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Analyzing the Blue Economy Potential of Pakistan's Maritime Sector

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Abstract: *The maritime economy is an important contributor to the economies of the countries. Pakistan, with more than 1000 km of coast, has a huge repository of sea resources and is located on a very important trade route. Its geo-sectoral location provides easy and short sea access to China, Afghanistan, and the Central Asian Republics. However, the continuous neglect of the maritime sector has resulted in the depletion of the sector, which was once thriving at a rapid pace. The lack of awareness of the maritime economy, depleting infrastructure, untrained human resources, and lack of effective policies are the contributing factors that have prevented the full potential of this sector from being exploited so far. The development of ports, the shipping industry, fisheries, and coastal tourism are the areas that can significantly contribute to the GDP of the country and provide livelihood to people. There is a dire need for the government to pay full attention to this sector and start investing in this ignored area for its revival, ultimately enabling it to contribute significantly to the economic development of the country.*

Key Words: Blue Economy, Maritime Economy, Pakistan, Asian Republics, Trade

Introduction

Oceans constitute about 70% of the earth's surface and have huge living and non-living resources. The maritime trade or seaborne trade is seen as an important factor in a country's economic development. It has traditionally numerous components like sea transportation, ports, harbours, fisheries industry, shipping and shipbuilding industry and tourism, but more recently, new economic activities such as offshore aquaculture and extracting offshore minerals and oil have added to its potential. The maritime economic activities of every country depend on its peculiar sea conditions and national policies. International trade has always been a catalyst in a country's economic growth. Globalization and the advancement of modern means of transport have provided a new trend to the network of this trade. 80% of the international trade taking place between countries is by sea, as it is the cheapest means of transportation. Shipping, shipbreaking, and shipbuilding are other important dimensions of the maritime economy that contribute considerably to the economic growth of a country.

The Ocean economy is that part of the economy in which the ocean plays an important role in providing certain raw materials for production and exploitation processes, which take place over or under the sea surface. Other economic activities of oceans may also take place in the non-coastal region (Alam, 2019). The maritime economy of a country significantly contributes to its development. The sustainable use and optimum utilization of sea resources were advocated years ago. Economists have estimated the net worth of the ocean economy is around $24 trillion, out of which $4 to 500 million is being explored every year (Basit, 2020).

Although Pakistan has a huge potential in the maritime sector, which offers huge sea resources, the continuous neglect has resulted in poor exploitation of such an important economic sector. With a reasonably large coastline, 240000 km of EEZ and an ideal geographical location, Pakistan has failed to benefit from its sea resources effectively. Having 95 percent of the country's international trade being carried out by sea, the lack of awareness in this sphere has been the contributing factor to this neglect.

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Ideally, with such heavy dependence on sea trade and sea routes, this sector should have been given more attention to gain more out of it, but unfortunately, the same has not been done so far, despite a lapse of seventy years.

Literature Review

Blue economy is not limited to specific small Island Developing States, SIDs. Many coastal states worldwide are interested in inculcating this innovative idea in economic strategy of their country. According to the literature, SIDs like Mauritius are highly attractive for tourism and investment for tourism-related industries, but their level of environmental monitoring is very low (Ngwawi, 2014).

UN, FAO describes concerns for the over-exploitation of fisheries resources, which is approximately 32% of the production and aquaculture production has been increased with a growth rate of 6 % per annum in recent years. Asia–pacific region is producing beyond limits within 90% of global production.

For the US economy, the value addition of the ocean economy, when estimated with the inclusion of its ecological value, its importance in controlling natural hazards, measuring the leisure industry and biotechnology-based genetic supply, reaches beyond 100 million $ (Aftab et al., 2017). National Ocean Policy USA was approved by the then US President Barack Obama In 2010 and was formulated to ensure and protect the interests of a new blue economic paradigm in coastal states. In this planning process, the construction of the United States' first commercial wind project at offshore sites in Rhode will be a pivotal platform for 30-megawatt clean energy production.

