VALUE CHAIAN OF WHEAT CROP IN BAGHDAD PROVINCE/IRAQ AN APPLIED STUDY FOR YEAR 2017

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ABSTRACT

Wheat is one of the most important strategic crops that have an important role in people's life and food security. Therefore, the research depends on the methodology value chain analyses to discuss and follow the most important determinants and problems facing wheat value chains in Iraq, as well as analyzing the costs and revenues for a different series of the chains, and then calculate the profits and value added in each of its chain .The results showed that the achieved profits by the producers of the wheat crop was 384258 dinar / dunum, while the value by weight was 371263.9 dinar / ton, The added value of the wheat producers and the marketing chain when the grain is delivered by (local wholesalers) was 212000.8 ID / ton, while the added value for crop producers and the marketing chain was 347000.8 dinar / ton when the crop is delivered by government Grain Stores , this represents a significant difference between the values by 135000 dinars that representing 39% of the total added value, while the added value of local traders was 88000 dinar / ton for first class grain and 48000 dinar / ton to second class grain . Also research identified many problems and obstacles that face the value chain of wheat , which have negative and reflective effects on the wheat production cycle and the added value, which were cleared by the questionnaire. These include: high costs of automation and fields preparation for cultivation , which is equal 52% of the total variable costs. As well as the high costs of production requirements included: fertilizers, seeds, fuel, oil , electricity, and control materials. Etc.), which was 22%, 8.1%, 7.6% and 5.4%, respectively, and inadequate quantities that received from the state, in addition the marketing which suffers from many problems and obstacles and boring routine and inefficiency of its operating systems which has lost confidence in the direct dealings between farmers and management of state stores, Finally the research included several conclusions and recommendations to the relevant authorities for solving the problems and obstacles in the value chains of the wheat crop in Iraq to increase the competitiveness of this crop in the local and regional market.

Keywords: local traders , added value, competitiveness

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سلسلة القيمة لمحصول القمح في العراق – محافظة بغداد حالة تطبيقية لعام 2017

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المستخلص

يُعد محصول القمح من المحاصيل الاستراتيجية والمهمة والتي لها دور مهم في حياة الشعوب وفي تحقيق الامن الغذائي. ولهذا جاء البحث وفق منهجية تحليل سلسلة القيمة لمناقشة وتتبع اهم المحددات والمشاكل التي تعترض حلقات سلسلة القيمة لمحصول القمح في العراق، فضلاً عن تحليل ومعرفة التكاليف والايرادات المتاحة لمختلف حلقات السلسلة، ومن ثم استخراج الارباح والقيمة المضافة عند كل حلقة من حلقاتها. اذ اوضحت نتائج البحث بان الارباح المتحققة لمنتجي محصول القمح على مستوى الدونم بلغت قيمة (384258) دينار/ دونم فيما كانت قيمتها على مستوى الطن 371263.9 دينار/طن. هذا وكانت القيمة المضافة المتحققة لمنتجي محصول القمح عند كل من مستوى حلقة منتجي المحصول وحلقة التسويق (تجار الجملة المحليين) بلغت 212000.8 دينار/ طن، فيما كانت القيمة المضافة المتحققة عند كل من مستوى حلقة منتجي المحصول وحلقة التسويق عند مخازن استلام الدولة (السايلو) بلغت قيمة مقدارها 347000.8 دينار/طن وهذا يمثل فرقاً واضحاً بين القيمتين مقداره (135000) دينار مكوناً نسبة بلغت 39% من اجمالي القيمة المضافة بين هذين المستويين، بينما بلغت القيمة المضافة للتجار المحليين 88000 دينار/طن الواحد الدرجة الاولى، فيما كانت القيمة المضافة المتحققة للتجار المحليين لمحصول القمح المسوق درجة ثانية باستلام مخازن الدولة بلغت قيمة مقدارها 48000 دينار/طن. هذا وشخص البحث العديد من المشاكل والمعوقات التي تعترض حلقات سلسلة القيمة والتي لها اثار سلبية وانعكاسية على حلقة انتاج محصول القمح ومن ثم على القيمة المضافة والتي افرزتها استمارة الاستبانة ومنها: ارتفاع تكاليف العمل الآلي وتهيئة الارض للزراعة والتي شكلت نسبة 52% من اجمالي التكاليف المتغيرة، فضلاً عن ارتفاع تكاليف مستلزمات الانتاج المتضمنة (الاسمدة، والبذور، والوقود والزيوت والكهرباء، ومواد المكافحة. الخ) والتي جاءت بنسب مساهمة بلغت 22% و 8.1% و 7.6% و 5.4% لكل منها على الترتيب، وعدم كفاية كمياتها المجهزة من الدولة، فضلاً عن ان العمل التسويقي تعتريه كثير من المشاكل والمعوقات والروتين الممل وعدم كفاءة اجهزتهِ العاملة، مما افقد ثقة التعامل المباشر بين المزارعين وجهة استلام الحبوب من مخازن الدولة الرسمية. واخيراً تضمن البحث في متنهِ العديد من الاستنتاجات والتوصيات للجهات ذات العلاقة بشان تذليل المشاكل والمعوقات التي تعترض حلقات سلسلة القيم المضافة لمحصول القمح في العراق للعمل على رفع تنافسيتهِ على المستويين المحلي والاقليمي.

