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Factors Influencing Value Addition among Fish Traders in Mombasa County, Kenya

By

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Abstract

Although there exists enormous benefits that can be linked to value addition, many fish traders in Mombasa County still sell unprocessed fish and fish products. The resultant losses are due to spoilage attributable to perishability of fish and losses of additional income for lack of processing. The study was on factors influencing value addition among fish traders in Mombasa County. The specific objectives was: to determine the influence of infrastructure on fish value addition. The research employed a descriptive research design and a census methodology. The target population was 76 registered fish traders involved in fish business. Structured and semi-structured questionnaires were employed. Quantitative and qualitatively analysis using frequency table proportions (percentage) was used to interpret the data, inferential statistics was used to analyze the data. The study established that the infrastructure ($\beta=.376$, $p<.001$) has significant causal effect on fish value addition in Mombasa County. It was concluded that support towards enhancement of infrastructure is necessary if value addition is to be uplifted. The County government is an important player in ensuring that trade policies are pro- business and especially towards ensuring that they work for up scaling of fish value addition. The study recommends that state and non-state actors should come in through infrastructural development to assist fish traders to embrace and enhance uptake of fish value addition. Government agencies should re-look at the existing policies, guidelines and regulation relating to fisheries industry to ensure they are pro-value addition. Fish traders should increase their internal capabilities by adopting modern technologies and equipment to enhance fish value addition activities.

Keywords: Mombasa, Value Addition, Infrastructure, Fish trader

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Introduction and Background of the Study

Value addition according to (Kim & Lalancette, 2013), refers to product enhancement resulting from growing in abilities, Skills, knowledge, plus other qualities the staffs have added from practice in the respective field over time. Benefits associated with value-added measurement include but not limited to given that fair estimation of that input businesses do to the production process observed within a period of time and provide more accurate estimate on the businesses effort associated with production levels and potential.

Value-added foodstuffs come in various methods that include, old-style processed products, and market-driven foods that have an increase in demand, and health-driven seafood, that is becoming an increasingly significant niche, values-added manufactured goods that is more focused on social issues, environmental issues and technologically focused seafood products which often adds quality characteristics and health aspects to products. The advantages of value-added processing, includes extending shelf-life, conserving high quality standards, creating safer products, and improve financial returns to producer/processor (Morrisey, 2011).

Value addition can be done to, a process, a product, a service, or the whole business. Value addition can be by means of giving out better or additional services in the form of after-sales amenities and superior customer care. Value may be equally be done by refining in some way a product, or include accessories with the product. A good example, a computers retail vendor can add value by adding computer accessories or software with the original product, the computer. Firms with forceful branding can add value by using the firm's logo to sell the product (Certification, 2018). It is imperative in virtually all sectors where goods and services are provided, to infuse and invoke value addition practices throughout the value chain.

In agriculture value addition involves changes made to prime agricultural products such as tea that increases the product's value (Tea Board of, 2014). Value Addition encompasses any extra value infused to enhance the original state of something. This is feasible to products, service, firms, and other areas of business including management. In this value addition would refer to the processing and packing provided to fishery resources in order to reduce waste and hence increase the final value above its initial value or raw form (IBF, 2011). (Eskandari & Zeraatkish, 2016), researched between 1989 to 2013 on the effect of value added and exports of fisheries sector on economic

Variables of agriculture sector in Iran using the VAR method. The study result indicated that the variable growth related with value addition in fisheries sector vis-a-vis the value add in agriculture had fluctuated accordingly. Value addition to fish is an essential strategy that enhances economic value to fish, broaden the market performance and decreases the problem of post-harvest losses in sub-Saharan Africa- (Kyule, et al., 2014), (Mohamad, Ahmad, Abidin, & Mohamad, 2011).

The value chain is divided into key activities that are involved in the physical creation, sale, transfer of goods and services to the client, and support activities which provide technology, personnel and purchased inputs and which organize the key activities (Fearne, Martinez, & Dent, 2012). It is a scheme of firms that interact to positively impact one another's performance (Bigliardi & Bottani, 2010).