A huge portion of the Canadian economy is also dependent on water resources. Only 7% of Alberta's water provides 75% of Canadian oil and gas production. A $ 1 billion investment is proposed to finance the development of infrastructure in Canada in water deficit regions that would create approximately 45000 jobs (Voyer et al., 2018). OECD has estimated the economic value of global ocean activity to be around US$1.5 trillion per annum, which constitutes 2- 3% of the world's GDP and employs more than 350 million people worldwide.

According to 2015 National report of Australia, contribution of marine sector in the economic development of Australia will be more than three times in next decade, i.e. that will reach 100 billion A$ in 2025 from 47 billion A$ in 2015. Highest supply of aqua culture is which 1/4th of the global supply is contributed by Norway owing to its 1 million metric tons' production. Norway considers the total value addition of its marine area productivity in the national budget to be 20% (Steinsli, 2017).

In China, 41 % of the total employed population works in ocean-related sectors directly or indirectly. All major economic income of Bangladesh is linked with its continental shelf and seawater resources, which spread over 118,000 square Km. Resultantly, Bangladesh has been ranked 41st among the largest economies benefitting from the maritime sector. Fishery, tourism, marine energy and maritime shipping can contribute towards economic growth from especially for developing countries like Pakistan (Bari, 2017).

Maritime Potential of Pakistan

The coastal and marine resources, along with three operational seaports, are the fundamental elements of the economy of Pakistan and offer huge potential for economic development. Pakistan has all the ingredients to be declared as a maritime country. According to the length of its coastline, it is ranked 74 out of the 142 states (Naghmana, 2019). More than 90% of the trade-in Pakistan, including oil and coal, is through the sea. There is huge maritime resource potential, which Pakistan is still not able to exploit fully. The share of Pakistan in the global maritime sector is not significant as compared to its resource potential. Except for our shipbreaking industry, which constitutes about 18% of the world's breaking industry, the rest of the maritime sector remains underutilized. At a conference of the United Nations in 2016 on trade and development, the share of Pakistan in the global shipping industry was only 0.04 per cent and 0.38 per cent in container trade. As observed by Stopford, the volume of the maritime economy reflects the actual size of the economy of a country (Kalim & Syed, 2020).

The Pakistani coast is used for the transportation of 15 million barrels of crude oil from the Gulf States through the Persian Gulf. The significance of the maritime sector increases with the fact that Pakistan

provides the easiest and shortest sea route to Afghanistan, China and Central Asian Republics. Despite being centrally located along the deep sea ports of the Indian Ocean, carrying huge economic potential, and being a key littoral state in the region, Pakistan has failed to develop its maritime sector in the last 70 years. This neglect has resulted in the underutilization of a potential economic treasure. Other countries in the region present along the Indian Ocean, like India, China and even Bangladesh, have substantially developed their maritime sector and are optimally utilizing their sea resources. The lack of maritime awareness in Pakistan has seriously affected the contribution of this sector towards the overall economy. If we compare our maritime revenues of 183 million dollars to that of India and Bangladesh, which are 6 billion and 5.6 billion dollars, it projects the dismal picture of our ignorance and neglect of this very important sector (Hussain, 2014).

Pakistan's coastal sector has a potential of around $3.1 billion annual capacity of fish and sea food to be exploited and processed, but despite such huge potential this sector only has a contribution of only 0.4% in the GDP of the country (Kaczan, 2020). This signifies that how far behind we are in utilizing this immense economic potential, and subsequently slowing down our growth.

The coastal tourism potential of Pakistan is around $4 billion, but unfortunately, like other sectors of the maritime, it only contributes 0.3 billion, far less than its actual potential. More than one lac Pakistani tourist visits Thailand, Maldives and Dubai for coastal tourism, resulting in an outflow of foreign exchange. The countries with developed coastal tourism are contributing very effectively to the economy of their countries. Pakistan National Shipping Corporation is the main handler of shipping, but it has also, unfortunately, been constantly ignored over the years. The depleting fleet of cargo vessels implies that the capacity to carry cargo has decreased substantially. At present, it only carries 7% of the country's cargo, while 93% is handled by foreign cargo companies, thereby stripping the country of $1.5 billion annually (Humayun & Zafar, 2014). Shipbuilding was another thriving sector in the 70's, which used to build cargo and transport ships for the shipping corporation and smaller ships for the fishing industry. It also used to build ships for some other countries in the region; like all other sectors, it has also seen a sharp decline in its capacity to build ships.