الكلمات المفتاحية: تجار الجملة، القيمة المضافة، التنافسية

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INTRODUCTION

Wheat is one of the most important strategic crops locally and internationally as it is a staple food for humans in many countries. It is also important in food and conversion industries. Wheat grains contain foodstuffs and important elements that include carbohydrates, starch, proteins and some vitamins like (A, E, B) and major minerals like (calcium, phosphorus, iron). Wheat is occupies the largest cultivated area compared with other food crops , as well as the entry of wheat crop in many trade and economic transactions among the countries in the world, many countries produce this crop and many countries import it. As well as many countries are interested in ongoing research to improve the productivity of this crop by improving high yield genotypes that are suitable for diverse environmental conditions, some of these countries have become the main source of this crop, which has a competitive ability to produce it. Iraq ranked 31st by production at 2013, which was 3.3 million tons, While China, India, United States and Russia ranked first, second, third and fourth globally for the same year by 121.7, 93.5, 60 and 52 million tons respectively (13). Sometimes, when political crises occur among countries, producer countries exert political pressure in commercial transactions for wheat, as in the 1990s during the economic embargo that imposed on Iraq. In spite of this, it is believed that Mesopotamia is one of the oldest regions in the history of wheat cultivation, as well as the availability of all the financial and human resources and natural resources suitable for Agricultural production in Iraq of water and arable land and the diversity of the climate suitable for the cultivation of many agricultural crops especially the wheat, but Iraq has been suffering from the agricultural sector deterioration in terms of production, including the wheat crop, which characterized that productivity fluctuation and decline compared to some Arab countries. Iraq ranked third after Egypt and Morocco in terms of production in Arab world at 2013, by production 4178000 tons, while it was second in cultivated area, which was 1844000 hectares, the average of productivity was 2266 kg / ha, by 566.5 kg / dunum, while the average of productivity of Egypt was 6623 kg / ha by 1655 kg/ dunum (1). This low rate of production, which does not meet the needs of local consumption, has caused the country to import to meet the main food requirements, especially wheat, which affect in balance of trade in Iraq, which drain large sums of money in foreign currency for importing large quantities of wheat, as well as the political pressure exerted on this aspect, which affect in food security, this requires study of the wheat crop and its productivity in all its episodes and the diagnosis of problems and constraints and the factors related to its production and variability, which led to a decrease in the profits and added value achieved for this crop at the level of the national economy or at the farm level of farm income, through the methodology of studying the analysis of the value chain of wheat in Iraq, which has been interested in research, study and diagnosis of the most important problems and obstacles in the chain of and find appropriate solutions and recommendations. The importance of research depends on several reasons:

First: Wheat is a strategic crop related to food security, a staple food for millions of people in the developed and developing world, especially the Arab peoples, including the Iraqi people.

Second: Wheat crop affects in commercial transactions and the trade balance and drains large amounts of foreign currency, the money spent on wheat importing for the period 2005-2012 was 2402 million US dollars, equivalent to 300 billion Iraqi Dinars (7). While the average quantities of imported wheat for the period 1983-2012 was 1788.75 thousand tons and its price were 349745.8 thousand US dollars annually (9). as well as the wheat crop is characterized as a basic crop and the quantities required of it does not depend on price changes because it is a basic crop and necessary and there is no alternative.to it.

Third: The importance of the methodology used in the analysis adds great importance to this research, which deals with wheat chain in Iraq at all stages, to diagnose the challenges and problems encountered and their negative impact on the profits and added value achieved for each of the series value chain. As it is this methodology from researches and studies the

very few in application of economic in Iraq, as first published researches and studies applied in this area dealt with fish sector in Iraq (4).Although most of the production elements are available such as human and financial resources and natural resources (arable land, water, climatic conditions, geographical diversity, etc.) that suitable for wheat production in Iraq, as well as the existence of agricultural price policy that supports the cultivation and production of wheat so that the state buys wheat from farmers at prices higher than world prices, in addition to supporting some of the elements of production, however, the production of this crop in Iraq continues to suffer from the problem of fluctuating production and low productivity, so local production is not enough to growing demand.

Therefore, the state relied on imports from producing countries to cover the needs of the local market. Importation drained large amounts of foreign currency. Many farmers abandoned wheat cultivation and converted to other more profitable crops, or left agricultural work and converted to industrial commercial work, the main reason for the decline in productivity and dependence on imports is the failure to exploit these resources efficiently. which requires additional scientific and research efforts to study the value chain of the wheat crop to diagnose the most important problems and determinants that affect the value chains of the wheat crop, which have a negative impact on the profits and added value achieved and find appropriate solutions. The research assumed that the most important problems and obstacles that face the value chain of wheat in Iraq start from the first processing chain of production requirements (seeds, fertilizers, pesticides, mechanization... etc) and workshops production, marketing and storage problems until stage of arrival the product to consumer table, all these factors have a significant impact on increasing production costs, also decrease the profits and added value achieved for wheat farmers .The research aims to study the following objectives :Diagnosis the main factors influencing in value chain of wheat crop in Iraq. Also Study and analysis all costs and revenues in main rings of value chain of wheat crop. In additional estimate the indices of added value and profits and their percentage at each value chain. Also exploring and diagnosing the important problems and constraints and affecting factors in value chain rings of wheat crop. Finally Proposing appropriate agricultural policies to solve the problems associated with value chain workshops. By improving the efficient use of resources and production elements available for the production of wheat and to improve its competitiveness at the local and global levels.