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Value addition activities present an opportunity to make profits by the fisher folks at the household and enterprise levels. This translates to increased economic development in the fisheries sector. The development of activities aimed at adding value not only allows a sound economic framework to be developed or maintained, but it can also capitalize on all the resources (human, economic, cultural) present in the territory to foster sustainable local development.

Income approach or the output approach is an ideal methodology for measuring value. This approach aggregates the factor incomes derived from the factors of production. It is called the “net product” or “value added” approach. It shows the influence (value added) achieved by each producing component in the production process.

The ISUDP, (2035) proposes several strategies and projects for development of fisheries sector and to provide a favorable business environment and employment opportunities. Among these are; to improve fishery products, its handling and to reduce the level of post-harvest losses, to increase fish production from the deep waters beyond the reef, to promote fish production through fish farming, to attract commercial fishing vessels for landing, transshipment and access to services, to ease access of landing- sites and development of the fishery, to centralize capture fisheries operations to designated beaches and to enhance fish storage and marketing in the County.

Mombasa County has come out with Area-Based Land use strategies to be adopted up to year 2035. In this regard, one of the propositions is to promote fishing activities through provision of fish processing facilities in the Mainland South (Sector V) which will mainly affect Likoni sub-county. (ISUD Plan - Mombasa Vision 2035). The fish traders in Mombasa County are concentrated in market areas within the sub-counties mainly Likoni, Kisauni, Changamwe, Mvita, Nyali and Jomvu of Mombasa County with Kongowea being the main market within the County. The Fish traders play an important role of bridging the gap between the downstream and upstream ends of a typical fish supply chain. On investment environment in Mombasa County, one major challenge cited for lower investment in fishing industry is lack of focus in fishing as an economic activity. (ISUD Plan - Mombasa Vision 2035).

Statement of the problem

According to (FAO, 2014) Kenya’s average per capita food fish consumption was estimated at 4.5 kg in 2014. The world per capita food fish consumption has increased from 9.0 kg to 20.2 kg between 1961 and 2015, with a yearly average rate of about 1.5 percent. Projected estimations for 2016 and 2017 were 20.3 kg and 20.5 kg respectively. East Africa Community average is 7 kilograms per person a year and Africa annual average is roughly 10 kilograms. In Kenya the 4.5 kg consumption level is far much below considering the nutritional worth of fish and fish products and also considering the potential of fish production in the Country. This is partly attributable to post harvest losses brought about by lower uptake of value addition practices which is significant towards enhancing palatability and economic worth of fish and fish products.

Given the challenges faced by fish traders, in relation to handling and processing of fish and fish products, value addition and enhancing the value chains is necessary towards reduction of post-harvest losses. Many fish traders in Mombasa County sell their fish products unprocessed and with little effort in value enhancement this leads to losses brought about by the perishability nature of raw fish. They also suffer losses attributable to forgone opportunity in terms of additional income. The study therefore sought to answer the question: Which factors influence value addition among fish traders in Mombasa County?

Objective of the Study

To determine the influence of infrastructure on value addition among fish traders in Mombasa County

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Review of Related Literature

Influence of infrastructure on Value Addition among Fish Traders.

In a study undertaken by (Alam, 2016), on supply and value chain of fish in the super-shop outlets. In the finding was that super shop fish corner buy fish from wholesalers/ paikers, agents or suppliers and resell the same to ultimate affluent end user consumers. The role of the super shops was to acquire products and display the same in a manner that is more attractive and safe forms and which are considerably convenient for middle class aesthetic end users to purchase. They act as the last link of intermediaries in the channel of value added fish marketing before the city dwellers. According to this finding, upend shop chains in Dhaka had necessary facilities and equipment for preservation and hence sell good quality fish in comparison with those that are availed at the general fish markets at between 20-25% over normal price. The marketing profit and marketing margins were higher in upend, when compared with other players in the downstream activities, owing to exorbitant management costs of business operations associated with the upend shops.