Comparative Analysis with Region

The South Asian region consists of five maritime countries: Pakistan, Bangladesh, India, Sri Lanka, and Maldives, while Afghanistan and Nepal are two landlocked countries that have access to sea through Pakistan and India (Sakhuja, 2015). Amongst the South Asian countries, Bangladesh has been the most vocal proponent of the maritime economy and has advocated for the unity of the countries through the Bay of Bengal partnership to utilize the sea resources for sustainable development. Nearly 30 million people in Bangladesh earn their livelihood from the sea through fishing and sea transportation. Despite the lack of technological and financial constraints, Bangladesh is very eager to utilize the full potential of its maritime sector. Besides the establishment of the National Oceanographic Research Institute, it is collaborating with certain European countries to move forward in this direction.

India is the largest South Asian country in terms of its 7500 km coastline, which stores huge living and non-living resources. Millions of people are also dependent on the sea economy for their livelihood, and it contributes to the nation's economy. India, realizing the potential of its maritime sector, is collaborating with countries in the region as well as certain other countries to propel its blue economy by upgrading its ports and shipping industry.

Maldives and Sri Lanka, being island nations, have a higher dependency on the sea than other South Asian countries. In fact, Maldives has been at the forefront of coastal and sea tourism and has been earning a major portion of its GDP through the tourism industry. Sri Lanka also contributes significantly to the seafood industry of the world and is also focusing on other areas like renewable energy resources, shipping and creating jobs through the development of the maritime sector. Initiatives taken by China, such as the Maritime Silk Route and the String of Pearls, shall promote regional maritime economic prospects and trade interests. It creates a vision of connected ports and nodal points across the breadth Indian Ocean.

As explained in the table below, the maritime sector of Pakistan contributes only 0.4 % of its GDP.