MATERIALS AND METHODS

To achieve the objectives of the research, the data and information were collected from primary sources by designing a questionnaire form for value chain workshops. The samples were taken from a personal interview with a number of farmers who are professionals, as well as a number of members and heads of agricultural division that belonging to Directorate of Baghdad Agriculture, and a number of local traders ring, the study also included a representative sample taken from some grain stores employees, cereal general company and mills, the analysis method included descriptive steps and quantitative analytical steps, the mathematical model used in this methodology is based on the following mathematical formula: (Value added = Revenue -Variable cost) as well as using some economic criteria, ratios and means, also value chain methodology is based on several related concepts, including: (value chain analysis approach) it is a system that converts production inputs into outputs that pass through several stages before they reach the final consumer including the stages of, production, marketing, processing and, each stage or activity of these activities adds value to the product (14). While(Porter) (17) explain the concept of the value chain as a link all the rings of the series like production ring, manufacturing ring and marketing ring together then study and analysis of each episode and its relationship to previous and subsequent ring before reaching the consumer, Emana (12) examined the value chain of the potato crop and explained it as consisting of basic rings containing : supply chain, producers, wholesalers, brokers, retailers, and finally consumers. Trienekens (19) suggested that the concept of the value

chain consists of two dimensions: the first is the vertical representing the flow of agricultural products from the producer down to the consumer, the second is the horizontal dimension includes the relationships between the active agents in the same chain of value chain, also the results indicate that there are factors and variables that lead to the success of the value chain and vice versa, such as: infrastructure, availability of human and financial resources, technology and knowledge, distance and proximity to markets, institutions, legislation and laws… etc. All these factors are supportive factors if they are available for the success of the value chain of commodity. There is also another concept related to the methodology of the value chain, which is competitiveness, Al- Kuthery (8) proposed to define it as the capacity of an activity or sector to find different situations through which it can excel in the field of (processing, production, manufacturing, marketing, etc.) then through which they achieve high added value and achieve continued excellence when put on the market .Also certainly some researchers (16) (11) (as that Value chain analysis is one tools effective planning to cost management and reduced them and can improve the quality and productivity of the product, as well as reduces distribution cost, in addition to profit increase and added value , Also keeping on competitive position in markets in same time). Zaid (20) explained that the most important factors leading to the success of competitiveness are: reducing the cost of production without affecting the product quality and desirable qualities of the consumer, as well as the ability of the productive sector or institution to provide a product of good quality and different compared with products those produced by other competitors in the same markets from point of consumer view. finally, the concept of (value added) refers to generated return by the productive entity during a period of time, that is one of the indicators that calculates the contribution of the project to the addition achievement to farm income. And can calculate the total and net value of generated added by the agricultural project (2). The added value can be defined as the difference between the total revenues and the costs of production inputs in production process that calculated at the macroeconomic level on the basis of economic sector adding to national income, and the added value represents the wealth that arises as a result of the effort of the economic unit and the efforts of its workers, (15). Also Al- Izzy (6) define it is the added value contributed by the productive project to enhance the national output, which is one of the important planning indicators in the distribution of resources on various projects to achieve social benefits, and the total added value can be obtained from the value of profits plus the value of interest on capital and value of wages or salaries and then the value of the exits. But AL- Dahary (3) define the added value that is the generated value by the use of production inputs (variable costs) in the production process to their original value.

RESULTS AND DISCUSSION

Depending on the methodology of value chain analysis, which deals with each of series of value chain by research and study starting from the preparation of initial processing of production inputs and processes of preparing the soil for production then the process of marketing and diagnosis of problems and obstacles facing wheat chain rings and their impact on revenue, profit and achieved added value are as follows:

1-Initial processing cycle of production elements:

The primary processing of production elements is one of most important stages in wheat chain, the profit of the agricultural project depends on it, the elements of production include (seeds, fertilizers, pesticides and herbicides, agricultural machines such as seed dispersing machines and fertilizers dispersing machines, irrigation systems, fertile land, water, etc.), the farmers get most of these equipment from different sources including: government sector by the Governmental Organizations , such as ministry of agriculture and its affiliated departments (the General Company for agricultural supplies, and Mesopotamia company for seeds ... etc), these Organizations are equipped with some of production requirements to farmers like (seeds, fertilizers, pesticides, etc.), but the problem is the supplies is less than required with limited quantities, for example, the

