ANALYSIS OF KEY SWOT-CHARACTERISTICS OF AGRI-BUSINESS, MANAGEMENT AND LAND USE IN KAZAKHSTAN: THE CASE OF TURKESTAN REGION

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ABSTRACT

Agriculture is the main livelihood option for development of region of Kazakhstan, which is characterised by small land-holdings, upland terrain, traditional cultivation practices, extensive irrigation, poor water conservation measures, middle productivity, limited crop diversification and low yields of food grains. 53% of the population in Kazakhstan is concentrated in rural areas and the economy is mostly based on agriculture produce with very limited industrialisation. This paper aims to perform SWOT analysis of agriculture sector of Kazakhstan. The study has been carried out by conducting SWOT-review and analysis of key characteristics of agri-business, management and land use in Kazakhstan in Turkestan region of Kazakhstan. It is found that agriculture sector is contributing a lot in region's GDP and there are many areas in which agriculture sector needs to grow and establish itself as a primary mean of development. By adopting the proposed solutions, agriculture sector can be developed significantly, its imports will decrease and exports will increase. The strength of the district lies with favorable environmental conditions, availability of labor, availability of agricultural lands. The weakness of the district include inadequate financial services, over-reliance on climatic conditions, poor post-harvest management practices and market conditions. The negative ramification of climate change, weak links between research, markets, and policy, insufficient political will towards the continuity of programs are serious threats. Based on the results of SWOT, recommendations for agri business, management and land use were provided.

Keywords: SWOT Analysis, Agri Business, Management and Land use, Kazakhstan.

INTRODUCTION

Currently, there are approximately 2.6 billion people worldwide living on less limited resources per day (Singh & Chudasama, 2020). Most live in the rural areas and depend directly or indirectly on the agricultural sector for their livelihoods (Pawlak & Kołodziejczak, 2020; Takahashi et al., 2020). Taking a long-term perspective, agriculture undoubtedly will continue to play a key role for sustainable development and poverty reduction, because it stimulates economic growth, particularly for the developing countries like Kazakhstan (Workie et al., 2020; Seymour et al., 2020). This makes less vulnerable to climate change, generates raw materials, and creates more livelihood opportunities for rural inhabitants, and provides more environmental services as well (Varela et al., 2020; Laurett et al., 2021). To illustrate this, agriculture feeds

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approximately three-quarters of the population in developing countries, and offers new job opportunities for around one hundred- million rural poor allowing them to move out of their poverty situation (Maïga et al., 2020). Moreover, it still makes up about 13% of the economy, and employs 57% of the labour force. However, aspects of agriculture and the agricultural system are vast, varied and always changing rapidly. Today world agriculture in general, and agricultural land use in particular, are facing many emerging problems such as climate change, sea level increase, floods, land degradation, soil erosion, water and soil pollution, land desertification, and exhaustion of natural resources (Faling, 2020). In other words, besides positive impacts on social development as already recognised, agriculture also impacts negatively on the environment, ecological systems, bio-diversity and other natural resources (Rahman & Anik, 2020). The agricultural reform in later of 1990 in former Soviet Union countries have led to the excessive and inappropriate applications of agro-chemicals (fertilizers, insecticides, herbicides) are testimony to this. Such excess creates water pollution, water scarcity, and frequent droughts and flooding, poisons people, upsets ecosystems, and degrades agricultural land as well as creating health problems (Khayrzoda et al., 2020; Saritas & Kuzminov, 2017). In other fields, humanity is currently facing global challenges of population increase, industrialisation, and urbanization (Lin et al., 2015; Zhang, 2016; Wade, 2018). World population, increased from about 2.5 billion in 1950 to 8.8 billion in 2020, and will pass 10 billion in 2025. As a result, a higher competition in terms of housing, manufacturing, planting and other social services is created. This means natural land areas in general, and farmland in particular, are reduced in area and extent.