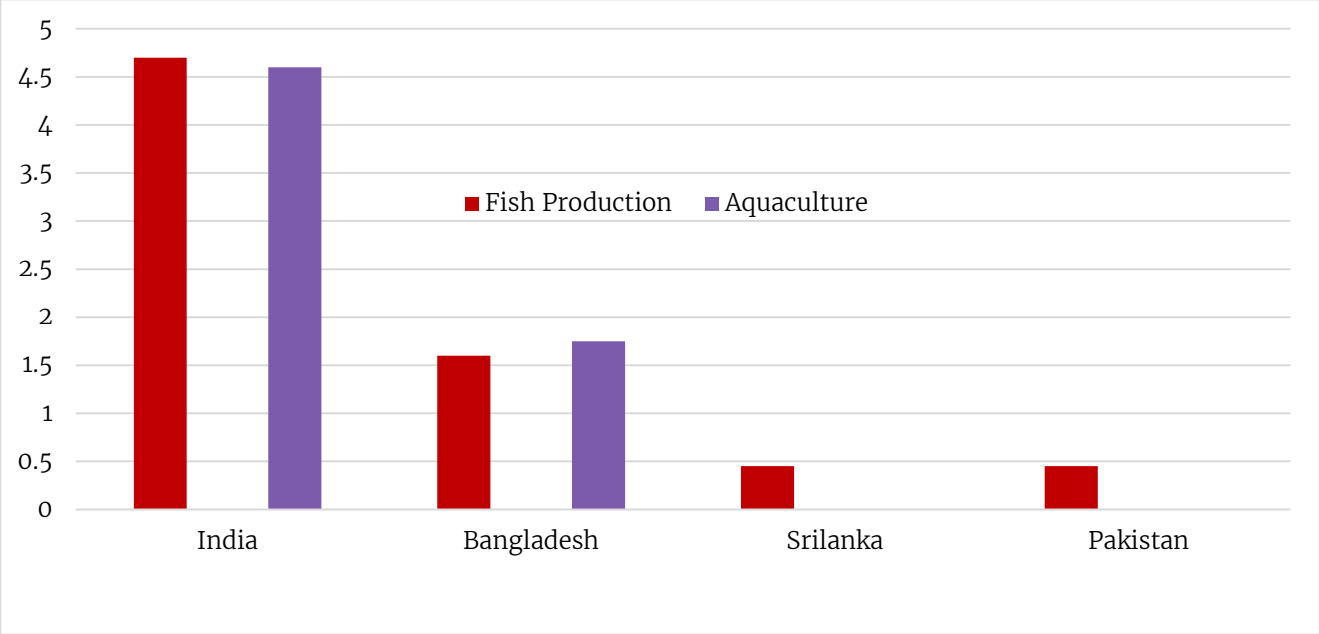
Table 1

Country	Marine sector as % of GDP (2019)
India	4.1 %
Bangladesh	3.6 %
Pakistan	0.4 %
Maldives	18 %
Sri Lanka	1.3 %

The aquaculture comparison and fishing industry also does not show good results for Pakistan in the region and is almost at the bottom (Simon, 2012).

Figure 1

Comparison of aquaculture and fishing in South Asian countries



The economic contribution from Fishery catches in the South Asian region has increased from 5% to 10% in the respective countries; more than 50 percent of the catch is captured by India and Bangladesh in the Indian Ocean and Bay of Bengal, which is s substantially high as compared to other nations in the region, i.e., Sri Lanka, Myanmar etc. Pakistan is lagging far behind due to its less-than-desired efforts for exploration and catches of aquatic resources (Simon, 2012).

Shipping Industry

The National Shipping Corporation, which is state-owned owned, was established in 1963. The early half of the 70s was the best era for the shipping industry of Pakistan when its fleet comprised 71 vessels. The fleet declined to 57 after the creation of Bangladesh. During 1974, like all other industries, the shipping companies were also nationalized and merged into government-owned companies, such as the Pakistan Shipping Corporation and National Shipping Corporation, with a strength of 51 ships. In 1979, both companies were merged and were renamed as Pakistan National Shipping Corporation, the only national shipping corporation remaining today. The present fleet of vessels is only seven, which does not fulfil the country's trade and cargo requirements. Since most of the cargo is carried out through container vessels, and Pakistan do not have any container vessels, resulting in substantial economic loss to the exchequer. The nationalization of the shipping industry in the 70s put brakes on a dynamic and growing industry which, despite many government incentives, could not be revived, and private investors were reluctant to invest in this sector. With almost all of the trade carried out through oceans by sea vessels, there is a

window of opportunity for Pakistan to accrue economic gains for its development. The shipping industry all around the world is an important source of foreign exchange and stimulates other economic activities like shipbuilding, shipbreaking, marine exploration, and marine tourism. Pakistan can also reap the benefits by having the right policies and investments in this sector (Bari, 2017).

The growth and development of shipping in Pakistan have been erratic during the past 64 years due to a number of factors such as lack of foreign exchange, non-friendly tax regime, insufficient funding by the government, lack of adequate ports, and the reluctance of private sector investments and nationalization of the shipping industry in 1974. PNSC presently has only 09 ships, which earned 2.534 Billion in profits during FY 2018-19 and handled 9.586 Million Tons of freight. It is estimated that Pakistan's revenue can increase by 1.8 billion dollars due to sea freight if a proper fleet is maintained for the transportation of goods.

Ports

Ports are another important segment of the maritime economy that plays a role in connecting oceans to land routes, thus facilitating trade and other economic activities. Karachi port is one of the largest and one of the oldest ports in the region. It handles about 60 % of cargo in the country. However, it has not been utilized to its full potential; weakness in railroad connectivity to the port has been a problem which could not be upgraded from time to time.