processing of chemical fertilizers, 25- 30 kg / dunam of (DAP) fertilizer at 520 I.D / kg, while urea fertilizer 30-40 kg / dunum at 330 I.D / kg, which are little quantities are not sufficient for the cultivated areas according to production plan for each farmer, so most farmers are obliged to buy necessary fertilizers and pesticides from the private sector in the local markets at high prices, also the processing of these materials from the state requires considerable time and effort due to routine procedures, registration is starting from agricultural division then the directorate of agriculture then to main processing department then to receiving center, which is often in the center of the province that away from the farms. The processing of farmers by fertilizer is linked to the agricultural plan, sometimes this fertilizer given late after germination and this is contrary to the adopted recommendations, part of the doses of fertilizer added when sowing the seeds, also there are some other problems such as access difficulty of this fertilizer to the fields because of the security measures that prevent use it pure in local markets and must be mixed with dirt that reduces the efficiency of fertilizer, the difficulty of fertilizers transporting and the high cost of transport led to farmers abstaining from using it, also there are other problems such as the ignorance of most farmers with fertilizer doses that must be added to the soil and plant. There are many farmers use fertilizers in more quantities than recommendations, which effects on production costs then on achieved profits and added value, while others are using less quantities than recommended quantities because of their inability to buy fertilizer from local markets because of high prices of up to 500000 I.D / ton for urea fertilizers, while prices are more than 750000 I.D / ton for imported DAP fertilizer, and this leads to decreased wheat yield. All of these problems can be solved by the state by supplying sufficient quantities of fertilizers at subsidized prices, which is an important element of wheat production process, as well as the state intervention in the restoration of Iraqi fertilizer industries, which were producing fertilizers with excellent specifications, the state started a step in this direction when the re-operation of fertilizer factories in Basra, which had a reflection on the fertilizers prices especially urea fertilizer prices that decreased from 500000 ID/ ton after it was about 800000 I.D / ton . When the state performs these measures, it will result in increased productivity, as well as reduced production costs, the farmers will depend on the state-supplied fertilizer of good quality and subsidized prices, also, if the state provides seeds of good varieties, farmers will depend on the state instead of buying bad seeds from the local market, this measure leading to increased productivity and reduced production costs which its origin is not guaranteed and low productivity that is main problem in wheat crop production in Iraq causing a decrease in the dunum productivity to 500-600 kg / dunum while dunum productivity in Egypt was 1655 kg / dunum in 2013, in addition, some farmers depend on the stored seeds from last season, this is a problem because when re-planting stored seeds will lose many of their qualities and their productive characteristics, the processing of wheat seeds faces a problem of the unreliability of the sources of processing, as well as the high prices in local markets, and this affects in accumulation of expenses thus increase the production costs of wheat crop that reflected negatively on profits and added value, this requires the intervention of the state by high-productivity varieties processing with sufficient quantities by their sources and competent institution, regarding, there is no real effort of the state for processing the agricultural mechanization, harvesters, fertilizers machines, so the prices of these equipment and machines are very high and most farmers cannot buy them, this will be reflected in plowing and preparing the soil for cultivation and crop harvest, which are high costs so the wages of one hour of harvest is to 50000-60000 I.D / dunums, while the wages of one hour tillage and other operations to prepare the soil is to 18000-20000 ID / hour. Table .1 showed that cost of mechanical operations is 53% of the total variable cost, which affects negatively in profits and added value of the wheat crop.

2-Production and harvesting cycle

The production cycle and all associated farm operations are the most important cycle, which include soil preparation and plowing and soil

settlement as it requires the creation the suitable environment for seed germination, because most of the soils require these processes, soil hardness causing slow growth and plant inability to obtain adequate water and nutrients from soil, most farmers depend on leased machines, because most farmers do not own tillage machines, and the cost of these operations is high and constitutes a high percentage of the total costs, it is noted that some farmers sow quantities more or less than the recommended quantities, which has effect in reducing the dunum productivity because of competition among plants on nutrients, water and fertilizers, or planting the seeds may be too late because some farmers planting wheat in early January or mid-December, there are also erroneous practices such as: fertilizer adding in non-specified times and quantities may be less than required because of high prices, the receipt of this fertilizer may be delayed from the processing department, other practices effect negatively in productivity such as use low-yield wheat varieties or use the stored seeds from last season as well as the high prices of these seeds in the markets, which are priced at 600000-700000 ID / ton,

Table 1. Costs Averages (I.D) for farm, (area) dunum and (yield weight) ton total costs.

Cost details Agri- operation	Average farmer cost / I.D	Rate %	Average cost donum/I.D	Average ton cost /I.D
mechanical labor *	4869425	52.68	99376.02	96015.47
Human labor lessor	173000	1.87	3530.6	3411.22
Cost seed	746710	8.08	15238.9	14723.65
Cost fertilizer	2009190	21.7	41003.9	39617.27
Pesticides	494503	5.35	10092	9750.63
Maintenance & Repair	250000	2.7	5102.04	4929.5
Electric & fuel	699070	7.56	14266.7	13784.28
TVC Total	9241898	100%	188610.2	182232
destruction	81125	2.45	1655.6	1599.63
Family labor	694900	21.05	14181.6	13702.06
Percentage Capital	369676	11.19	7544.4	7289.28
rent land	2156000	65.29	44000	42512.07
Total TFC	3301701	100%	67381.6	65103.05
Total TC	12543599		255991.8	247335.1
Average ATR	31372250		640250	618599
Average profit	18828651		384258.2	371263.9
Average value added	22130352		451639.8	436366.9

Source: by the researcher through the field questionnaire forms.