According to (Salagrama, 2015) in his study on opportunities in relation on strengthening value chain of small scale fishers he deduced that infrastructure is an important enabler towards enhancement of value addition. According to him, infrastructural challenges led to various outcomes. Among these are: long chain of market intermediaries, long delays in market access; and lack of control for the value chain actors on issues related to markets or market information. Such conditions have contributed to substantial losses which are both quality and value related. Also according to (Akanbi, 2016) in a study conducted on value chain analysis and its performance on small scale agribusiness featuring fish farmers at Kwara State, the outcome of the findings form majority of respondents indicated that major constraints limiting the fish farmers production included but not limited to inadequate credit facility, poor quality of water, problem of poor access to electricity, and lack of government support for fishing input acquisitions. With constraints facing the marketers the major constraints features issues to do with transportation, inadequate capital, inadequate basic infrastructure, product spoilage, lack of market information and price fluctuation.

According to a study conducted by (Mwirigi & Theuri, 2012) in relation to the challenge associated with value addition of seafood value chain in the northern coast of Kenya, the findings were that there are inadequate facilities to undertake value addition. Marketing channels available also are insufficient and with fairly weak linkages. Most fishermen have no access to international markets; there is ignorance on prices and inadequate information on market opportunities, customer needs and trends. The chain, owing to very little linkages in the value chain notes is also significantly underdeveloped. Furthermore, along the various points in the chain, there is very little value addition. A bigger number of the seafood products sold are in their raw forms.

In the study conducted by Hempel (2010) on the fisheries sector value chain analysis in Africa the findings indicated that owing to lack of iced and cold structures there was a constant rise in deterioration of tilapia quality. The conveyance route inside DRC is also considered prohibitive for trucks and reefers that are insulated. The issue of inadequate storage facilities also brought about limitations thereby reducing marketing period for produce to period of less than 24hrs. According to (De Silva, 2011), in his study on value chain of fish and fishery products and the application in developed and developing country markets, the findings indicated that there was urgent need to introduce coolers and improve ice distribution systems in order to minimize post-catch losses. Further to this, it also indicated that proper harbors, landing sites and markets would be an upgrade plan that could stimulate value chain growth.

In a study by (Ntale & Mphande, 2014) on Kiambu and Muranga featuring indicators of value added agri-business on small farms, the findings according to the marginal effects of the predictive models namely; LPM, logit and probit models, distance to market is the major

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determinant of value addition among farmers. The OLS results (LPM model parameter estimates) showed that with every kilometer increase on the distance to the market, it increased value addition by 1.49% ($t = 5.73$), while in the logit model with every increase distance in kilometers to the market increases the probability by 0.69% ($t = 4.18$) for a farmer in adding value to farm produce and in the probit model by 0.8% ($z = 4.81$). This implies that the further the farmers are from the market, the more likely they are to have granaries for their agricultural produce. Most farmers in value addition utilize granaries predominantly as their value addition mechanism. The study results for LPM also indicate that having electricity increases the probability of value addition by 7.4% ($t = 2.79$). Similarly, the marginal effect for the logit is 4.79% ($z = 1.84$) while the marginal effect for the probit is 54.3% ($z = 2.3$). The results therefore, concur with Ntale (2013) observation that the cost of power is way above the reach of the rural folk and therefore, value addition in agriculture will remain a mirage if the issue is not addressed.

