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RESEARCH ARTICLE

FACTORS AFFECTING GROWTH OF THE FISHING INDUSTRY IN PUNTLAND: A CASE STUDY OF EYL DISTRICT.

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Abstract

Fish harvesting in Somalia is very limited and unexploited natural resource due to existence of several factors that influence the growth of the fishing industry. This study focused on the factors influence growth of the fishing industry in Eyl district in Puntland State of Somalia. The general objective of this study was to examine the factors influence growth of the fishing industry in Puntland. The study examined how variables such as cultural practice and market accessibility influence growth of the fishing industry. The study was quantitative in nature; the study targeted population of 80 fishermen living in the two villages of Dawad and Badey. Due to the small number of the target population the study employed census technique method for the respondents who were only fishermen. Research instrument was primary data using Likert scale type of questions and close ended questionnaires. Pilot testing of the questionnaire was done to know whether the questions in the questionnaire were well worded and framed, the researcher identified that there are some errors in the questions and then replaced, one research assistant was trained. Lastly, data was analyzed by using Statistical Package for Social Scientists (SPSS version 20) with figures and tables. The findings from the study was that cultural practice have no influence on growth of the fishing industry in the study area. Another finding revealed by the study was poor market accessibility for the fishermen was the biggest challenge that influence on growth of the fishing industry. The recommendation is that there is need for the government to help the fishing communities to provide investment opportunities, loans, establish cooperative societies and banking systems, provide storage facilities and build cold rooms in every landing sites where fish is collected, improve roads leading to the fish collection centres so that the tracks and lorries transporting fresh fish to distant markets move within the stipulated time to avoid wastage.

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Introduction:-

With a coastline of over 3,898km long, Somalia has one of the largest maritime zones in the western Indian Ocean that embrace a very important large marine ecosystem (LME) known as the Somali Current Marine Ecosystem. A prominent feature of this ecosystem is a seasonal upwelling which gives rise to high levels of biological productivity which in turn sustains rich fishing grounds, most notably in the area between Ras Aseyr and Ras Maber off the Puntland coastline. Because of its location of the convergence zone of three seas, Somalia is regarded as a major ecotone between the fauna and flora of the Indian Ocean, the Red Sea and the Arabian Sea. Obviously, the Somali coastal and marine environments are of national and regional significance both in terms of biodiversity and fisheries resources. Other distinctive features of the Somali coast include fringing reefs and patches of coral reefs along the Gulf of Aden coast as well as in the south coast between Adale and the Kenyan border. Conservative estimates have put the country's yearly sustainable marine finfish production in the range of 300,000 tons, with the major commercial fisheries being small and large pelagics, demersal fishes, sharks and rays, as well as shallow-water and deep-sea lobsters and shrimps (UNEP, 2010).

In an effort to tap the fisheries resources, successive Somali Governments had implemented, with technical and financial support from bilateral and multilateral donors, various fisheries projects along the coastline including fish processing plants, icemakers, boatyards and acquisition of modern fishing vessels. The Government also established and operated a modern fishing fleet under the Ministry of Fisheries in order to exploit the abundant offshore resources. In the early 1970s, fishermen were organized into district cooperatives and drought-affected nomads were as well resettled in the coastal villages and encouraged to take up fishing. The nascent cooperatives were provided with assistance from various international aid agencies in the form of training and various fishing inputs such as motorized fishing boats, fishing gear and other related shore facilities. However, the cooperatives never become economically viable and eventually collapsed due to mismanagement, corruption and fishermen's dissatisfaction with collectivization programme in the first place.

In spite of the huge resources and the Government's efforts, Somalia has failed to transform itself into a fishing nation owing to various factors and as a result its fish production has never exceeded more than 20,000 tons even when the catch of the licensed foreign fishing vessels is included. The sector provided only 2% of the country's GDP in the 1980s.