another problem facing farmers is the rise in pesticides prices for weeds, fungal infections and insecticides control. All these problems and other determinants are affecting factors in productivity of area unit of wheat crop then in the profits and achieved added value, water scarcity is one of the main problems in expansion of wheat crop cultivation, as well as the high prices of fuel that used in diesel pumps, due to frequent interruptions of electricity which continue for hours and affect in increase irrigation costs, all these problems require solutions from the state because it is the most influential and which plays an important role in supporting prices or manufacturing fertilizers locally and facilitate the process of delivery to farmers, and seeds processing of high-yielding varieties and suitable for climatic conditions and Iraqi soil as well as the processing of control pesticides, and support agricultural machinery for most farmers such as fertilizers and seeds machines, most of farmers suffer from high wages of automatic harvesting , which is 50000-60000 I.D / h. and the high loss of seeds during harvesting because of few number of harvest machines and insufficient for cultivated areas, which leads to the delayed harvest. All these problems affect negatively in wheat crop production, farm income and added value, one of important methods which this methodology adopted on it to reach its objectives was analyze and study the items of both variable and fixed costs because they are basis in the process of competition and competitiveness of any production project because the competitiveness of any project and the imposition of its competitive position in the markets depends on its ability to reduce costs in a way that does not affect the quality of the product and the efficiency of production. **Rijib (18**) explained that redistributed and Resource allocation economic using in agricultural wheat crop can reduce about 42% from

Production total Costs, is this led to Positive affect for increasing Profit and added value.) it was noted, through the results of tables (1) and (2), that the variable costs recorded the highest percentage of total costs by 73.7%, and the most important of them was cost of mechanical work by 53% of the variable cost then cost of fertilizers and seeds and cost of fuel and oils by 21.7%, 8.1% and 7.6% respectively, finally cost of pesticide control by 5.4%, this result confirms, mechanical work: includes the processes of tillage, modification, settlement, irrigation channels opening, seed sowing, fertilization, control operations, pesticides spraying and mechanical harvesting, The importance of these costs on each of profits and added value, for this reason it is necessary to support and control the reduction which affects positively on each of profits and added value of wheat crop value chain .While the fixed costs were 26.3% of the total cost and the most important item were the cost of fields renting by 17.2% then the cost of opportunity cost for family work by 5.5%. the benefits average obtained by farms studied were as shown in table (3). The average of income, profit and added value in the farms was

Table 2. Percentage of variable and fixed costs of total costs

Details Cost	Cost	Rate %
TVC	9241898	73.7
TFC	3301701	26.3
TC	12543599	100

Source: prepeaiy by researcher based on table (1)

(31372250)ID, (18828651) ID and (22130352) ID, respectively. the benefits value per dunum was (640250) ID, (384,258.2) ID and (451639.8) ID for each of income, benefits and added value respectively.

Table 3.benefit Average (I.D) for farm, (area) donum and (yield weiht)ton

utility level	I.D/farm	I .D/donum	I .D/ton
Average revenue	31372250	640250	618599
Average profit	18828651	384258.2	371263.9
Average add value	22130352	451639.8	436366.9
Average area /donum	49		
Productivity ton /donum	1035		

Source: depending on table (1)

While the value of benefits per weight (ton) (618599) ID, (371263.9) I.dinars and (436366.9) ID for each of income average, profits and added value respectively. It can be noted here that average of cultivated area with productivity average was 49 dunums and 1035 kg / dunum respectively, most of these farms are sponsored and supported by the National Wheat Development Program in Iraq.

1-Marketing and processing cycle

The marketing cycle is one of the important cycles, because it gives a clear image of marketing problems and margins it. It as known difference between the price for this item in the stage of marketing operations and between its new in the stage of marketing later this one hand, and success of economic planning of the other hand **(5)**. The economies described it that outcomes of marketing process affect by two aspects, first, the producers receive profits when selling their crops, second the consumers have received satisfaction, so marketing efficiency is defined as the best economic use of the marketing process inputs, which results in the greatest satisfaction of the desires and needs of consumers, as well as those employed in the marketing system at the appointed place and time which results in satisfying the desires and needs of consumers, as well as those working in the marketing system in the place and time appointed ,also the marketing cycle is an important link to the value chain of the wheat crop **(10)**. When successful leads to increase the added value in value chain and vice versa leads to a decrease in profits and added value thus leads to significant negative effects on the value chain, the marketing of wheat crop is by two ways: first, marketing the wheat crop directly from farmers to the receiving warehouses (silos of the state), this depends on its success or failure by a number of factors, the most important factor is the ease of receiving, non-delay, delivery of money on time and reduction of routine rings in grain stores, it seems from study of questionnaire indicators that marketing is a complex process and may be delayed payment of money due on the dates specified, so most of farmers rely on the provision of production inputs to buy long-

term until harvest and this affects their agreement with the traders and agents and prefer to marketing their product to local brokers or traders whose their shops are close to the sites of farms and they have sufficient funds and experience in the marketing of grain crops in harvest seasons. Farmers prefer to marketing their products to these local traders in order to ensure that their cash payments are paid immediately after the sale as well as to avoid problems, complications and delays in direct marketing operations when marketing to state stores. These two methods of marketing will create differences in the achieved added value for both farmers and local traders. Table.4 shows the items of expenditure and costs per ton by local traders since its purchase from the farmers until marketing to the state receiving sites (silos) amount (52000) ID dinars / ton, and the cost of ton produced at the farm gate value amount

Table 4. Average of expenditure by local traders (brokers) per ton of wheat in I.D

details	Cost I.D/ton
Cost of trans from trailers to (silo)	20000
fees & cost in site delivery	10000
carry &)Cost of labor (cleaning	18000
Cost of electric & fuel	700
Other cost(driver & human labor)	3000
Rent of shop	300
Total	52000