Recently, Kazakhstan has emerged as one of the most striking economic successes. From a country with quite a high rate of hunger in the 1990s, Kazakhstan quickly recovered from poverty, to become the largest crop exporter in the 2000s. However, its economy has relied heavily on oil and gas sector (Karatayev et al., 2016; Karatayev & Hall, 2020). In general, these sectors have employed more than 55% of the labor force, distributed nearly 60% of the GDP and contributed 70% of the export value to the nation, while largely ignoring resource availability in other sectors such as water and land (Karatayev et al., 2017; Rivotti et al., 2019; Artykbaev et al., 2019; Artykbaev et al., 2020). However, in general, Kazakhstan is an agricultural country in Eurasian continent. Its economic growth and export values still based on agricultural and aquaculture sectors with non-developed service sector including education (Movkebayeva et al., 2020; Movkebayeva et al., 2021). Crops are typical products for exporting (Kurmanalina et al., 2020). However, recently high crop intensification and quick industrialization in aquaculture are threatening to the capability of agricultural lands. So far, Kazakhstan has no national program or project to evaluate the agri business, management and land use. Selecting Turkestan region in Kazakhstan, the study aims of review and analysis the key SWOT-characteristics of agri business, management and land use in Kazakhstan is very significant and reasonable. By this, local agricultural land managers in Kazakhstan will have references to plan and utilize sustainably their land resources for supporting of agri business.

SWOT Methodology

SWOT is an analytical tool used by organisations for strategic planning (Ghazinoory et al., 2011). Its exact history is unclear but the concept has been traced to the 1960s (Helms & Nixon, 2010). As an analytical method for strategic planning, it focuses on outcomes. SWOT analysis has become pervasive as reflected by the number of academic articles. SWOT analyses

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have been used for planning for health care companies, governmental agencies, not-for-profit companies and for-profit companies. It may be applied to a single country or a group of countries (Brooks et al., 2014; Zare et al., 2015; Baudino et al., 2017; Basset et al., 2018). SWOT is also useful for analysis of economic sectors within a nation, which is the approach used herein.

As indicated by its acronym, SWOT consists of four elements. Strengths are generally within an organisation's (or nation's) control. Weaknesses are also generally controllable and indicate areas where improvement is desired or needed (Khatri & Metri, 2016). Opportunities are either short-term or long-term, focusing less on the 'how' than what are desirable directions for policy to take. Threats are usually conditions that are outside the control of the organisation yet impact the organisation. SWOT in and of itself is not a system and does not constitute an organisational structure, although it may lead to conclusions about the need for change in the structure of an organisation or its operational systems.

One of the benefits of SWOT analysis is its non-ideological nature, which means that as an analytical tool it is regime-neutral and may be applied to authoritarian or non-authoritarian countries. SWOT has been used to measure political correctness of a group within a company. Disadvantages of SWOT are its oversimplification and failure to provide clear priorities that would optimise allocation of resources. SWOT is not an end-all and may be usefully combined with other analytical tools. SWOT, however, does not necessarily speak to the utility of having a farming structure that depends on agroholdings or what it means for rural social development and retaining youth in the countryside. Further, the SWOT analysis does not speak to connections and mutual dependencies across the factors examined. Despite drawbacks, SWOT analysis remains 'one of the most respected and prevalent tools of strategic planning'.

Much of the information for this article derives from online media sources in Kazakhstan and specialised agricultural journals. Statistical data are drawn from Kazakhstan's statistical agency and from reports by the Ministry of Agriculture. Secondary sources in English are used for context where relevant.

Case Study

Turkestan region possesses significant land reserves, which are extremely important in solving agricultural years, since the natural conditions allow it. Among the regions of the Republic of Kazakhstan, the Turkestan region takes 13th place in terms of the total area, and the administrative-territorial structure of the region includes 13 districts and 3 cities of regional subordination: Baydibek district, Zhetisay district, Kazygurt district, Keles district, Maktaaral district, Ordabasy district, Otyrar district, Sayram district, Saryagash district, Suzak district, Tolebi district, Tyulkubas district, Shardara district, c. a. Arys, c. a. Kentau, c. a. Turkestan. The entire land fund is located in natural areas characterized by warm climate (Thevs et al., 2017). In the southern part, agriculture is possible under conditions of regular irrigation, and in the northern regions, rainfed agriculture is possible, which require comprehensive measures to preserve moisture in the soil, and semi-desert is used as arid low-productivity pastures for animal husbandry (Liefert & Liefert, 2015). The distribution of the land fund by category for 2020 is shown in Table 1.

