 1106 thousand tons, respectively, and its lowest in the governorates of Suez, North Sinai and South Sinai by about 91.4, 67.2, and 16.6 thousand tons, respectively.

Beni Suef governorate achieved a surplus of maize by about 90.6 thousand tons, while the governorates of Alexandria, Behera, Gharbia, Kafr El-Sheikh, Sharqia, Ismailia, Menoufia, Dakahlia, Damietta, Port Said, Suez, Qalyubia, Cairo, Giza, Fayoum, Minya, Suhag, Qena, Assiut, Luxor, Aswan, Matrouh, New Valley, North Sinai and South Sinai had a deficit, totaling about 7850.4 thousand tons, where this deficit reached the highest in Cairo Governorate by about 1059.1 thousand tons, and the lowest in the New Valley Governorate by about 2.2 thousand tons.

\

Table (5): Production, consumption, surplus and deficit of agricultural crops under study in the governorates of the Republic in 2019. thousand tons

Governorates	Potatoes			Rice		
	Production	Local trade	Surplus or Deficit	Production	local trade	Surplus or Deficit
Alexandria	8.6	211.2	127.4	11.9	217.3	-205.4
Behera**	1179.8	255.3	924.5	689.6	262.6	427
Gharbia	353	205.1	147.9	348.2	211	137.2
Kafr El_sheikh	17.6	138.6	-121	1060	142.6	917.4
Dakahlia	603.9	266.2	337.7	1401	273.8	1127.2
Damietta	76.9	61.3	15.6	176.8	63.1	113.7
Sharkia	105.6	295	-189.4	963.7	303.5	660.2
Ismailia	368.2	53.9	314.3	21.4	55.5	-34.1
Port Said	0	30.5	-30.5	74.1	31.3	42.8
Suez	3	29.9	-26.9	0.5	30.7	-30.2
Menoufia	449.3	177	272.3	0.1	182.1	-182
Kalyoubia	140.4	230.9	-90.5	21.7	237.5	-215.8
Cairo	0.1	390.1	-390	0	401.3	-401.3
Giza	253.7	355.3	-101.6	0	365.5	-365.5
Beni Suef	168.7	131.1	37.6	10.9	134.8	-123.9
Fayoum	1	149.4	-148.4	12.4	153.7	-141.3
Menia	308.8	229	79.8	0	235.5	-235.5
Assuit	17.7	182.8	-165.1	0	188.1	-188.1
Suhag	48.4	207	-158.6	0	212.9	-212.9
Qena	0.1	131.6	-131.5	0	135.4	-135.4
Luxor	0	51.7	-51.7	0	53.2	-53.2
Aswan	0	61.1	-61.1	0	62.8	-62.8
New Valley	720.9	24.8	696.1	4.3	25.5	-21.2
Matruh	44.4	18.4	26	1.6	18.9	-17.3
North Sinai	0	18.5	-18.5	0	19	-19
South Sinai	0	4.2	-4.2	0	4.3	-4.3
Total	5200.2	3910		4798.3	4022	

Source: Collected and calculated from: Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.

Orange:

The estimated volume of the total internal trade of orange was about 1115 thousand tons, the volume of local trade of orange reached its highest in the governorates of Cairo, Giza and Sharqia by about 111.3, 101.3 and 84.1 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai by about 5.3, 5.2 and 5.2 thousand tons, respectively.

The governorates of Behera, Gharbia, Sharqiya, Ismailia, Suez, Menoufia, Qalyubia, Assiut, New Valley and Matrouh achieved a surplus of orange, totaling about 2478.9 thousand tons, where this surplus reached the highest in the Behera governorate by about 1288 thousand tons and the lowest in the Matrouh governorate by about 2.7 thousand tons, while the governorates of Alexandria, Kafr El-Sheikh, Dakahlia, Damietta, Port Said, Cairo, Giza, Minya, Fayoum, Beni Suef, Qena, Suhag, Luxor, Aswan, North Sinai and South Sinai had a deficit, totaling about 527.3 thousand tons, where this deficit reached the highest in Cairo governorate by about 109.3 thousand tons and the lowest in South Sinai governorate by about 0.8 thousand tons.