According to Odoyo (2013) in a study conducted in Bureti District Kenya, on impact of access to agro-processing technologies, the findings indicated that cost of agricultural manufacturing equipment was considered a factor that constrained the establishment and expansion of smallholder agro- processing businesses due to un-affordability. Eighty (80.0) percent of agro-processing respondents experienced reduced rate of growth in the number of income generating activities engaged in agro-processing owing to the high costs of manufacturing equipment. The diversity of equipment was limited to 6 major types of agro-processing tools included those used for crushing, slicing, thermal preservation, sorting, packaging and non-thermal preservation of agricultural produce. Diversity of processing equipment impacted positively on the number of agro-processing IGAs with 60.0 percent of farmers experiencing speedy rise in number of agro-processing units set up. There was a significant link between distances to agro-manufacturing equipment sources and the number of agro- based income generating activities units established by small scale farmers. The shorter the distances to manufacturing equipment sources the more positive the impact of the number of income generating ventures compared to long distances. Sources within radius of 50 km had the highest impact with 70 (53.8 percent) followed by sources 50 to 100 km away with 10 (7.7 percent).

Theoretical Framework

Sustainable Resource Theory

The theory is more concerned with long-term versus the short-term agenda. In essence it is concerned with how limited resources can be harnessed so that immense benefits can be accrued. Thurow (1993) predicted that in the future, sustainable advantages would be dependent on technological endowment and on technological process development as opposed to technological product development. Going by this observation, future industries would be dependent on brain power. Towards this end, competitive advantage was going to be driven by brain power to replace the comparative advantages associated with natural resources or historical endowments. Sustainable resource management refers and is understood to involve attaining the immediate needs of the present-day generation without curtailing the capability of the future dependents of fulfilling theirs. In this regard, the focus is normally on continuity looking at various key fronts associated with social, economic and environmental facets. The aspects mentioned and commonly identified as the three main pillars of sustainability and in other circles are informally understood to refer to people, planet and profits. In this regard for an enterprise to meet the threshold of being considered to be sustainable, key parameters hinging on the internal and external influences have to be considered. Thereafter, commitment towards realizing meaningful engagement which is conscious of the facets of business environment and corporate irresponsibility has to be embarked on.

In corporate world, corporate sustainability has become a buzzword and has been

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recognized as a parameter used for measuring abilities with focus cutting across the board regardless of the size of the enterprise. In this regard, major corporates have been put to task to prove how their commitment in the creation of goods and services in a manner that can be considered to be sustainable. In the current corporate world, corporate sustainability in investment is believed to fall under the environment, social, and governance (ESG) or socially responsible investment (SRI).

The environmental pillar has of late been given more cognizances with focus being on how carbon emissions could be reduced, how packaging related waste could be minimized, and sustainable usage of water resources. This can be looked at in relation to the general effect subjected on the environment. On this front, companies have realized that when the beneficial impacts on the planet and the financial benefits are measured, there is a great positive correlation. Lessening waste and usage of some products has shown merits in ensuring a more efficient and effective supply chain and overall benefits to industries. With regard to the social pillar, it has been elucidated in corporate world that a business should be supported and approved by its employees, the community it operates in and the stakeholders. This support should therefore be sort and approved by considering and taking cognisance of the welfare of this employees. Practicing good neighbourhood and by being a member of a community both locally and in the diaspora is therefore of essence.

According to (Swanson & Holton, 2001), the economic pillar which focuses on profitability comes with a rider. In this regard, the theory postulates therefore that the economic pillar does not mean amassing profits at any cost. In essence, it therefore means that there should be some considerations even when profit making is an objective of an enterprise. In this respect, key activities under this pillar should focus on compliance, good governance and risk management. For the same to hold, it is become a common practice that the same should be replicated in the entire supply chain. The theory is therefore used purposeful because it implies that by investing in human capital it must add value through creation of a sustainable and long-term economic growth.

Research Design

The descriptive study design was considered appropriate given the qualitative nature of variables used. It made more sense compared to probit, logit or linear probability models which have limitations in determining qualitative responses, like accounting for unquantifiable characteristics of the subjects under study. This study embraced a descriptive research design. The design offered necessary description of the subject under the study and identified problems addressed, profile of subjects through collection of necessary study details and documented the same using statistical parameter like frequencies. This data was later used for interpretation through analysis. The researcher used quantifiable statistics of mode, frequencies, percentages and socio-economic characteristics of the respondents as well as the independent variables and the dependent variable. The measurement was determined using the Likert scale of 1-5 with 1 being the highest degree of disagreement while 5 denoting the highest degree of agreement. Disagree is represented with 2 and agreement is measured with 4 in the scale. Level 3 stands for indifference/neutral. The Qualitative variables were measured using ordinal parameters.