Ports and harbours are the termini of trade and sources of revenue. The existence of ports leads to other economic activities such as large employment opportunities, ship maintenance and road/ rail transportation of cargo brought by ships. Pakistan inherited only two ports, i.e. Karachi and Chittagong, in 1947, whereas India retained five. At that time, Karachi port had the capacity to handle POL products up to one million tons, and the capacity of its dry cargo handling was 1.5 million tons per annum. Over the last few years, bulk cargo and container shipments have seen a rising surge in handling at Karachi Port, which is a positive sign. Moreover, with nearly 300 ships transiting the Indian Ocean daily, the development of Gwadar as a major hub port outside the Straits of Hormuz is critical for the economic prosperity of Pakistan (Malik, 2017).

Karachi Port handles about 60% of total cargo and has the capacity to accommodate all kinds of vessels. It can also offer repair facilities to ships at anchorage or inside the port. Karachi International Container Terminal (KICT), which was operationalised in 1996, can process approximately 300,000 TEUs and also has the capacity to handle the 11-metre draught of container ships (Shah et al., 2019). Karachi Fish Harbor is also situated inside the Karachi Port area, which handles about 90 percent of fish and seafood caught in Pakistan

Port Qasim started operations in 1990 and is very effectively connected to the road and rail network, which has increased its accessibility. It is the first Pakistani deep-sea port to have a multipurpose role and has industrial standard facilities. The specialized oil terminal of this port can accommodate tankers as large as up to 75,000 DWT. In addition, it has four multipurpose berths to facilitate large cargo ships. However, during the year 2018-19, the cargo volume at Port Qasim dropped as compared to last year, indicating a decline of 2 %.

Aqua Culture and Fisheries

With a total coast line of approximately 1000 km and having around 300,000 square km area of fishing potential, Pakistan has one of the richest fishing grounds having vast variety of marine life suitable for commercial purposes and exports. But unfortunately if we inspect the share of the fisheries sector in exports of Pakistan, it reflects a very bleak picture, mainly because of slow growth and interest in this sector.

However, aquaculture and fisheries in Pakistan's coastal areas face severe challenges. The fisheries sector of Pakistan is underdeveloped to the extent that most of the people involved in fishing do not know the proper storage procedures, which results in the wastage of huge quantities of fish before reaching the shore. This further shrinks the already depleted seafood export from the country, and only low-product fish and seafood are being exported. Similarly, the salt-dried fish being preserved at Karachi, Sonmiani,

Ormara, Gawadar, etc, does not follow the international protocols and uses low-quality salt for preservation, and the conditions are so unhygienic that the preserved fish cannot be exported to any developed countries except to only a few regional countries. Up to 1970, our exports consisted mainly of salted, dried seafood of good quality, but at present, these products are contributing a meagre portion, comprising only 5 % of the total sea products exported from Pakistan (Humayun & Zafar, 2014).

A flourishing shrimp canning industry in 1960's was seen as an economic opportunity and thrived very well till early 80's when these canning plants were closed down as the price of raw material increased and were not cost effective anymore. At present only two canning plants are operational, out of which one is processing pasteurized crab meat for exporting it to US markets.

Most of the fish are consumed locally in Pakistan, and a very small quantity can be exported owing to the lack of wet processing facilities. In Pakistan, most of the fishing activities are primarily carried out in shallow coastal waters, and the boats being used are of small capacity; these boats have a capacity of 20 to 100 tons (Kalim & Syed, 2017).

Key Issues in the Fisheries Sector in coastal areas of Pakistan are the use of destructive nets, overfishing beyond sustainable limits, and Pollution activities in the coastal fishing areas, which result in a decline in the total fish catch due to unsustainable methods of fishing and neglect aquaculture development. The causes highlighted above have worsened the situation in this sector, along with the unregulated and disorganized private fishing sector, lack of consistent government policies and minimal government investment.

Developing Coastal Tourism

Maritime tourism is defined as "the sector of the tourism industry that is based on tourists and visitors taking part in active and passive leisure and holiday pursuits or journeys on coastal waters, their shorelines and their immediate hinterlands" (Pakistan, 2016).