Grapes:

The estimated volume of the total internal trade of Grapes was about 1466 thousand tons, the volume of local trade of reached its highest in the governorates of Cairo, Giza and Sharqia by about 146.3, 133.2 and 110.6 thousand tons, respectively, and its lowest in the governorates of North Sinai, Matrouh and South Sinai by about 6.9, 6.9 and 1.6 thousand tons, respectively.

The governorates of Behera, Gharbia, Beni Suef, Minya and Matrouh achieved a surplus of the grape, totaling about 1107.5 thousand tons, where this surplus reached the highest in Behera governorate by about 980.7 thousand tons and the lowest in Matrouh

governorate by about 7.6 thousand tons, while the governorates of Alexandria, Dakahlia, Damietta, Kafr El-Sheikh, Sharkia, Ismailia, Suez, Menoufia, Qalyubia, Port Said, Cairo, Giza, Fayoum, Qena, Assiut, Suhag, Luxor, Aswan, New Valley, North Sinai and South Sinai had a deficit, totaling about 978.7 thousand tons, where this deficit reached the highest in Cairo governorate by about 145.7 thousand tons and the lowest in South Sinai Governorate, about 1.3 thousand tons.

Table (5): Production, consumption, surplus and deficit of agricultural crops under study in the governorates of the Republic in 2019. thousand tons

Governorate	Maize			Orange			Grapes		
	Production	Local trade	Surplus or Deficit	Production	Local trade	Surplus or Deficit	Production	Local trade	Surplus or Deficit
Alexandria	167.7	675.2	-507.5	6.8	60.2	-53.4	3.4	79.2	-75.7
Behera**	1284.6	1528.5	-243.9	1360.9	72.8	1288.1	1076.4	95.7	980.7
Gharbia	221.2	842.9	-621.7	117.9	58.5	59.4	94.5	76.9	17.6
Kafr Elsheikh	330	576.6	-246.6	33.5	39.5	-6	0.9	52	-51.1
Dakahlia	409.2	1106.0	-696.9	32.3	75.9	-43.6	52.6	99.8	-47.2
Damietta	6.5	248.2	-241.7	0.2	17.5	-17.3	0.1	23	-22.9
Sharkia	732	1478.0	-746.0	320.4	84.1	236.3	16.2	110.6	-94.4
Ismailia	127.4	209.7	-82.3	475.1	15.4	459.7	6.8	20.2	-13.4
Port Said	25	121.5	-96.5	0.2	8.7	-8.5	0	11.4	-11.4
Suez	13.4	91.4	-77.9	21.1	8.5	12.6	1.5	11.2	-9.7
Menoufia	669.7	801.1	-131.3	202.5	50.5	152	16.1	66.4	-50.3
Kalyoubia	244.3	849.1	-604.8	289	65.8	223.2	0.9	86.6	-85.6
Cairo	0.3	1059.4	-1059.1	1.9	111.3	-109.4	0.6	146.3	-145.7
Giza	183.8	1114.0	-930.2	46.1	101.3	-55.2	24.1	133.2	-109.2
Beni Suef	616.7	526.0	90.6	21.8	37.4	-15.6	58.8	49.1	9.7
Fayoum	302.3	571.5	-269.2	3.6	42.6	-39	5.5	56	-50.6
Menia	851.4	954.1	-102.7	7.4	65.3	-57.9	177.8	85.9	91.9
Assuit	574.2	612.9	-38.7	82.5	52.1	30.4	29.4	68.6	-39.1
Suhag	478.4	794.5	-316.2	8.2	59	-50.8	4.2	77.6	-73.4
Qena	96.9	426.0	-329.2	0.8	37.5	-36.7	2.7	49.4	-46.6
Luxor	41.2	187.5	-146.4	1.2	14.7	-13.5	5.3	19.4	-14.1
Aswan	56.2	219.9	-163.7	2.6	17.4	-14.8	0.5	22.9	-22.4
New Valley	131.4	133.6	-2.2	21.5	7.1	14.4	1.5	9.3	-7.8
Matruh	29.2	141.1	-111.9	8	5.2	2.8	14.5	6.9	7.6
North Sinai	0	67.2	-67.2	0.5	5.3	-4.8	0.3	6.9	-6.6
South Sinai	0	16.6	-16.6	0.4	1.2	-0.8	0.2	1.6	-1.3
Total	7592.8	15352.6		3066.7	1115		1594.8	1466	

Source: Collected and calculated from Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, 2019.