Livestock and agricultural sectors have always been the main stay of the economy. More than 60% of the population is still nomadic pastoralists who depend on raising camels, cattle and goats for their livelihoods. Eating fish is therefore unusual in the Somali tradition and even fishermen themselves prefer red meat to fish, resulting in the country to have one of the lowest per capita fish consumption in the world – a mere 1.6 kg/per person/per year (FAO, 2010) . For comparison, average global and African fish consumptions are respectively 15 and 7 Kg/person/year.

The fisheries sector has been hit hard by the civil war and the cost of its revival may require millions if not billions of dollars given the fact that the entire fisheries infrastructure and facilities put in place by the previous governments were either looted or destroyed beyond repair or left to degrade in the course of the civil strife. Other problems affecting the sector include Illegal, Unregulated and Unreported (IUU) fishing activity, irrational inshore resources exploitation and lack of markets as well as the absence of effective fisheries governance in the country. If developed and managed in a sustainable manner, however, the fisheries sector has without any doubt great potential to contribute significantly to national development and economy at large through food security, foreign exchange earnings and creation of employment opportunities.

The first serious investment in the sector was initiated in 1940s when Italian businessmen established two fish canneries in Kandla and Habo on the Gulf of Aden coast east of Bosaso. A similar but bigger factory was also implemented in Las Qorey in 1960s with Soviet assistance. The three canneries together employed several thousand Somalis during their heydays. These initiatives were followed by the implementation of NECFISH project in Bari Region in the 1980s that resulted in the construction of a cold storage in Bosaso and several fish collection points in Kandala and Alula districts. With the exception of the Bosaso cold storage, all the factories and facilities have been looted after the collapse of the Government. The Bosaso cold storage may not fair better though as it lies idle thanks to a tussle between the Puntland Government and a group of Businessmen over its ownership.

It was only after the collapse of the Government in 1991 that local Puntland businessmen had realized the potential of the sector and made modest investments in the form of reefer trucks, mobile cold stores, boats and other fishing inputs, mainly to exploit lobster resources. The venture paid off and the lobster fishery had at one time become the main stay of the economy replacing the livestock as the number one foreign exchange earner through the export of frozen lobster tails to UAE. The ban of the Somali livestock export to the Gulf countries also drew more investors to the fishery further intensifying the pressure on the lobster populations.

Problem Statement:-

According to the FAO, the only fish stocks in the world that are actually “underfished” are in deep water off Somalia’s coast. Large schools of, primarily, tuna migrate from north to south and back along the east coast of Africa and concentrate off Somalia, where the upwelling of oxygenated deep water brings nutrients to the surface and, ultimately, smaller fish on which the tuna feed. As Somalis prize meat from livestock and consider fish to be second-class food, the domestic market for fish is very small – a principal reason why the industry has not developed further.

The fact that it is cheaper in Somalia to buy canned tuna from Thailand than to get high quality tuna from a few miles up the coast illustrates the industry’s weaknesses. The situation has been complicated by piracy, mostly of Puntland, which peaked in 2009 and allegedly began to stop overfishing. With neither coast guard nor navy, Somalia is incapable of policing its own waters. Foreign navy vessels implementing the international anti-piracy effort check Somali fishing boats, which has made it difficult for legitimate Somali fishermen to go to sea because their boats are unregistered and crew members may not have clear identification.

However, various factors have significantly influenced to growth of the fishing industry in most of coastal areas, this have resulted many coastal communities in Somalia not to benefit the marine resources, most of these factors influencing fishing industry they experience include but not limited to cultural practice and market accessibility. According Ministry of Fisheries and Marine Resources with partnership of FAO (2014), found that despite Somalia have the largest coast in Africa it regarded as one of the lowest per capita fish consumption in the world; they further found that only 4% of the working force are engaged with the fishing industry, and hence this small percentage are faced by a number of problems including poor infrastructure, cultural practices and marketing accessibility. Moreover, there is need to study this problem by examining how such factors influence growth of the fishing industry as well as to propose better solutions that could enhance the fishing sector. There is no study done on factors influencing growth of fishing industry in Puntland.

The study investigated the factors influencing growth of the fishing industry in Eyl district. It provided strong arguments on how the variables such as cultural practice and market accessibility may directly or indirectly influence growth of the fishing industry in Puntland with especial case study of Eyl district in Nugal region.