The target population of this study was made up of 76 fish traders with 8 of these being drawn from large fish traders, while the remaining 68 being drawn from small fish traders. Out of this the researcher intent was to collect information from persons directly involved in one way or the other in fish handling and processing with the purpose to add value

The researcher undertook a complete enumeration of the population. In this respect, 76 subjects were targeted for study.

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Results and Discussions.

Influence of infrastructure on value addition

Specific objective: To determine the influence of infrastructure on value addition among fish traders in Mombasa County.

Descriptive analysis of Infrastructure on Fish Value Addition among fish traders in Mombasa County

The researcher sought to investigate the influence of infrastructure on fish value addition. To respond to this question, the respondents were required to indicate to what extent they agreed with the statement. The summary of the findings is as presented in Table 1.

Table 1:
Influence of infrastructure on fish value addition

Statement	Descriptive	SA	A	N	D	SD	Total
Access to market	Frequency	23	23	15	5	1	67
	Percentage	34.33	34.33	22.39	7.46	1.49	100
Availability of established structures	Frequency	9	25	23	8	2	67
	Percentage	13.43	37.31	34.33	11.94	2.99	100
Availability of power supply	Frequency	30	16	9	11	1	67
	Percentage	44.78	23.88	13.43	16.42	1.49	100
Availability of preservation equipment	Frequency	29	23	7	6	2	67
	Percentage	43.28	34.33	10.45	8.96	2.99	100
Availability of market system	Frequency	32	18	9	5	3	67
	Percentage	47.76	26.87	13.43	7.46	4.48	100
Availability of waste disposal system	Frequency	6	34	15	8	4	67
	Percentage	8.96	50.75	22.39	11.94	5.97	100
Availability of piped water	Frequency	24	15	7	12	9	67
	Percentage	35.82	22.39	10.45	17.91	13.43	100

Source: Author 2020

From the findings shown in Table 1, most of the respondents 23 (34.33%) indicated that they strongly agreed that access to market influences fish value addition. Another 23 (34.33%) indicated they agreed, 15 (22.39%) indicated indifferent/neutral response, 5 (7.46%) indicated they disagreed while 1 (1.49%) indicated they strongly disagreed. Also a significant majority 25 (37.31%) of the respondents agreed that availability of established structures influenced fish value addition activities. 23 (34.33%) gave an indifferent/neutral response. 9 (13.43%) strongly

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agreed with this statement, another 8 (11.94%) disagreed with the statement while 2 (2.99%) indicated that they strongly disagreed with the statement.

Further table 1 shows that majority of the respondents 30 (44.78%) indicated that they strongly agreed that availability of power has an influence on fish value addition with 16 (23.88%) indicating they agreed with this statement. Further 11 (16.42%) of the respondents indicated they disagreed with the statement. 9 (13.43%) of the respondents indicated an indifferent/neutral response to the statement. 1 (1.499%) strongly disagreed. On the opinion that availability of preservation equipment influences fish value addition a majority 29 (43.28%) strongly agreed with the statement, 23 (34.33%) agreed with this statement, 7 (10.45%) of the respondents registered indifferent/neutral response to the statement, 6 (8.96%) of respondents disagreed while 2 (2.99%) of the respondents strongly disagreed with the statement.