Table (5): Production, consumption, surplus and deficit of agricultural crops under study in the governorates of the Republic in 2019. thousand tons

Governorates	Chicken meat			Red Meat		
	Production	Local Trade	Surplus Or Deficit	Production	local trade	Surplus or Deficit
Alexandria	14.9	45.9	-31	10.7	38.2	-27.6
Behera**	191.4	55.5	135.9	19.4	46.2	-26.9
Gharbia	61.5	44.6	16.9	18.7	37.1	-18.4
Kafr El_sheikh	34.3	30.1	4.2	6.8	25.1	-18.3
Dakahlia	89.6	57.9	31.7	13.6	48.2	-34.7
Damietta	16.4	13.3	3.1	4.7	11.1	-6.4
Sharkia	152.8	64.1	88.7	10.6	53.4	-42.8

Ismailia	21.8	11.7	10	5.5	9.8	-4.3
Port Said	0.5	6.6	-6.2	2.3	5.5	-3.2
Suez	0.3	6.5	-6.2	5	5.4	-0.4
Menoufia	23.5	38.5	-15	18.9	32.1	-13.2
Kalyoubia	76	50.2	25.9	23	41.8	-18.8
Cairo	4.8	84.8	-80	38.6	70.6	-32
Giza	16.3	77.3	-60.9	27.2	64.3	-37.2
Beni Suef	12.1	28.5	-16.3	7.8	23.7	-15.9
Fayoum	20.3	32.5	-12.2	4.9	27	-22.2
Menia	39.1	49.8	-10.7	16.8	41.5	-24.7
Assuit	13.9	39.8	-25.8	15	33.1	-18.2
Suhag	12.7	45	-32.3	14.5	37.5	-23
Qena	4	28.6	-24.6	7	23.8	-16.9
Luxor	4.5	11.2	-6.7	2.2	9.4	-7.2
Aswan	0.1	13.3	-13.2	24.3	11.1	13.2
Matruh	27.1	4	23.1	5.7	3.3	2.4
North Sinai	6.6	4	2.6	0.5	3.3	-2.8
South Sinai	0.1	0.9	-0.8	0.5	0.8	-0.2
New Valley	3.4	2.2	1.3	1.2	1.8	-0.6
red sea	0.9	3.2	-2.4	4.5	2.7	1.8
Total	849.2	850.1		309.7	708	

Source: Collected and calculated from the same source.

Chicken meat:

The estimated volume of the total internal trade of chicken meat was about 850.1 thousand tons, the volume of local trade of chicken meat reached its highest in the governorates of Cairo, Giza and Sharqia by about 84.8, 77.3 and 64.6 thousand tons, respectively, and its lowest in the governorates of Red sea, South Sinai and North Sinai by about 3.2, 2.2 and 0.9 thousand tons, respectively.

The governorates of Behera, Gharbia, Kafr El-Sheikh, Dakahlia, Damietta, Sharkia, Ismailia, Qalyubia, New Valley, Matrouh, North Sinai and South Sinai achieved a surplus of chicken meat, totaling about 328.9 thousand ton, where this surplus reached the highest in the Buhaira Governorate by about 135,9 thousand tons and the lowest in the New Valley governorate by about 1.3 thousand tons, while the governorates of Alexandria, Menoufia, Port Said, Suez, Cairo, Giza, Beni Suef, Minya, Fayoum, Aswan, Qena, Assiut, Suhag, Luxor and Red Sea had a deficit, totaling about 328.9 thousand tons, where this deficit reached the highest in Cairo Governorate by about 80 thousand tons and reached the lowest in South Sinai Governorate by about 0.8 thousand tons.

Red meat:

The estimated volume of the total internal trade of red meat was about 708 thousand tons, the volume of local trade of red meat reached its highest in the governorates of Cairo, Giza and Sharqia by about 70.6, 64.3 and 53.4 thousand tons, respectively, and its lowest in the governorates of Red sea, South Sinai and North Sinai by about 2.7, 1.8 and 0.8 thousand tons, respectively.

