

Exploring the opportunities to promote value-added products in the fisheries sector in the Sultanate of Oman

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Abstract

The Sultanate of Oman has identified aquaculture as one of the key pillars to diversify its national economy. The goal of the Government of Oman is to make the Omani economy independent of its non-renewable resources. Expansion of the fisheries sector seems to be the first positive development in the intended direction. The focus of fisheries sector in Oman is to make seafood export as high standards on international markets and increase the contribution of seafood to the country's GDP. The purpose of this paper is to explore the opportunities to promote value added products in seafood industry in Oman by evaluating the previous literature in a broader spectrum of seafood industry. Oman is a country which is rich in waterbodies containing ample seafood and the nation also has a treasure trove of fishermen already working in this traditional sector. As the fisheries and aquaculture sectors are closely linked to other sectors, it is likely that further investments will create new business opportunities which will contribute to the growth and well-being of the nation. Export of seafood is very important for Oman to diversify the economy, but further to achieve higher living standards to fishermen in the country. In the present state, because of the export of raw fish, the value addition is not taking place. The Ministry of Agriculture, Fisheries, and Water Resource plan for comprehensive advancement of fisheries industries in the Sultanate in line with the sustainability of fisheries resources. This is achieved through the increase of value-added fish processing projects and the diversification of fish products, while meeting the requirements of quality, safety, and competition in global markets. The future study will investigate effective strategies to promote value-added products in fisheries sector in Sultanate of Oman to increase the revenue generated from export market.

Key Words: Seafood, Value Addition, National Economy, Fisheries, Export

Introduction

Aquatic animals are increasingly recognized by the research community as nutritious animal-source foods that are critical to food and nutrition security (Belton and Thilsted 2014, Hicks et al 2019). Seafood is a rich source of protein and essential micronutrients, produced

locally (Thilsted et al 2016) and traded globally (Gephart and Pace 2015) via capture fisheries and aquaculture that are both expected to have key roles in transitioning towards sustainable global food systems (Costello et al 2020, Naylor et al 2021). Seafood is expected to play a key role in improving access to healthy diets while providing food products (Robinson et al, 2022).

Global Fisheries Sector

Global seafood trade nearly doubled in recent decades, fueled by decreasing transportation costs, advances in preservation and processing technologies, and open trade policies and is now among the most highly traded commodities (Gephart & Pace, 2015) The global seafood market recorded a growth rate throughout the study period, and it is anticipated to register a 9% growth in market share from 2022 to 2028. The rising public awareness of the vital role of fish as a food group in healthy and diversified diets has driven the growth of seafood consumption over the past five decades. Among all the seafood types, fish has largely dominated global consumption, and it is anticipated to register a CAGR of 1.49%, by value, during the forecast period. This is largely substantiated by the growing per capita consumption of fish in many regions, accounting for nearly 70% of all the seafood types consumed (Global Seafood Market - Size, Share, COVID-19 Impact & Forecasts up to 2028, 2023).

Fisheries Sector in Oman

The Sultanate of Oman, which occupies an area of 309500 square km, lies in the extreme southeast corner of the Arabian Peninsula. It shares borders with the Republic of Yemen to the southwest, the Kingdom of Saudi Arabia to the west and the United Arab Emirates to the north and can lay claim to several small islands in the Gulf of Oman, the Strait of Hormuz, and in the Arabian Sea. Oman's coastline stretches from the Arabian Sea and the entrance to the Indian Ocean at its south-western extremity, to the Sea of Oman and Musandam in the north, where it overlooks the Strait of Hormuz and the entrance to the Arabian Gulf. Fisheries and agriculture are among the oldest and most important production sectors in the Omani economy. They play a vital part in feeding the population, providing employment for large numbers of Omanis, and helping to boost the country's GDP. Fishing is considered one of the country's oldest occupations. Capture production comes mainly from marine waters, providing nearly 99.9 percent of total fish landing. The quality of the catches has improved, following the creation of the Fisheries Quality Control Centre (FAO, 2019).