On the statement that availability of market influences fish value addition, a majority 32 (47.76%) strongly agreed with the statement, 18 (26.87%) agreed with the statement, another 9 (13.43%) gave an indifferent/neutral response, 5 (7.46%) disagreed with the statement while 3 (4.48%) strongly disagreed. Further table 1 shows that majority of the respondents 34 (50.75%) indicated that they agreed that availability of waste disposal system had an influence on fish value addition. 15 (22.39%) gave an indifference/ neutral response, 8 (11.94%) disagreed with this statement, 6 (8.96%) strongly agreed while 4 (5.97%) strongly disagreed. On the opinion that availability of piped water influences fish value addition, a majority 24 (35.82%) strongly agreed with the statement, 15 (22.39%) agreed with this statement, 12 (17.91%) of the respondents registered indifferent/neutral response, 9 (13.42%) strongly disagreed while 7 (10.45%) gave an indifferent/neutral response.

From the responses given, this implies that infrastructure has an influence on fish value addition. This findings concurs with the findings of a study conducted by (Mwirigi & Theuri, 2012) in relation to the challenge associated with value addition of seafood value chain in the Kenyan north coast, the findings were that there are inadequate facilities to undertake value addition. The finding is also buttressed by those of (Akanbi, 2016), whose outcome of the findings from majority of respondents indicated that major constraints limiting the fish farmers production included but was not limited to poor access to electricity. The findings of (Salagrama, 2015) in his study on opportunities in relation on strengthening value chain of small scale fishers also cited infrastructure as an important enabler towards enhancement of value addition. The implication of this study is that infrastructure is a key component that is of significance to fish value addition. Infrastructural amenities are an important enabler to fish value addition activities. An increase in infrastructural development therefore has a positive influence to fish value addition.

Summary

The results indicate that the infrastructure ($\beta=.376$. $p<.001$) has significant causal effect on fish value addition in Mombasa County. Considering infrastructure coefficient results, it means that an increase in infrastructure by 100%, the value addition increase by 37.6%.

Conclusions

The finding indicates that by investing in infrastructural developments and amenities it can go a long way towards enhancing value addition activities. Support towards enhancement of infrastructure is therefore necessary if value addition is to be uplifted.

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Recommendations

There is need for County Government of Mombasa in collaboration with the National Government and relevant stakeholders to enhance fish trading and value addition infrastructure. They should work to enhance access to market, and ensure that there are established structures for the fish traders. They should also ensure availability of power supply, preservation equipment, waste disposal system, and also availability of piped water for Value addition.

There is need for improved infrastructural development by County Government of Mombasa, National Government, stakeholder non-state actors e.g. Development partners like Food and Agriculture Organization (FAO), World Food Programme (WFP), World Bank (WB), International Development Agency (IDA), United States Agency for International Development (USAID) and Non-Governmental Agencies like, Africa conservation Centre, Africa Wildlife Foundation, Aga Khan Foundation, East Africa Wildlife Society and Jamii bora among others, to assist fish traders in adopting and up scaling of fish value addition activities. In this respect, state and non- state actors should combine efforts to address this key requirement. This is because infrastructural projects are capital intensive necessary for fish value addition as the findings from the study indicates. Mombasa County and National Governments and non-state actors should come in to streamline infrastructural licensing, regulatory and policy frameworks for purposes of mainstreaming fish value addition activities.

Recommendations for further research.

The following areas can be considered for further research.
A research study to determine other influencing factors in the fish value chain dynamics and its influence on the attitude of fish traders on value addition.