The governorates of Aswan, Matrouh and the Red Sea achieved a surplus of red meat, totaling about 17.4 thousand tons, This surplus amounted to about 13.2, 2.4 and 1.8 thousand tons for the three governorates, respectively, while the governorates of Alexandria, Behera, Gharbia, Kafr El-Sheikh, Dakahlia, Damietta, Sharkia, Ismailia, Qalyubia, Menoufia, Port Said, Suez, Cairo, Giza, Beni Suef, Minya, Fayoum, Qena, Assiut, Suhag, Luxor, New Valley, North Sinai and South Sinai had a deficit, totaling about 415.7 thousand tons, where this deficit reached the highest in Sharkia Governorate by about 42.8 thousand tons and the lowest in South Sinai Governorate by about 0.2 thousand tons.

Dairy Milk:

The estimated volume of the total internal trade of dairy milk was about 5266.3 thousand tons, the volume of local trade of dairy milk reached its highest in the governorates of Cairo, Giza and Sharqia by about 525.6, 478.7 and 397.4 thousand tons, respectively, and its lowest in the governorates of Red sea, South Sinai and North Sinai by about 19.3, 13.4 and 5.7 thousand tons, respectively.

The governorates of Behera, Gharbia, Kafr El-Sheikh, Damietta, Sharqia, Port Said, Menoufia, Beni Suef, Minya, Suhag, Matrouh and New Valley achieved a surplus of dairy milk, totaling about 862.9 thousand tons, where this surplus reached the highest in Menoufia governorate by about 222,1 thousand tons and the lowest in Matrouh governorate by about 1.6 thousand

tons, while the governorates of Alexandria, Dakahlia, Ismailia, Qalyubia, Suez, Cairo, Giza, Fayoum, Qena, Assiut, Luxor, Aswan, North Sinai, South Sinai and the Red Sea had a deficit, totaling about 1385.7 thousand tons, where this deficit reached the highest in Cairo governorate by about 521.7 thousand tons and the lowest in South Sinai governorate by about 3.8 thousand tons.

Fish:

The estimated volume of the total internal trade of fish was about 2515 thousand tons, the volume of local trade of fish reached its highest in the governorates of Cairo, Giza and Sharqia by about 251, 228.6 and 189.8 thousand tons, respectively, and its lowest in the governorates of Red sea, South Sinai and North Sinai by about 9.6, 6.4 and 2.7 thousand tons, respectively.

The governorates of Behera, Kafr El-Sheikh, Damietta, Port Said, Suez and the Red Sea achieved a surplus of fish totaling about 1267,5 thousand tons, where this surplus reached the highest in Kafr El-Sheikh Governorate by about 776.3 thousand tons and the lowest in Suez Governorate by about 1.6 thousand tons. and the lowest in Suez Governorate by about 1.6 thousand tons, while the governorates of Alexandria, Gharbia, Dakahlia, Sharqiya, Ismailia, Menoufia, Qalyubia, Cairo, Beni Suef, Minya, Suhag, Giza, Fayoum, Qena, Assiut, Luxor, Aswan, Matrouh, North Sinai, South Sinai and New Valley had a deficit, totaling about 1748.1 thousand tons, where this deficit reached the highest in Cairo Governorate by about 249.3 thousand tons and the lowest in South Sinai governorate by about 0.3 thousand tons.

Table (5): Production, consumption, surplus and deficit of agricultural crops under study in the governorates of the Republic in 2019. thousand tons

Governorates	Dairy Milk			Fish		
	Production	Local Trade	Surplus or Deficit	Production	Local Trade	Surplus or Deficit
Alexandria	126.3	284.5	-158.2	25.7	135.9	-110.2
Behera**	555.6	343.8	211.8	213.8	164.2	49.6
Gharbia	287.9	276.3	11.6	7.1	131.9	-124.8
Kafr El_sheikh	260.7	186.7	74	865.5	89.2	776.3
Dakahlia	339.4	358.6	-19.2	62.2	171.2	-109
Damietta	93.4	82.6	10.8	279.2	39.5	239.7
Sharkia	472.7	397.4	75.3	183.4	189.8	-6.4
Ismailia	33.2	72.6	-39.4	34.3	34.7	-0.4
Port Said	59.6	41	18.6	199.7	19.6	180.1
Suez	15.7	40.2	-24.6	20.9	19.2	1.6
Menoufia	460.5	238.5	222.1	6.8	113.9	-107.1
Kalyoubia	136.5	311	-174.5	17.3	148.5	-131.2
Cairo	3.9	525.6	-521.7	1.6	251	-249.3
Giza	301.6	478.7	-177	3.1	228.6	-225.4
Beni Suef	243.6	176.5	67.1	7.6	84.3	-76.7
Fayoum	164	201.2	-37.2	23.7	96.1	-72.3
Menia	363.1	308.5	54.7	9.6	147.3	-137.7
Assuit	154.2	246.3	-92.2	6.1	117.6	-111.5
Suhag	315	278.8	36.2	0.3	133.1	-132.8
Qena	99.6	177.3	-77.7	0.7	84.7	-84
Luxor	59.1	69.6	-10.5	1.2	33.2	-32
Aswan	73	82.3	-9.3	26.3	39.3	-13
New Valley	26.4	24.8	1.6	0.1	11.8	-11.7
Matruh	3.4	24.9	-21.5	3.7	11.9	-8.2
North Sinai	1.9	5.7	-3.8	2.4	2.7	-0.3
South Sinai	92.7	13.4	79.3	2.3	6.4	-4.1
Total	0.3	19.3	-19	29.6	9.6	20