Source: field questionnaire

182232 ID in addition to transportation and cleaning fees (15000) ID / ton, while the purchase price per ton at the local traders cycle was (410000) ID / ton, so the farmer achieves an added value (212800) ID / ton at this level of the value chain but when marketing to state warehouses is done easily and efficiently, in this status the price average per ton (550000) I.D., in addition, the cost of transporting per ton with other fees paid by farmers in government warehouses site is (20000) I.D / ton. Thus, the farmer achieves an added value is (347800) I.D / ton, (Table 5), the difference between added value in the silo site and local trader was (135000) I.D / ton, this indicates that most of the achieved added value by farmers goes to the middle circle (local traders), which requires reducing the gap

Table 5. value add per ton between farm gate to providing points

Agricultural Operation	Cost I.D
Mechanical labour	96015.5
Rented labour	3411.2
Seed Procurment	14723.6
Fertilizer Procurment (Urea + Dap)	39617.3
Herbecides materials	9750.6
Maintenance and repearing	4929.5
Fuiel and Oils and electricity.	13784.3
Cost of ton in farm gate.	182232
Cost of transporting and cleaning from farmers to domestic merchant (median)	15000
Procurement average price of ton first degree by domestic merchant	410000
Value add of farmars from value chain (Median stage)	212768
In case of marketing efficiency in delivering point to stores of state as price per ton.	550000
Cost of transporting per ton to the sailo with another taxes consumed from farmer.	20000
Value add achieving to farmars in this stage (the sailo Stage)	347768
Difference of value add of farmer between the Sailo Stage and domestic merchant (meadian).	135000
Cost of transport and Costs of domestic merchant per ton of wheat from moment of procument from farmer untel marketing it to the sailo.	52000
Cost of marketing per ton second degree by local merchant	462000
Marchant. Local achiveng to Value add = 462000 - 550000	88000
Price per ton of second degree what deleverd from the farmer + transportation cost.	402000
Price of delevernig per ton by state second degree.	450000
Value add to Local merchant per second degree.	48000
In case of selling the second degree as first degree the value add to Local merchant = 402000 – 550000 148000	148000

Source: Depending on data in table (1) and the marketing indicators in year 2017.

By facilitating direct marketing procedures to state warehouses. The local trader achieves an added value about 88,000 I.D / ton (when the grain is ranked first class) at the receiving by state warehouses, while the value added was (48000) I.D / ton (when the grain is ranked second class) but, when local traders can sell the second class as a first class through the influence and the strength of their bargaining, they achieve added value (148000) I.D / ton (table 7).The prices of the state warehouses in 2017 was (560000) I.D/ton for the first class and (460000) I.D / ton for the second class.

4-The state warehouses (silos) and grain factories cycle: The state's strategic policy try to ensuring the food security for people in peace and war conditions , to secure a reserve of the quantities of wheat, therefore it gave special importance to grain stores. Table.6 shows storage costs within one month until the

next stage (mills stage) amounted to (13427) I.D / ton.

Table 6 .Average storage cost per ton monthly in the state warehouses until it is transferred to the mills

details	Cost I. D/ ton
salaries of employees Wages and	8667
Deprecation of buildings of the silo	46.3
The cost of the deprecation of the silo(monthly)	1110
Electricity Costs of	1667
cost of fuil & oil and fats	667
repairing of store equipment's Maintenance and	150
Wages of additional labour hours	120
Wages of Loader and unloader	1000
Total fixed & variables costs	13427.3

Source: Questionnaire for sample from warehouses (silos) in Baghdad governorate

The mixing rate was 70% of grain type first class, with 30% second class grain, when calculating each quantity at the specified price by the state, we get the total cost per ton that be equal (700 kg * 560 I.D / kg + 300 kg * 460) I.D / kg = 530000 I.D /ton for milling and manufacturing grain) plus storage expenses that is 13427.3 I.D / ton, the state also grants 10 $ / ton to the grain factories, thus the total support of the state of the ton of 555427.3 I.D / ton. The state policy works to stabilize the prices of wheat flour and not to be affected by the rise in the market. This is achieved through support of the general budget of the state in the process of grain production together with the private sector (grain milling affiliate of the General Company for Grain Manufacturing), Table (7) shows the average of milling costs per ton in the Grain milling affiliate of the General Company for Grain Manufacturing 41915.5 I.D / ton, the cost of grinding one bag (50 kg) is 2096 I.D/ bag.

Table 7. Average of expenditures costs per ton in factories of cereals industry

details	Cost I. D/ton
Salires of permanent labour	12066.5
buildings Deprecation	393
Deprecation of equipment's	5340.5
Other Extinction	597
Taxes Annual	680.5
Rent of land of factory	66
Cost of timer labor	1333.5
Transporting per ton fron silo to factory	5000
Buy of packets 20 unit	4000
Fuiel and oil and electricity	9583.5
Maintenance & repeiry of generator	1371.5
Maintenance of pumps of water in factory	358.5
Monthly costs of water	1125
Total fixed and variable costs	41915.5I.D/ton