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References

- Akanbi, U. S. (2016). . Value chain analysis and the Performance of Small Scale Agri-business: Evidence from Cultured Fish Farmers Kwara State.) . *Journal of Marketing Development*, 1(2), 85-102. <https://www.researchgate.net/publication/319099824>
- Alam, N. (2016). *Supply and Value Chain of Fish in Super-shop Outlets in Dhaka Cit.* BAU Department of Fisheries Technology.
- Bigliardi, B., & Bottani, E. (2010). Performance measurement in the food supply chain: a balanced scorecard approach. *Facilities*, 28(5/6), 249-260. <https://doi.org/10.1108/02632771011031493>.
- Certification, F. M. (2018). *Certification, Financial Modeling and Validation Analyst* <https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-value-added>.
- De Silva, D. A. (2011). Value chain of fish and fishery products: origin, functions and application in developed and developing country markets. *Food and Agriculture Organization*. 63, 1-53. <http://www.fao.org/3/ca0388en/CA0388EN.pdf>
- Eskandari, S., & Zeraatkish, Y. (2016). The effect of value added and export of fisheries on economic variables in the agricultural sector in Iran. *Aquaculture Development*, 10 (3), 1-12 [aquadev.liu.ac.ir/browse.php?a_id=402&slc_lang=en & si](http://aquadev.liu.ac.ir/browse.php?a_id=402&slc_lang=en&si).
- The Food and Agriculture Organization. (2014). *Global Aquaculture Production Statistics for the year, 2014*. www.fao.org;
- Fearne, A., Martinez, M. G., & Dent, B. (2012). Dimensions of sustainable value chains: implications for value chain analysis. *Supply Chain Management: An International Journal*, 17(6), 575-581. <https://doi.org/10.1108/13598541211269193>.
- Francisco, M. (2016). *Integrated strategic urban development plan Mombasa vision 2035*. <https://www.scribd.com/document/365662403/Integrated-Strategic-Urban-Development-Plan-Mombasa-Vision-2035>
- Kim, H., & Lalancette, D. (2013). *Literature review on the value-added measurement in higher education. Ahelo Feasibility Study*. <https://www.oecd.org/education/skills-beyond-school/Litterature%20Review%20VAM.pdf>.
- Kyule, D. N., Yongo, E., Opiyo, M. A., Obiero, K., Munguti, J. M., & Charo-Karisa, H. (2014). Fish product development and market trials of fish and fish products in Kenya: a case study of Kirinyaga and Meru Counties. *Livestock Research for Rural Development*, 26(6), 1-9. <http://www.lrrd.org/lrrd26/6/kyul26108.htm>
- Mohamad, R., Ahmad, M. F., Abidin, A., & Mohamad, R. (2011). Consumers acceptance and purchase intent of fresh water fish products developed by MARDI. *Economic and Technology Management Review*, 6, 77-82. https://www.researchgate.net/publication/270565334_Consumer_Preference_on_Value_Added_Products_of_Farmed_Fish_in_Lake_Victoria_Basin_Tanzania
- Morrissey, M. (2011). *Development of Value-Added Products in Aquaculture*
- Morrissey, M. T. (2011). *Development of value-added products in aquaculture*. *Avances en Nutrición Acuicola*.
- Mwirigi, F. M., & Theuri, F. S. (2012). The challenge of value addition in the seafood value chain along the Kenyan north coast. *International Journal of Business and Public Management*, 2(2), 51-56. <http://hdl.handle.net/1834/8873>.
- Ntale J.. F. L. K., & Mphande O. M. (2014). Indicators of Value Added Agri- Businesses on Small Farms in Kenya: An Empirical Study of Kiambu and Murang'a. County. *Journal of Small*

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Business and Entrepreneurship Development, 2(3 & 4), 89-101.
<http://dx.doi.org/10.15640/jsbed.v2n3-4a6>.

Ntale, & Litondo. (2013). Determinants of Commercial Mixed Farming on Small Farms in Kenya. *European Journal of Business and Management*, 5(22), 47-54.
<http://erepository.uonbi.ac.ke/handle/11295/81284?show=full>

Odoyo. (2013). *Impact of Access to Agro-processing Technologies on Growth of Smallholder Agro-processing Industry in Bureti District, Kenya* (Unpublished master's thesis) university of Nairobi, Kenya. <http://erepository.uonbi.ac.ke/bitstream/handle/11295/71>.

Salagrama. (2015). *Fisheries Value Chain Assessment Opportunities for strengthening the position of the small scale fishers in the value chain*".

Swanson, R. A., & Holton, I. (2001). *Foundations of Human Resource Development*. Koehler Publishers, Inc.

Tea Board of, Kenya. (2014). *Feasibility Study o Establishment of Tea Value Addition Facilities in Kenya*. M.A Consulting Group.