Objectives Of This Study:-

The objectives of this study were:

1. To determine the influence of cultural practice on growth of the fishing industry in Puntland.
2. To establish the influence of market accessibility on growth of the fishing industry in Puntland.

Theory:-

Each of the selected two variables (cultural practices and market accessibility) of this study were guided by theories.

Cultural variability theory model:-

This theory was first introduced by Hofstede (1972), in this theory culture is measured in terms of individual and collective behavior, it emphasizes emphasize personal rights and responsibilities, privacy, voicing one’s own opinions, freedom, and self-expression. The “I” identity places emphasis on individuals with less concern for the group. Reciprocity is voluntary, self-initiated or self-motivated Members feel interconnected in a group orientation system which creates more group solidarity. Management can appeal to this group-level solidarity. Seventy-five percent of the world’s population subscribes to some kind of collective outlook and approach.

This theory believes that individual’s cultural material and non-materials plays significant role in development, it urges that some cultures are friendly to development, for example, Japanese cultures directly relates to their

development, the culture of confusion which made Japan more developed society, it also urges that some cultures are not friendly with development, the theory further urges that continuity of cultures that are friendly with the development, while giving examples to other society, likewise, the theory model urges that culturally unfriendly societies should integrate and modernize their culture and to be in line with the modern world perspectives.

Cultures freedom produces uncertainty, which leads to stress and anxiety. These cultures may seek to avoid uncertainty by increasing rules of behavior, this theory further suggests that many southern European countries, as well as Japan and Peru, tend towards uncertainty avoidance. Other countries (including many northern European countries) are, it is argued, better able to tolerate freedom and diversity without excess stress and anxiety, culture's rigidity and dogmatism are a function of the uncertainty avoiding dimension. This dimension also influences communication between individuals; particular direct or indirect forms of communication can be used to reduce uncertainty.

Market theory:-

The theory of market participation has developed many different perspectives, including asset-based approaches and agricultural developmental theory approaches. Boughton et al (2007) viewed market participation as both a cause and a consequence of economic development. Markets offer households the opportunity to specialize according to comparative advantage and thereby enjoy welfare gains from trade. Recognition of the potential of markets as engines of economic development and structural transformation gave rise to a market-led paradigm of agricultural development during the 1980's (Reardon and Timmer, 2006) in which market liberalization policy agendas were widely promoted in Sub-Saharan Africa (SSA) and other low-income regions. Furthermore, as households' disposable income increases, so does demand for variety in goods and services, thereby increasing demand-side market participation, which further increased the demand for cash and thus supply-side market participation. The standard process of agrarian and rural transformation therefore involves households' transition from a model of subsistence, in which most inputs are provided for and most outputs consumed internally, to a market engagement mode, with inputs and products increasingly purchased and sold off the farm (Timmer, 1988; Staatz, 1994). The asset-based theory was summarized by Omiti et al (2009), who held that as the market share of agricultural output increases, input utilization decisions and output combinations are progressively guided by profit maximization objectives. This process leads to the systematic substitution of non-traded inputs with purchased inputs, the gradual decline of integrated farming systems, and the emergence of specialized high-value farm enterprises.

Several models have been proposed to explain why limited market participation may exist. In short, Allen and Gale (1994), Williamson (1994), Vissing-Jorgensen (1999), and Yaron and Zhang (2000) have focused on how entry costs and/or liquidity needs have created limited market participation.

Methodology:-

The target population of the study was a fishermen living in Eyl district which was a total of 80 fishermen, since the target population was small, census technique was adapted so that all the target population were selected as respondents. The study used quantitative research with research instrument of close ended questionnaires using Likert Scale type as primary data collection tool, ranging from Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N), Disagree (D) and Strongly Disagree (SD). The rating corresponds to 1 (SA), 2 (A), 3 (N), 4 (D) and 5 (SD). Pilot testing of the questionnaire was done to know whether the questions in the questionnaire were well worded and framed, the researcher identified that there are some errors in the questions and then replaced, one research assistant was trained. Lastly, data was analyzed by using Statistical Package for Social Scientists (SPSS version 20) with figures and tables.