Source: Questionnaire for sample from grain Companies in Baghdad Province

The profit of private mills (affiliate of the General Company for the grain manufacture) is by get remnants of grinding (flour bran) after mills fulfillment to deliver 80% pure flour to the General Company for the Grain Manufacturing per ton of grain, the remaining 20% is (flour bran+ residues + impurities), the quantity average of grain processed per month to the mills is estimated at 1200 tons per month, of this quantity produces a quantity of 960 tons of pure flour supplied for final consumption and distributed within the ration card program, and the remaining 240 tons of (bran + impurities), the General Company for the Grain manufacturing takes 13% of profits because it is a self-financing company, thus taking approximately 31.2 tons of flour bran, the remaining 208 tons (flour bran + impurities) are share of private flour mills these contracted with General Company for the Grain Manufacturing, after subtracting the estimated impurity ratio by 3-4%, the net residual of flour bran is estimated at 200 tons, which is considered as revenue for mills these sold at market prices, the field questionnaire indicates that the price average per ton of flour bran ranges from 250000- 300000 I.D / ton, in addition to these revenues, 10 $/ ton is transferred from the state treasury to the national mills, which are included in the grain production expense .Many of conclusions and recommendations were obtained from results

of this research regarding wheat value chain workshops, the questionnaire also clarified the problems and obstacles that affect in work of the wheat chain and find suitable recommendations, and delivery of these solutions and proposals to the decision-making channels to make appropriate solutions to improve and develop the productivity of the wheat crop, which is an important and strategic crop of food security. The research achieved to number conclusions it's there: a shortage in the quantities of seeds, fertilizers and pesticides that are provided by the state to farmers as well as high prices of in private markets ,Also The agricultural machinery is expensive in private markets such as tillage machines, harvesters, fertilizing machines and seed machines, which most farmers cannot afford, As well as The state does not equip farmers with modern technologies such as spray irrigation machines and improved seeds of high-yielding varieties. In addition High cost of preparing the soil from tillage, softening, modification, opening of irrigation channels and mechanical harvesting , which are a high ratio of production costs, and Shortage of fertilizers quantities of (DAP) and (UREA) given by the state to farmers, as well as the high prices in the private markets, which affected in increase the production costs, this reduces the profits and added value of the wheat crop, as well as the non-use of fertilizer on time and quantity specified, and sometimes delayed the addition of fertilizer because of delayed receipt from the government centers, as well as the prohibition of use some fertilizers and the difficulty of arrival on time to the farmers, In addition to Some farmers use local seeds that round from last season, and do not use high-productivity and improved seeds due to insufficient quantities provided by the state, or high seed prices in local markets, these seeds are often unreliable and of poor quality, as well as non-commitment to cultivate seeds in quantities and densities according to scientific recommendations, may be more than required or less because of use manual seed cultivation, which does not depend on scientific method and seeds quantities recommended, Also Scarcity of water and not to use modern methods of irrigation, as well as frequent power cuts and high fuel prices. In addition to the deterioration of the infrastructure of most of the irrigation channels and field drains these increasing the expansion of the cultivation of wheat crop, and the routine in the procedures of yield receiving from farmers in the government receiving sites (the state silos). In addition to receipt of the yield shall be according to a plan prepared in the state departments and the receipt of the crop is not allowed from farmers who do not have an agricultural plan, And there are problems in determining the wheat quality obtained by marketing centers for the purpose of blackmailing farmers and to take additional fees, As well as Marketing centers determine the time for receipt then receipt is stopped, despite the existence of quantities of yield is not marketed, and there is a problem of delay crop receipt and stand the lines of farmers in front of the delivery sites for several days, which affects in wages increase from the farm to the delivery sites , In addition to there are cheats where traders mix the local yield with imported wheat ,this causes contention in the marketing centers and waste a lot of money to buy this imported wheat ,and the number of crop receiving centers is very few and far from the farmers in each governorate, And delay the delivery of financial dues to farmers, for this reason, many farmers do not market to these centers and sell the yield to local traders to receive their money directly without routine and bribes in these centers. In addition to the achieved added value by local traders constitutes a large percentage of the achieved value for farmers when their crops are sold to local traders, Finally there is financial support from the state to grain delivery stores and grain mills to support the final product (flour) and this is the support for the final consumer. Also the research achieved to number from recommends as to increase wheat production, we propose that the state provide the production requirements of high-yielding varieties seeds , fertilizers and pesticides with support prices, and Propose a mechanism to equip farmers with various machines and necessary agricultural machinery for the preparation of soil for production operations, or establishment of associations or institutions for the rental of agricultural mechanization

managed by a joint effort between the public sector and the private sector with subsidized wages, As well as encouraging and supporting farmers to use modern irrigation techniques that regulate using of irrigation water, and reconstruction of the infrastructure of Iraqi fertilizer factories of different types (urea, compound, phosphate), which have a significant role in the budget prices of imported fertilizers and reduce prices. As well as support prices of fertilizer (DAP) and support the prices of various kinds of pesticides, And revitalize agricultural extension to educate farmers how to use scientific field practices such as use of seed quantities and the specific date of sowing and the addition of fertilizers and ways to control of diseases and weeds, In addition to supporting the scientific research to develop high-yielding varieties suitable for Iraqi climatic conditions .and restructuring the infrastructure of irrigation and drainage channels and establishment new and modern irrigation channels and use of modern irrigation methods to reduce water consumption according to crop need, Also establishing a specialized center for wheat crop database to study the production costs and achieved returns, and study the feasibility of supporting production inputs and outputs and determining the optimal way to increase productivity of wheat crop, And reducing the harvesters wages by supplying their owners with quantities of diesel fuel to reduce the wages, also monitoring the representative of the agricultural division in harvest area, as well as providing modern harvesters and distributing them on agricultural areas according to wheat crop areas , And working on activating the supervisory role for the marketing of grain during harvest season and punishing responsible employees in case of violation of the controls that facilitate and reduce the complex red tape and administrative corruption in the important marketing sector, As well as Facilitate the marketing of the wheat yield in specified time and keep receiving centers open until end of the harvesting process, In addition to pay farmers' financial dues as soon as possible to create trust between farmers and government receiving centers in other seasons., Finally, restructuring and modernization the silos and construction new silos in each governorate, as well as the establishment of centers to yield collect near-production areas to reduce episodes number of marketing according to production plan and yield expectations for each provinc.