Source: Collected and calculated from the same source.

2. The role of internal trade in limiting the increase in agricultural commodities prices in Egypt :

This part of the study deals with the role of internal trade in limiting the rise in agricultural commodity prices, by studying the effect of the change in supply quantity on both the farm price and the consumer price of the rice crop as a case study, where The current part aims to:

a. Review the evolution of production, farm price and consumer price of rice during the study period.

b. Analyze the effect of the change in the quantity supplied of rice on both the farm price and the consumer price for it.

Table 6: production, farm price and consumer price of rice during the period (2000-2019).

Years	Production	Farm Price	Consumer Price
2000	6	582.6	1380
2001	5.23	592.2	1410
2002	6.1	671.5	1462
2003	6.17	992	1786
2004	6.35	1024	2167
2005	6.12	1069.3	1900
2006	6.74	1077	2032
2007	6.87	1451	2308
2008	7.24	1465	3189
2009	5.52	1495	2280
2010	4.33	1837	2670
2011	5.67	2008	4280
2012	5.9	2067	4540
2013	5.72	2110	5020
2014	5.46	2130	5110
2015	4.82	2136	5220
2016	5.31	2268	6090
2017	4.96	3500	7710
2018	3.12	3552	9430
2019	4.8	3556	10550

Source: Collected and calculated from: 1-Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, various issues.

2-Central Agency for Public Mobilization and Statistics Annual Bulletin of Prices of Food Products and Services (Producer, Wholesale and Consumer), various issues.

For the effect of the change in the quantity supplied of rice on its consumer price, the results show, about 58% of the changes in consumer price of rice are attributed to the change in the quantity supplied of it, the adverse effect of the quantity supplied of rice on its consumer price, the consumer price of rice increases by 1.99% when its quantity supplied decreases by 1%, and the significance of this relationship was confirmed at the significance level of 0.05.

2.1 Evolution of local production, farm price and consumer price of rice during the period (2000-2019).

Table (6) indicates a decrease in the quantity of domestic production of the rice crop from about 6 million tons in 2000 to about 4.8 million tons in 2019, with a decrease rate of about 20%, As a result of implementing a policy that adopts rationalization of water use, especially crops that consume high water, such as rice. The general trend of the quantity of production of the rice crop was estimated and the results were summarized in table (7), which shows the annual decrease by a statistically significant amount of about 96.2 thousand tons, with an annual decline rate of 1.7%.

Table 6 also shows an increase in the farm price of rice, from about 582.6 pounds / ton in 2000 to about 3556 pounds / ton in 2019, with an increase rate of about 510.4%, The results of estimating general trend of the farm price of barley, which summarized in table (7), show the annual increase of about 150.3 E.P., With an annual growth rate of 8.4%.

For the consumer price of white rice, table 6 indicates an increase from about 1380 pounds / ton in 2000 to about 10550 pounds / ton in 2019, with an increase rate of about 664.5%, The results of estimating general trend of the consumer price of white rice, which summarized in table (7), show the annual increase of about 419.9 E.P., With an annual growth rate of 10.4%.

2.2 Analyze the effect of the change in the quantity supplied of rice on both the farm price and the consumer price for it.

The method of ordinary least squares was used to analyze the effect of the change in the quantity supplied of rice on both its farm price and its consumer price using the available data in table 7 and the results were summarized in table 8.