Results and discussions:-

Influence of cultural practice on the growth of fishing industry:-

From the data analysis in Table 1 when enquired respondents' views on the statements of "People engaged with fishing activities are regarded as inferiors and henceforth they are socially discriminated and subordinated" Majority of the respondents with spectacular percentage of 50 (62.7%) disagreed the statement, while on the other hand, 20 (25.4%) agreed the statement, 4 (4.5%) of the respondents strongly agreed the statement, only 1 (1.5%) Neither agreed or disagreed the statement. Hence, the study found that people engaged with fishing industry are not socially discriminated and subordinated. Thus, the study contradicts with Ivan Kyangwa and Konstantine Odongkara, (2005) findings that fishing activities are always engaged by the inferiors and most discriminated part of the society.

Table 1: Social discrimination and subordination of people engaged in fishing industry

	Frequency	Percent (%)
Strongly Agree	4	4.5
Agree	20	25.4
Neither Agree nor disagree	1	1.5
Disagree	50	62.7
Strongly disagree	5	6.0
Total	80	100.0

From the data analysis in Table 2 when enquired respondents' views on the statements of "fish is regarded as men's job, and women involved in fishing industry are considered as immoral and considered as a bad example" majority of the respondents with 53 (65.7%) disagreed the statement, while on the other hand, 21 (26.9%) agreed the statement, also 5 (6%) of the respondents strongly disagreed the statement, only 1 (1.5%) of the respondents strongly agreed the statement. Therefore, the study found that fishing is not regarded as men's job and also women involved in fishing industry are not considered as immoral and bad example. Thus, the study contradicts with Adhiambo Eunice Okello et al, (2015) finding that fishing is a man's job is still very strong. Culturally, women are supposed to be housekeepers taking care of children. Naturally, women fear the lake and fishing is mostly done at night which is hard for women.

Table 2: Fishing are regarded as men's job and women involved are regarded as immoral

	Frequency	Percent (%)
Strongly Agree	1	1.5
Agree	21	26.9
Disagree	53	65.7
Strongly disagree	5	6.0
Total	80	100.0

From the data analysis in Table 3, when enquired respondents' views on the statements of "Individuals who consumes the sea food including the fish are cultural regarded as 'Jaji' meaning somebody who have deep poverty and not able or even keen to rear camels, cows and goats. Majority of the respondents with 48 (59.7%) disagreed the statement, while also 4 (4.5%) strongly disagreed the statement, on the other hand, 27 (34.3%) of the respondents agreed the statement, while also 1 (1.5%) of the respondents strongly agreed the statement. Therefore, the study found that individual who consumes fish are not culturally regarded as 'Jaji' and there are not considered as people with deep poverty.

Table 3: Individual who consumes fish are regarded as "Jaji"

	Frequency	Percent (%)
Strongly Agree	1	1.5
Agree	27	34.3
Disagree	48	59.7
Strongly disagree	4	4.5
Total	80	100.0

From the data analysis in Table 4, when enquired respondents' views on the statements of " There are concerns that staying landing sites and consuming fish would lead to deteriorating health issue including sight loss, mouth illness and change of person's way of talking" Majority of the respondents with overwhelming percentage of 61 (76.1%) of the respondents disagreed the statement, while 5 (6%) of the respondents strongly disagreed the statement, on the other hand, 11 (13.4%) of the respondents agreed the statement, while 1 (1.5%) of the respondents strongly agreed the statement, only 2 (3%) of the respondents neither agreed or disagreed the statement. Therefore, the study found that consuming fish does not lead to deteriorating health issue such as sight loss, mouth illness and change of person's way of talking, thus, the study contradicts with Adhiambo Eunice Okello et al, 2015, findings that most of his respondent's with 73% believed that fishing activities leads to deteriorate health by causing diseases including sight loss, mouth illness and change of peoples' way of talking.