The Sultanate of Oman has a long coastline, the vast majority of which faces the Gulf of Oman and the Arabian Sea. The main economic activity of many coastal communities is fishing which provides an important supply of fish to local communities, urban areas and for the export markets. Oman is one of the largest fish producers in the region and a net exporter of fish and fish products (FAO, 2019). Oman's fisheries sector alone has plenty of potential to boost the contribution it makes to the country's economy and become a world-class competitive industry. (Fitri and Rahman, 2020). The fisheries sector plays an important socio-economic role in terms of food and nutrition security, employment, income, and foreign exchange earnings in Oman (Al-Busaidi et al., 2015). Agriculture and Fisheries sector has been identified as one of the five promising sectors to enhance the development of the fisheries sector and to promote the export of value-added products and the quality of Omani seafood products, in the domestic and global markets (MAF, 2015). Oman's fisheries sector alone has plenty of potential to boost the contribution it makes to the country's economy and become a world-class competitive industry (Fitri and Rahman, 2020). However, fisheries in Oman are predominantly small scale in nature (Bose, et al, 2019). Oman exports to regional market such as the Gulf Cooperation Council (GCC) countries and international markets (Al Naabi, 2018). Fish export creates competition between local and foreign consumers (Bose, et al, 2019). The seafood

processing companies deal mainly with locally sourced fresh and frozen fish products and supply to local, regional, and international markets (Al Naabi, 2018). The use of latest technology for seafood processing will make a value addition to the product which will be preferred in the foreign market. There is an immense potential in seafood export in Oman which will enhance the economic development of the country.

The Ministry for Agriculture and Fisheries is looking to increase aquaculture production to 220000 tones with a value of OMR 340 million by 2030. To encourage the development of the industry the authorities have identified and allocated suitable coastal sites for aquaculture projects. An atlas has been printed and available to potentially interested investors; aquaculture farming by-laws (regulatory framework) are in place and investments opportunities and incentives have been widely promoted; established a governing body to foresee aquaculture investments, protection of the environment and human health, sustainable development of the industry, licensing, investment guidelines and incentives, and the use of fertilizers and chemical products (FAO, 2019).

Purpose & Method

The global aquaculture sector has grown continuously over the past 40 years, though unevenly among countries. Fishing, as an economic activity, is rooted deep in the cultural and social fabric in Oman, and it had been the prime source of livelihood for almost 80% of the population before the discovery of oil (World Bank Group, 2015). Oman enjoys one of the biggest oil and gas reserves in the world, the Government of Oman has opened a new chapter of diversification of the domestic production structure. The goal of the Government of Oman is to make the Omani economy independent of its non-renewable resources. The 2014-2017 expansion of the fisheries sector seems to be the first positive development in the intended direction. Not only the self-sufficiency ratio of the fisheries in Oman, which is above 100%, but also the growing potential of seafood exports add to the stability of the exchange rate regime in the future (Mlodkowski & Belwal, 2021)

After the year 2000, several initiatives were taken by the Government of Oman in compliance with the national economic plan. They were largely instrumental in the development of industrial estates, free economic zones, fishermen harbors and well-structured landing sites besides supporting the growing fisheries sector (Al Busaidi et al., 2016). Since 2000, the fisheries sector in Oman comprised three sub-sectors: artisanal fisheries, commercial fisheries, and aquaculture production. The modern supply chain system in the Sultanate emerged subsequently (Mlodkowski & Belwal, 2021).

Fish processing is one of the important investment areas in the fisheries sector, due to its economic and social role alike. This is highlighted by contributing to the promotion of economic diversification and food security, as well as providing job opportunities for citizens and providing them with the necessary expertise (MAF, 2023). The purpose of this paper is to explore the opportunities to promote value added products in fisheries sector in Oman by evaluating the previous literature in a broader spectrum of fisheries sector.

According to Creswell & Creswell (2017), search methods determine how the researcher will collect, analyze, and understand the data of a specific study. This study was based on a secondary data analysis in the Middle East region on the opportunities in promoting value added product in seafood industry. Secondary analysis is a systematic process with procedural and evaluative steps to develop the research objective, then the identification of the dataset, and thorough evaluation the dataset (Johnston, 2017).

Literature Review

Fisheries play an important role in the world economy and food for millions. There are around 30 million fish farmers in the world which earn their livelihood from fisheries (Nadarajah & Flaaten, 2017). Globally, fish provides about 16 percent of the animal protein consumed by humans and is a valuable source of minerals and essential fatty acids. Global fish production has grown steadily in the last five decades (Kumar et al, 2015). Seafood is increasingly highly valued as food and is considered to have many nutritional benefits. Seafood is one of the most important foodstuffs for humans, due to its nutritional benefits and mild taste. However, it is also one of the most sensitive and perishable food groups and require suitable handling throughout the industrial network to keep a high food quality and safety. (Pfister, 2018).