For the effect of the change in the quantity supplied of rice on its farm price, the results show, about 57% of the changes in rice farm price are attributed to the change in the quantity supplied of it, the adverse effect of the quantity supplied of rice on its farm price, the rice farm price increases by 1.66% when its quantity supplied decreases by 1%, and the significance of this relationship was confirmed at the significance level of 0.05.

2.3 Problems of the internal trade of rice:

A questionnaire was conducted to identify the problems of the internal trade of rice, using the rapid rural research method, and the results of the questionnaire reached the following marketing problems:

a. A few traders monopolized the market and received the crop at low prices due to the farmers' inability to store the crop, because they needed money to prepare for the next agricultural season.

b - High transportation and storage costs.

c- Banning the export of rice.

d- An abundant supply of rice.

E. Low price with high production costs.

f. High loss rate.

Table 7: The results of estimating the general trend of rice production, rice farm price and rice consumer price for the period (2000-2019).

	R^2	F	a	b	T_a	T_b	Average	Growth Rate
production	0.36	10.2*	6630.6	-96.15	18.4*	-3.2*	5621.2	-1.7
farm price	0.91	177.9*	201.1	150.3	1.5	13.3*	1779.2	8.4
consumer price	0.84	95.1*	-382.2	419.9	0.7	9.8*	4026.7	10.4

*significant at level of 0.05.

Source: results of analysis using spss program.

Table 8: The results of estimation of the effect of rice quantity supplied on both rice farm price and rice consumer price.

	R^2	F	a	b	T_a	T_b
The effect of the change in the quantity supplied of rice on the farm price of rice	0.57	8.1	21.65	-1.66	4.3*	-2.85*
The effect of the change in the quantity supplied of rice on the consumer price of rice	0.58	9.15	25.27	-1.99	4.45*	3.03*

*significant at level of 0.05.

Source: results of analysis using spss program.

Summary

The idea of internal trade is based on the movement of goods from the areas of production to their markets or areas of consumption, and its importance increases with the increase in the concentration of production of those goods in areas without others,. The study mainly aimed to study the role of internal trade in providing agricultural commodities and limiting their prices increases in Egypt. The study reached the following results:

1- Analysis of the degree of concentration and dispersion of production of the most important agricultural commodities indicated the concentration of production of commodities, onions, tomatoes, potatoes, rice, oranges, grapes, broiler and fish in certain governorates.

2- The total volume of internal trade in Egypt of onions, tomatoes, potatoes, rice, maize, oranges, grapes and mangoes amounted to about 2381, 6540, 4440, 4100, 16354, 1115, 1466 and 1047 thousand tons, respectively and the total internal trade volume of chicken meat, red meat, dairy and fish amounted to 1777, 988, 5267 and 2515 thousand tons, respectively.

3- The most important problems of the internal trade of rice were, A few traders monopolized the market, high transportation and storage costs, banning the export of rice, abundant supply of rice, low price with high production costs, high loss rate.

4- To study the role of trade in limiting price increases, the effect of the change in the quantity supplied of rice on both the farm price and the consumer price was analyzed as a case study and it was found that, the rice farm price increases by 1.66% when its quantity supplied decreases by 1% and the consumer price of rice increases by 1.99% when its quantity supplied decreases by 1%.

Recommendations:

In light of the problems of the internal trade in the rice crop, the study recommends the following:

1- Develop mechanisms to implement contract farming in coordination between farmers, agricultural cooperative association, Ministry of Agriculture, Ministry of Supply and financial institutions.
   1) Implementing anti-monopoly procedures to control the rice trade markets.
   2) Expanding the construction of grain storage silos to reduce marketing losses.

References:

[1]. Ahmad A. Juwaili, Principles of Agricultural Marketing, Dar Al-Hana for Printing, 1972.

[2]. Central Agency for Public Mobilization and Statistics, Annual Bulletin of Prices of Food Products and Services (Producer, Wholesale and Consumer), various issues.

[3]. Central Agency for Public Mobilization and Statistics, Annual Bulletin of Statistics fish production, 2019.

[4]. Central Agency for Public Mobilization and Statistics, Annual Bulletin of the Movement of Production, Foreign Trade and Available of Agricultural commodities, 2019.

[5]. Ministry of Agriculture and Land Reclamation, Economic Affaires Sector, Bulletin of Agricultural Statistics, various issues.

6/29/22021