According to the World Economic Forum, coastal and marine tourism is predicted to be the most rapidly growing, expanding and largest value-added sector of the ocean economy by year 2030. Travel and tourism is globally a well-recognized industry. For ocean related economy, coastal and marine, Travel and Tourism is a well-recognized value adding industry. It is growing faster than other giant sectors of construction and agriculture.

This sector contributed to 10.4% of the global GDP in 2018. This sector is responsible for approximately 10 percent job creation in any given year. Pakistan stands at 121 among 140 countries according to the Travel & Tourism Competitiveness Index (2019), which places its position below Bangladesh. According to the World Bank's sources, the contribution of the travel and tourism sector to Pakistan's gross domestic product remained at just 2.93 percent in 2018. At the same time, other regional states with almost similar social and economic dynamics are performing much better in the sector (Bhatti, 2019).

Maritime tourism has the potential for significant socio-economic development and reduced unemployment of communities in coastal areas. South Asian tourism sector earned 300 billion dollars in 2018, and its total share in the global industry was 8.8 %. However, this region is expected to reap the benefits of this fastest-growing industry in the coming years if it understands the significance of this sector and develops it as a major contributor to the national economy.

China, India, Turkey, Thailand and Maldives are already reaping the benefits of their well-established infrastructure, in coastal areas, and also through marketing and promotion of themselves as tourist friendly brands.

Scenic views, historical sites, religious places, blue lagoons, ancient monuments and sandy beaches offer a lot of opportunities for maritime tourism in Pakistan. However, in Pakistan, the bleak security situation, especially in Balochistan, negligible infrastructure and comparatively poor education are the main reasons that tourism has not yet gained momentum. In Pakistan, coastal tourism and recreational activities seem to be limited along the Karachi coast and extend towards a few beaches along Baluchistan, such as Gaddani Beach and Kund Malir only (Pakistan, 2016).

From Sir Creek to Gawader Bay, these shores can be developed as exotic Marine recreational zones with Yachting and sailing belts, and Maritime theme Parks can be develo ped along Astola Island and Indus River Canyon provided Government can ensure safety, security and accessibility through developing basic infrastructure and secure environment. If private sector investment is encouraged, this blue can be turned into gold.

Exploitation of Offshore Natural Resources (Minerals, Oil and Gas)

Pakistan has a large unexplored offshore basin. There are unexplored sedimentary basin having Conventional resources like oil and gas reserves and other offshore marine resources like metallic deposits and salts which provide Exploration and production companies an opportunity to invest and make profit.

Pakistan offshore exploration has a challenging history and a promising future. Multinational Exploration and Production (E&P) companies are usually equipped with extensive research and development experience, extensive databases, skilled human resources, and sufficient financial capability. Therefore, major foreign E&P companies carried out seismic surveys and drilling of near-shore wells, which proved that Offshore Makran has considerable potential for shale gas exploration and production, which are estimated to be more than 9 billion barrels (Aftab et al., 2017). Specially designed incentives offered to interested firms possessing sound technical and financial backing can support the government's initiative to undertake exploration activities.

Conclusion

Despite having the enormous economic potential for maritime trade and natural access to the sea and its abundant resources, the maritime sector in Pakistan has unfortunately not been able to gain the attention of policymakers, which has caused this sector to be underutilized and contributing a very negligible share towards economic growth and development. The reasons for the neglect can be identified as financial constraints, lack of strong maritime policies, only focusing on land resources and significantly low maritime awareness. A thriving shipping industry generates revenue, creates added employment opportunities and assures reliable shipping services, especially in times of crisis, for a sustained supply of strategic reserves. Due to limited fleet and heavy reliance on foreign ships not only taxes our economy but could be a major strategic drawback in times of conflict/war. Similarly, the shipbuilding/breaking industry needs to be revitalized. Processing fish and seafood using modern techniques will save wastage, which occurs due to inefficient storage methods. Coastal tourism and recreation are other areas that can contribute to the development of the economy, as is the case in many countries. With fast-depleting land resources, an ever-increasing population and no substantial economic upturn, sea resources will help Pakistan sail to a brighter future.

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