Oman has a long coastline, encompassing around 3000 kilometers (Qatan, 2010), to the Arabian Sea, the Persian Gulf, and the Gulf of Oman with rich fishing grounds (FAO, 2019). Fisheries is among the oldest and most important sector in the Omani economy (Pfister, 2018). Aquaculture in Oman began in 1986 with a production trial of the giant tiger prawn conducted in a private farm in the Al-Sharqiyah South Region, Sur. However, this venture was halted prematurely by some technical difficulties. As a result, the Government became aware of the sector's need to improve the utilization of the country's natural fishery resources as means of livelihood hence, the establishment of the Aquaculture Laboratory at the Marine Sciences and Fisheries Centre (MSFC). The fisheries sector has been identified recently in the National Program for Enhancing Economic Diversification (Tanfeedh) as one of five promising sectors for economic diversification and enhancement of non-oil revenues of the Sultanate (Al-Qartoubi et al., 2020).

The Sultanate of Oman has identified fisheries as one of the key pillars to diversify its national economy. The overall vision of the Ministry of Agriculture & fisheries is to develop a sustainable, competitive, and environment-friendly fisheries sector that meets the needs of customers from the high-quality aqua products. Since 1997, the Ministry of Fisheries Wealth has been engaged in Different research and development projects on fish and shellfish culture. These included the investigations on abalone hatchery, mussel and oyster culture, shrimp farming and pilot trials on cage and pond culture of finfish, suitable site selection for aquaculture, development of feed for cultured aquatic animal, hatchery development for finfish, sea cucumber aquaculture and development of freshwater integrated tilapia farms in Oman and using GIS in selecting suitable sites for fisheries. As result of this strategy many initiatives have been developed by Ministry of Agriculture and Fishery including: (i) Atlas for suitable sites for aquaculture; (ii) establishment of Aquaculture committee; (iii) establishment of aquaculture center for researches; (iv) establishment of the Directorate of aquaculture development for investment opportunities and monitoring; (v) drafting investment guidelines for aquaculture development in Oman; and (vi) elaboration of environmental best management practices manual (FAO, 2018).

The Ministry of Agriculture and Fisheries (MAF) in Oman plays a significant role in managing fishery resources and thereby protecting the livelihoods of thousands of artisanal fishers through the enforcement of fisheries legislation (Bose et al., 2017). In Oman, fisheries legislation is enshrined in the Law of Living Aquatic Wealth ('Fisheries Law', hereinafter) (Ministry of Legal Affairs, 2019) and enacted through MCS programs (Al-Qartoubi et al., 2020). The global seafood sector is large, and it is estimated by FAO (2016) that 200 million people are directly or indirectly employed in the seafood industries and that 12% of the world's population rely on fisheries and aquaculture for their livelihoods.

Significance of the study

According to the Ministry of Agriculture and Fisheries Wealth, fish is considered, after crude oil, the second most important export commodity in terms of foreign exchange earnings. The fishery sector has contributed significantly to the economic growth of the country through generation of foreign exchange income and employment generation. Agriculture and fishing have always been a very important part of the lifestyle of many Omanis. Both food production sectors have increasingly played an important role in the diversification of the national economy, which could have been entirely dependent on the crude oil industry (FAO, 2019). As the fisheries and aquaculture sectors are closely linked to other sectors along the supply chain, including insurance and finance, etc., it is likely that further investments will create new business opportunities which will contribute to the growth and well-being of the nation. Omani seafood products with the international quality and safety standards are the key to lucrative export markets (Bose, et al, 2016).

Fish exports are important source of foreign exchange earnings, and thereby, strategic objectives of the sector encourage fish exports to GCC countries and international markets (Bose, et al, 2016). Export of seafood is very important for Oman to diversify the economy, but further to achieve higher living standards to fishermen in the country (Zaibet, 2000). Fish exports are an important source of foreign exchange for the economy (FAO, 2019). Over the past half century Oman has experienced growth in various sectors, however fisheries and related industries are lagging (Belwal et al., 2015) and there is a great potential for improvement in the industry (Pfister, 2018). The Ministry of Agriculture and Fisheries said that fish from the waters of Oman were exported to 57 countries around the world in 2019, compared to 49 countries in 2015. The Gulf Cooperation Council (GCC) accounted for 35 percent of those exports, followed by 41 percent to Asia (non-Arab countries), four percent to South America, four percent to other Arab countries, seven percent to African countries, two percent to European Union, one percent to North and Central America, and three percent to other countries. The UAE was the topmost fish importer last year, with 22 percent of the total Omani fish exports. The South Sharqiyah came first in the list of fish exports accounting for 40 percent of the Sultanate's total exports during the past year, with a quantity of 81,994 tones, while Muscat accounted for 32 percent of total exports. (Observer, 2020).