Table 1

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DISTRIBUTION OF THE LAND FUND BY LAND CATEGORY FOR 2020		
Land categories	**Area, ha**	**%**
Agricultural land	4114,3	25,0
Lands of settlements	785,6	14,0
Lands for industry, transport, communications	99,7	0,4
Lands of specially protected natural areas	430,9	11,0
Forest lands	3010,3	18,0
Water fund lands	133,4	7,0
Reserve lands	3035,3	21,0
Total	11609,5	100

As can be seen from the data in the table, the total structure of the region's land fund is 4114.3 thousand ha, land of settlements - 785.6 thousand ha, industrial, transport and communications, defense and other non-agricultural lands - 99.7 thousand ha, lands of specially protected natural areas - 430.9 thousand ha, forest lands - 3,010.3 thousand ha, water fund lands - 133.4 thousand ha, reserve lands - 3,035, 3 thousand ha. The area of land of the special land fund (reserve land) is 3091.0 thousand ha, including laylands - 22.0 thousand ha, perennial plantations - 0.1 thousand ha, hayfields - 14.6 thousand ha, pastures - 2710.5 thousand ha. During the period of reforming agricultural enterprises in 1991-2005, the area of agricultural land in the region decreased by 7.1 thousand ha, but subsequently the area of land in this category decreased annually and its overall decrease, from 2005 to 2018, amounted to 0.3 thousand ha. Agricultural land in the districts of the region is characterized by a variety of soil and vegetation cover. The uniform part is characterized by a distinct latitudinal zoning, and in mountainous areas - vertical zoning, which in turn is characterized by soil vegetation cover within individual zones and altitudinal belts.

The total area of land in the Turkestan region is 11609.5 thousand ha, agricultural land is 4114.3 thousand ha, including: arable land - 863.4 thousand ha (20.9%) (incl. irrigated - 462.60 thousand ha), pastures - 2932.4 thousand ha (71.2%), hayfields - 69.5 thousand ha, other lands 129.6 (3.14%) (many plantations, laylands and other lands). When performing work on the economic assessment of land, base rates are used. Basic payment rates are necessary to prevent price imbalances for individual land plots when they are sold for private ownership or provided for land use by the condition, as well as to optimize taxation and rent.

RESULTS AND DISCUSSION

Strengths

The suitability of environmental conditions such as precipitation, temperatures, and soil conditions are critical for the agricultural development. In Turkestan region, environmental conditions are categorized into one main ecological zone and defined by climate, natural vegetation, and soil type. As a result of the existence of the ecological zone, farmers can identify crops that are suitable for the conditions of a given zone. The crop suitability could be defined as the adaption of crops to a given set of climatic and other biophysical characteristics of an area to sustain a crop production cycle. The suitability of different crops to the different ecological zones presents farmers with a unique opportunity to adopt different on-farm climate change mitigation strategies. Given that one major distinguishing feature of ecological zone is vegetation or land cover, the climate change effect is likely to vary. For instance, while the climate change effect may increase precipitation in some ecological zone, it may reduce precipitation in others.

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As such, farmers have the opportunity of selecting crops that thrive in other ecological zones under certain conditions to meet the demands of their respective ecological situation.

Agriculture in Turkestan region is highly labor-intensive and requires an economically active population to thrive. The region's economic active population (65%) indicates the labor potential. This population is largely made up of persons between the ages of 18 and 60 years. Given these figures, the region's high rate of unemployment presents a significant opportunity. Job creation for the seemingly rising number of the region's unemployed population underscores the importance, which seeks to create jobs through the production of food for both local consumption and export. The average household size in rural areas is 4-5 persons per household compared to the 3 persons per household in urban areas. However, recent studies have found that regional averages for household sizes are significantly higher than that of the national average. For instance, observed that while the northern regional average is 5 persons per household, the national average is 4 persons. Given that most rural people are predominantly engaged in the agricultural sector, the average household size of 5 persons per household serves as a source of a strong labor potential for farm households.