REFERENCES

1.Agriculture development for Arab Organization, Arab Agricultural Statistics Yearbook.2013.Khartoum, Sudan. 43:320.

2.AL- Assauy, k. J. 2005. Economic Studies and Enterprise Evaluation Analysis Practice and Theory,2th ed, Dar AL- Mnahj for Distribution and Publ, Amman, Jordan .pp:255.

3.AL- Dahary, A. M. 1991. Enterprise Evaluation and Economics Studies, Dar AL-Hekma for Printing and Publ, Baghdad. pp: 668.

4.AL- Fllujy. S.J,. A.A. Mudh, and S.H. Muhammad. 2016. The value chain of fish for floating cages and pond techniques in Baghdad province. The Iraqi Journal of Agricultural Sciences – 47(5):1264-1275

5.AL- Fraji. A.M.A,. G. H. Thamer and. M. A. Manhal. 2016. Marketing margin account between the producer and consumer price of some vegetable crops in the province of Baghdad and the price of the agricultural season for summer 2014. The Iraqi Journal of Agricultural Sciences. 47(4): 989-997

6.AL- IZZY, J . M. H . 1989. Introduction to Enterprise Evaluation Agricultural, Press ,of Ministry of Higher Education and Scientific Researcher, Univ- of Baghdad, Dar AL-Hekma for Printing and Publ. pp: 272.

7.AL- Kaabi, H.H.B. 2015.Predict Food Gap of Wheat and Rice Crops in Iraq By Using two Model Box- Jenkins and Artificial Neural Networks for the Period (2014-2022), Desecration, Ph. D. of Agri. Economics Dept . Coll. of Agri - University of Baghdad .pp: 157.

8.AL- Kuthery, M. A. 2004. Competitiveness advantages, Competitiveness, 1St ed. Crops AL- Nile AL- Arabia, Egypt. pp: 225.

9.AL-Ahbabi, N.J.M. 2015.Analyzing The Impact of Price Policy on Wheat Production in Iraq by Using Policy Analysis Matrix (PAM) (The Provinces of Nineueh, Salahuddin, and Karbala Model applied) Agricultural Season 2012, Desecration, Ph.D. of Agri. Economics

Dept. Coll. Agric. University of Baghdad. pp:157

10.AL-Dabagh, J. M. J.2014. Economics of Agricultural Marketing, 2nd ed. Dar AL-Murtadha, Ali AL-Hadi, lraq-Baghdad.pp:728.

11.Devi Prasad. V. V. 2013. A study on value chain management practices of fresh Fish : An empirical study of castal Andhar Pradesh Marine Fisheries. IOSR Journal of Business and Management . (IOSR – JBM) e- ISSN: 2278 – 487X, P- ISSN: 2319 – 7668 : 80- 90.

12.Emana, B. and M. Nigussie . 2011. Potato value chain analysis and Development in Ethiopia case of Tigray and SNNP Reigns. United States Agency International Development, International Potato Center , Website: www. Cipotato. Org.pp:82

13.Food and Agriculture Organization (FAO), www.faostat3.fao . org .pp:180

14.Hempel, E. 2010, Value Chain Analysis in the Fisheries Sector in Africa. pp: 1- 85.

15.Karpik, Ph. and A. Belkaoui. 1990. The relative relationship systematic risk and value added variables . Journal of International Financial Management and Accounting, 7 (3): 259-275.

16.Nor, S. K. M. 2015. Management Accounting Role Using Value Chain Method to Achieve the Strategic Aims of the Industrial Companies listed In Amman Stock Exchange . M.Sc. Thesis. Coll. Higher Studies . Univ- of Zarqa . pp: 139.

17.Porter, M. 1985, Competitive Advantage: Creating and Sustaining Superior Performance: New York, the Free Press. pp:556.

18.Rijib, M.Z. and O. K. Jbara. 2016. Effect of variation in the measurement of space Ccgories of wheat farms in Sulyamaniyah Wheat on the level of economic efficiency and estimate the size of the efficiency achieved optimal resources . The Iraqi Journal of Agricultural Sciences – 47(6):1486-1498.

19.Trienekens, J. H. 2011. Agricultural value chain developing countries A Framework for analysis. International Food and Agribusiness Management Review, 14 (2): 51- 82

20.Zaid, A. 2006. Differentiation for Performance Organizational, the Way for Future Organization, 2nd ed. Studies and Researches for Arab Organization of Office Development Publ. Cairo, Egypt.pp:96