Discussion

In Oman, the limited harvesting capacity, the lack of technological advancement and the economic performance of the current traditional fishing fleet, constitute a real opportunity to increase capture fisheries production and improve the quality of landings and hence improve the overall performance of the sector. (FAO, 2019). The processors serve domestic, neighboring, and large international markets but focus primarily on export to non-neighboring countries, and more specifically high-value markets. The products distributed are mainly fresh and frozen, but some value-added products such as canned, salted, and dried, are also included. In 2015 there were 47 processing companies in Oman. In 2015, 21 out of the 47 seafood processors operating in Oman had a national certification for export (Al-Busaidi et al., 2015). If the seafood is designated to be exported to high-value markets additional demands are placed on the processor. Firstly, it is required that the processor has a QA-certification. In addition, when it comes to non-monitored species that is destined for export to high value markets the processor must also assure that the seafood is sourced from QA certified fishermen, as well as ensure that transportation of the seafood is carried out in controlled transport with automatic cooling systems (Pfister, 2018). The objective of fisheries sector in Oman is to make seafood

exports meet the legal requirements and high standards on international markets and increase the contribution of fisheries to the country's GDP.

In support of the fishery sector, the Government of Oman has recently invested a total of OMR 500 million on a variety of projects to improve fish production and exports. Considerable attention has been directed towards the efficiency and functioning of fish stores as well as increasing the efficiency of the artisanal fishing sector. The authorities have plans to further develop the fish marketing sector by launching a project that aims at setting up a series of retail outlets that would offer attractive fish products of high quality and at reasonable prices. Furthermore, local companies and individual entrepreneurs have been encouraged by the Ministry to invest in fish marketing facilities (particularly in the premises of the fishing ports) by providing a series of investment incentives. Among the new projects started, there are 42 outlets being run by young Omanis who received support from the Government. These projects include frozen and fresh fish refrigerators, fish cutters and cooperative ice production units (FAO, 2019).

A subsidized system as part of the Ministry's program for fish marketing has been used when there is scarcity of fish in the local fish markets (especially during the summer months and Ramadan), to ensure regular availability of fish all year round. To support the long-term sustainability of the fisheries sector, the Ministry of Agriculture and Fisheries Wealth plans to prepare and release a series of best aquaculture practices codes to ensure the sustainability of the sector, the responsible utilization of natural resources, and safe interaction with other sectors; establish an aquatic health strategy to prevent the introduction of animal pathogens and disease outbreaks. The disease prevention plan will help provide assurances to potential investors; establish rules and regulation for fisheries that are transparent, enforceable in harmony with other national and international regulations and standards (FAO, 2019).

Fish processing is one of the important investment areas in the fisheries sector, due to its economic and social role alike. This is highlighted by contributing to the promotion of economic diversification and food security, as well as providing job opportunities for citizens and providing them with the necessary expertise. The Ministry of Agriculture, Fisheries, and Water Resource's vision, which seeks to comprehensively and integrate the fisheries sector, includes the advancement of fisheries industries in the Sultanate in line with the sustainability of fisheries resources. This is achieved through the increase of value-added fish processing projects and the diversification of fish products, while meeting the requirements of quality, safety, and competition in global markets (MAF, 2023).

Future Study

The future study will investigate effective strategies to promote value-added products in fisheries sector in Sultanate of Oman to increase the revenue generated from export market. The data from the fish landing centers should be collected to understand the species, the fishing gear employed, and the fishing vessel infrastructure will be used. Data of lands suitable for aquaculture, infrastructure, technology to be adopted will be collected. The post-test survey questionnaires will be developed in conjunction with the literature review aimed at understanding the export performance of Seafood from Oman and suggest suitable mechanisms for improvement, and to analyze the feasibility of aquaculture in Oman. The future study will aim at providing strategic directions on value addition of raw fish and its impact on increases its export value which will be a positive economic boost for the country.

Conclusion

The fishery sector has contributed significantly to the economic growth of the country through generation of foreign exchange income and employment generation. Agriculture and fishing have always been a very important part of the lifestyle of many Omanis. The growth of fishery and agriculture related activities have certainly contributed over the last few years to slow down the migration of rural inhabitants (both farmers and fishermen) to the larger cities. It is likely that further investments will create new business opportunities which will contribute to the growth and well-being of the nation (FAO, 2019).

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