The availability of arable lands for agricultural purposes, especially at the household level, is a very critical factor considered when farmers decide to adopt agricultural farm technologies or accept agricultural initiatives. Household heads or community leaders usually own agricultural lands and hence decision-making processes regarding the use of these lands for farming purposes are free from bureaucratic processes that may hinder or delay such decisions. Over the past decade, agricultural land has expanded significantly. Agricultural lands have expanded from 20% in the 1970s to over 60% in 2020. The expansion of the country's agricultural land area presents a unique potential for scaling up agricultural production and productivity levels if efficiently managed. Given that, land availability is a critical factor considered in determining productivity levels, this unique case region implies that farmers are more likely to acquire agricultural land at cheaper costs and, as such, can afford to expand their production levels either by expanding their land sizes or by investing in other aspects of their production.

Weaknesses

The region economy is basically agrarian and mostly dependent on smallholder farmers struggling to elevate themselves out of the poverty bracket. Access to financing by particularly these smallholder farmers is consistently cited as the major hindrance to the agricultural sector growth. The donor agencies and government have, over the years, tried to increase access to funding and investment for the region's agribusiness; however, a large gap persists. Several financial institutions perceive the agricultural sector as intrinsically risky and view the small and medium-sized enterprises in the agricultural sector as a non-bankable segment. The commercial banks were obliged as a matter of policy to give credit not less than 10% of their loanable capitals to activities in the agricultural sector at reduced interest rates. However, these policies were obliterated in 1990, and interest on loans for agricultural activities was increased to levels comparable to interest charged on loans for non-agricultural activities. Agricultural activities are at a disadvantage relative to commercial interest determination because of the relatively high risk in the sector, the high rate of non-payment of loans, and the high cost of administering credit to farmers at the mall-scale level.

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The region's agricultural sector struggles to provide the needed ratios of food supplies to people and even embark on an aggressive export of such produce to other countries. This is mainly due to the high levels of post-harvest losses at the farm, retail, and wholesale levels. Despite the hard-working nature of farmers relative to the production of crops such as vegetables, crops, and tubers, it is estimated that 30% to 45% of their produce is lost due to poor post-harvest management and handling practices. This culture in the country threatens food security, nutrition, and the incomes of farmers. It is important to treat farm produce immediately after harvest. This is because the perishability rate for fresh horticultural products relative to post-harvest losses is estimated to be between 30% and 50% for vegetables. For this reason, post-harvest management is necessary to minimize the level of losses with respect to quantity and quality, from the period of harvesting to consumption.

In region, lack of ready markets for the produce of smallholders is identified as one of the main challenges for the sector, and this is also because of the lack of enough processing facilities. One major challenge faced by farmers in the marketing sector is weak bargaining power by smallholder farmers. This is because most of such farmers lack information on prices, alternative marketing strategies, or demand conditions. Some farmers may also default on agreements, which is a disadvantage to traders. It is reported that these contractual inadequacies decrease the performance of the market system. Smallholders are mostly not directly included in the marketing chain of their produce for export trade. Such farmers generally develop linkages with agents responsible for exports. Therefore, the gains of the smallholder farmer depend on the market structure. Access to markets especially for smallholders is critical for their development because it creates the needed demand and presents remunerative prices, which have a positive effect on the incomes of smallholders. Access to better markets can also lead to an expanded production and adoption of technologies that enhance productivity.