Table 4: Consuming fish leads to deteriorating health condition

		Frequency	Percent (%)
	Strongly Agree	1	1.5
	Agree	11	13.4
	Neither Agree nor disagree	2	3.0
	Disagree	61	76.1
	Strongly disagree	5	6.0
	Total	80	100.0

4.2 Influence of market accessibility on growth of the fishing industry

Fishers' perceptions were sought on domestic market demand. When asked whether the domestic market demand of fish is low, Table 5 shows that most of the respondents 53 (65.7%) were disagreed and mentioned that domestic market demand is high in the study area, the rest of the respondents 24 (29.9%) and 4 (4.5%) were agreed and strongly agreed that domestic market demand of fish is low respectively. The result is similar to Ssebisiubi Maurice (2010) in a study in Uganda; who reported that 77% of the respondents stated that there is high demand of fish from their customers.

Table 5: Domestic market demand of fish

		Frequency	Percent (%)
	Strongly Agree	4	4.5
	Agree	24	29.9
	Disagree	53	65.7
	Total	80	100.0

As shown in Table 6 the analysis of the data revealed that majority of the respondents approved that there are no banks that would provide loans to invest the fishing sector. The Table 4.11 indicates that 59 (73.1%) and 18 (22.4%) were agreed and strongly agreed that no single bank would provide loans or investment grants to the fishermen, while 2 (3%) and 1 (1.5%) were strongly disagreed and disagree in the subject respectively. The result is in line with the findings of Adhiambo Eunice Okello et al. (2015) who reported that 54.8% of the respondents agreed that there is lack of banking facilities thus hindered them from saving money. Most banks were situated in the towns of Hoima county in Kenya.

Table 6: There are no bank services

		Frequency	Percent (%)
	Strongly Agree	18	22.4
	Agree	59	73.1
	Disagree	1	1.5
	Strongly disagree	2	3.0
	Total	80	100.0

The study intended to find out whether there are companies that monopolize fish export to international markets. The findings in Figure 1 revealed that most of the respondents 37 (46.3%) agreed that there are companies that monopolize the export of fish to international markets, 7 (9%) were also strongly agreed the existence of monopoly for fish export to international markets while 32 (40.3%) and 4 (4.5%) of the respondents were disagreed and strongly disagreed respectively the existence of monopoly in exporting fish to international markets.