Opportunities

Hunger is on the rise globally; it affects about 821 million of the world's population. As a result Sustainable Development goals (SDG) builds on the advancement attained under earlier hunger extermination efforts and presents an ambitious target to end hunger worldwide by 2030. The principal targets of SDG include: ending of all forms of malnutrition by the year 2030; guaranteeing sustainable food production systems as well as implementing robust agricultural practices by 2030; doubling production and proceeds of smallholder farmers by 2030; and, finally, sustaining genetic diversity of plants, seeds, and animals. These targets are intended to be implemented through the following: the adoption of measures to safeguard the effective functioning of food commodity markets and the facilitation of timely access to market information; correction and prevention of trade restrictions and distortions in agricultural markets globally; and an increase in investments through improved transnational cooperation.

The Turkestan region has therefore put several policies in place to support the agricultural sector, and these include planting for Export and Rural Development and Greenhouse Villages. The Turkestan region's trade policy offers clear and transparent procedures for implementing the government's international and domestic trade agenda. The government provided an enabling environment for trade in the private sector which aided the country's economic growth. The policy is to be realized through the complete spectrum of trade policy instruments across these objectives: increasing production volume for local and export markets; creation of a fair and transparent regime for import and export; protection of the consumer and fair trade; facilitating

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trade; and multilateral trade and the protection of intellectual property rights. The export sector has seen significant progress over the years, and some of the significant interventions in the sector are made.

Threats

The negative ramification of climate change and its economic impact on developing countries have attracted much concern from stakeholders. Climate change impact on agricultural production over the past years has worsened. Fluctuations in climate variables such as rainfall and high temperatures have led to a reduction productivity levels. While warm and dry weather conditions negatively affect soil moisture and nutrients, excessive rainfall may cause floods, thus affecting output. In this regard, the effect of climate change may occur in two ways. First, excessive rainfall may create favorable conditions for the growth and multiplication of pathogens, especially among perennial crops. Second, a decrease in rainfall may cause a reduction in soil water content, thereby resulting in drought which may deprive plants of the ability to synthesis soil nutrients for proper growth and development. Moreover, delays in the onset of rain affect farmers' preparedness for the season and affect productivity.

Establishing a strong link between research, markets, and policies is significant to developing any production sector. Thus, the sustainable development of the agricultural sector, to a considerable extent, is dependent on linking agricultural research to market studies to inform better policy formation. The development of the agricultural sector and the attainment of the country's food security status depends on farmers' access to a reliable market. Due to the gap between research, markets, and policy, farmers face several challenges such as the over-exploitation by middlemen, poor road networks, and others. To address these challenges, agricultural market research centers must be stablished at strategic locations across the country. This will help improve the quality of research between agricultural products and the market, which will, in turn, inform the formulation of effective agricultural policies. Further, farmers will have adequate market information on specific products.

The Turkestan region's economy is predominantly agrarian, with almost half of the population engaged across all aspects of the agricultural value chain (i.e., from the producer to the consumer). With the increasing trend of population, it is projected that pressures on agricultural lands and food production will increase drastically in the near future. It is crucial to take a critical look at national agenda on agriculture, which seeks to modernize Kazakhstan's agricultural sector. The results obtained from the analysis in this paper provide authorities with the most critical issues to consider during policy formulation for the sector. They also give investors and other stakeholders interested in the country's agricultural sector a holistic idea about the terrain in which they seek to invest in or support and the areas that need special attention.

The following recommendations are proposed to policy- and decision-makers in the country to help in the development of the sector: Finance: redirect the focus of the Agriculture Development Bank to its core mandate of giving soft loans to smallholder farmers to help boost agricultural production at the local level; Spare parts production: It will be very important to set up companies that are into the production of agricultural equipment and spare parts. This will reduce the cost of importing such equipment into the country and also make them easily accessible to the farmer when needed; Digitization of extension services: This will promote therapid dissemination of information from the officers on the field to research centers and

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government institutions responsible for the agricultural sector, and it will be necessary to digitize that space. The digitization of extension services will also help to connect the farmer to banks, the private sector, and NGO's for assistance when needed; Documentation: It is essential to provide reliable data on the country's agricultural sector. This should be taken into consideration to create a single data base station for the whole country (including data on farmers). Interested parties will access this information to support their decision-making. This will reduce the sector's risks, thereby giving banks and other financial institutions the assurance that their monies given to farmers will be returned.

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