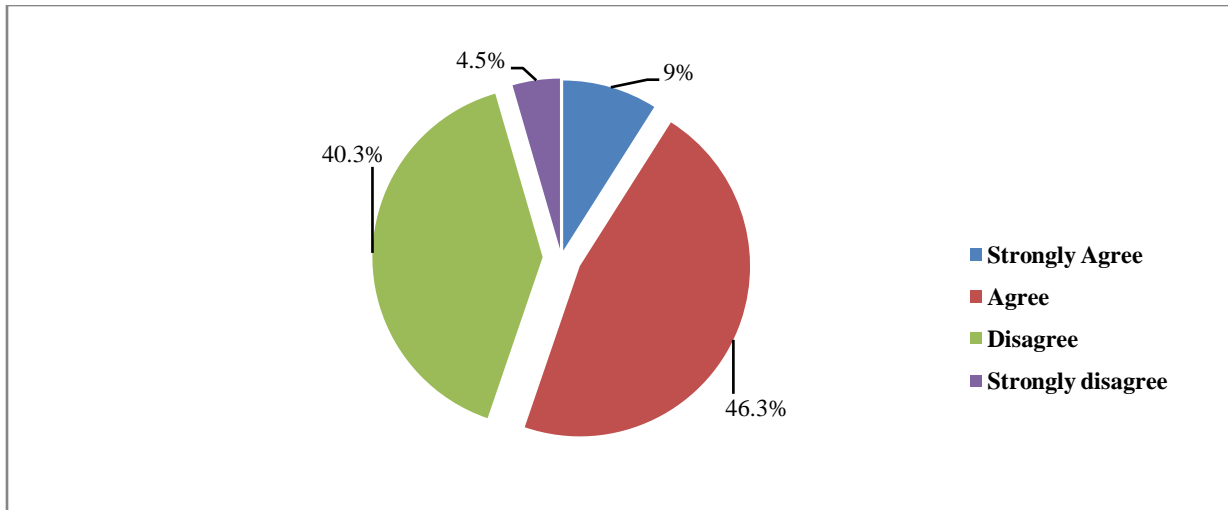


Figure 1: Monopolizing fish export to international markets

The study also sought to examine whether there are limited companies that export fish from landing sites to international markets. The results of Table 7 indicated that 66 (82.1%) of the respondents agreed that there is limited fish export companies, 8 (10.4%) were also strongly agreed that there is limited fish export companies that operates in the study area while 5 (6%) and 1 (1.5%) of the respondents were disagreed and strongly disagreed respectively that there are limited fish export companies in the study area.

Table 7: There are limited fish export companies

	Frequency	Percent (%)
Strongly Agree	8	10.4
Agree	66	82.1
Disagree	5	6.0
Strongly disagree	1	1.5
Total	80	100.0

The study set out to find out whether there is lack of access to market information by the fishermen that makes them not to be aware the existing opportunities in the markets. The Table 8 indicated majority of the respondents 50 (62.7%) were agreed that there is lack of access to market information by the fishermen, 4 (4.5%) were also strongly agreed that lack of information by the fishermen in the study area, while 25 (31.5%) of the respondents were disagreed that there is lack of access to market information by the fishermen and only 1 (1.5%) were also strongly disagreed the subject. The study findings oppose to the FSAU-FAO study (2011) that found majority of the population have access to information on fish (benefits, preparation and handling) from health workers, local media, fish mongers and other fish consumers.

Table 8: There is lack of access to market information

	Frequency	Percent (%)
Strongly Agree	4	4.5
Agree	50	62.7
Disagree	25	31.3
Strongly disagree	1	1.5
Total	80	100.0

The study intended to find out whether there is no government subsidies for the fishermen to facilitate them to access to the markets. The analysis in Table 9 revealed that majority of the respondents 49 (61.2%) were agreed that there is no government subsidies to support for the fishermen, 10 (11.9%) were also strongly agreed that there is no government subsidies for the fishermen while only respondent 1 (1.5%) was neither agreed nor disagreed the query. On the other hand, 19 (23.9%) of the respondents were disagreed that there is no government subsidies for the fishermen. Similarly, only 1 (1.5%) of the respondents was strongly disagreed that there is no government subsidies

for the fishermen in the study area. This is in agreement with the findings of Harrison Kwame Golo and Lawrence Odumah (2015) who found that majority of the respondents (85%) cited high prices of inputs such as nets, premix fuel and outboard motors are the key major problems hampering their fishing activities in rural coastal fishing communities in the Volta region of Ghana.

Table 9: There is no government subsidies for the fishermen

	Frequency	Percent (%)
Strongly Agree	10	11.9
Agree	49	61.2
Neither Agree nor disagree	1	1.5
Disagree	19	23.9
Strongly disagree	1	1.5
Total	80	100.0

Conclusion:-

In the past, cultural practice in study area have framed fishing as an inferior industry, and fish meat has been considered to be of a 'lower status' than others. Recently though, there has been a shift that has seen a greater acceptance of fish and fishermen. Much of this has to do with communities increasingly recognizing the health benefits of eating fish. The healthfulness of fish has been promoted by local doctors. The study concluded that cultural practice have no influence on growth of the fishing industry in the study area. The study dealt with domestic market demand, banking services. Other challenges included limited fish exporting companies, lack of access to market information and lack of government subsidy to support for fishermen.

Recommendations:-

Based on the findings of this study and the conclusions drawn, the following recommendations were made:

1. The fishing communities need to be provided investment opportunities, loans, establish cooperative societies and banking systems.
2. The government should help the fishermen acquire storage facilities and cold rooms be built in landing sites where fish is collected.
3. Roads leading to the collection centres need to be improved so that the tracks and lorries transporting fresh fish to distant markets move within the specific time to avoid wastage.

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