

CONTRIBUTION OF THE MANUFACTURING SECTOR ON ECONOMIC DEVELOPMENT IN MBEYA CITY COUNCIL - TANZANIA

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ABSTRACT

The study investigates the contribution of manufacturing sector on economic development in Tanzania with a major focus in Mbeya City. Through cross sectional survey design the small and large scale manufacturing firms were researched in Mbeya City Council. Small and large scale sunflower oil processing, fruit juices and soap firms were surveyed. Through systematic and simple random sampling techniques, 210 respondents were obtained out of whom 200 were processors and 10 officials from Ministries and public parastatals such as SIDO respectively involved in supply chain value of manufacturing sector. Through structured questionnaires and observation, collected and screened data were analysed quantitatively by employing structural equation modelling. It was then revealed that manufacturing industry contributes positively to market efficiency necessary for development of the economy. Moreover growth in manufacturing sector was revealed to have a positive contribution to commercialization of primary core economic activities and value addition over finished products sufficient for development in economy. Despite its positive contributions on economic development, the growth of the manufacturing sector was revealed to be insignificant. Thus the study recommends that manufacturing sector development should be promoted by all stakeholders through creating better environment for investment over processing industries, technology and sustainable energy supply, training, subsidies, and credits support at low interest rate.

Keywords: Manufacturing sector, market efficiency, commercialization of primary economic activities, value addition, economic development, Tanzania.

1.0 INTRODUCTION

Manufacturing industrial economy has been the agenda of the current world especially with the developing countries (Szirmai & Bart, 2015). This is from the fact that development in manufacturing/processing sector creates value added goods which helps in achieving thus commercialization. The commercialized value added goods increase in sales or net exports thus sustaining terms of trade, balance of trade and balance of payment (Pérez, Geldes, Kunc, & Flores, 2019). The sustained balance of trade and payments lead into increase in national income (Ghani & Stephen, 2016).

It is through development in the manufacturing sector in which substitute differentiated products are obtained. The differentiated products created, play a great role in sustaining the market efficiency (Timmer & de-Vries, 2015). A good supply of substitute products in the market increases market or individual demand and thus sustaining market equilibrium ($Q_s=Q_d$). It is through developed manufacturing sector in which a steady market for extracts produced by small scale farmers is formed. Commercialization of the traditional agrarian sector is associated with increase in outputs called marginal productivity (MP) from which the surplus is sold. Thus, it is through commercialization in which farmers are sustained in-terms of food and income (Wuytz & Kilama, 2014), which increases their individual income thus helping them to accessed quality social services. Generally growth in manufacturing sector is a mere start of experiencing agricultural revolution (Rodrik, 2015).

In India, the manufacturing sector contributes to about 51.4% of national income. Indeed the 25% of GDP share contributed by the developed manufacturing sector in India is enough to create an economic transformation (Jawaharlal, 2019) which is a pulling labour force created to balance with pushing force to be created by agricultural productivity i.e.

$$\frac{Y_a}{n_L} = a_L (\frac{a_y}{n_L} * Y_a - L_a) = n_L (\frac{n_y}{n_L} Y_n - L_n) \quad L_a \quad a_L$$

where Y= Output ; L= Labour force; a=agricultural sector; n= non-agricultural sector

That is to say, for economic structural change/equilibrium shown above to happen, then strong manufacturing/processing sector should be sustained as a pull force (McMillan, Dani & Inigo, 2014). The manufacturing sector being a non-agricultural economic sector (n) its growth creates a steady pull force of labour force which is exclusively employed in agricultural (a) sector unproductively for them to move and therefore creating a greater 'Ya' i.e. $\frac{Y_a}{L_a} > 0$ (Chinery, 1960).

In fact what is needed to be attained to a large supply from farms is the investment over capital intensive production mechanism and not much labour force (Kathuria & Rajesh, 2017). Thus the 'L_a' employed in the agricultural sector in Tanzania should be reduced to <50% and not as it is currently at >70%. With agricultural sector more labour force (L_a) lead into more GDP share (Y_a). It should be clearly put forward that, rise in GDP share, is a good indicator of economic growth. However, economic stakeholders need to understand that economic growth does not sufficiently imply a good standard of living of people or social transformation to be achieved (Felipe, Aashish & Changyong, 2015). Economic growth is a blessing over national income to grow but since national income is measured in terms of GDP growth rate, which is the macroeconomic perspective, this then does not necessarily indicate a microeconomic efficiency over increase in individual income, savings, and reduction in cost of living and improvement in peoples' livelihood.

De-industrialization is mostly with developing countries to find that market deficiency is prominent. Agricultural sector and more other primary economic activities are conducted in small scale being not commercialized (Rabbi *et al.*, 2019). Less industrialization in developing countries has made most of extracts being non-valued and therefore leading to disequilibrium in balance of payments and in-favourable balance of trade if not export loss (McFetridge, 2019). It is reported that de-industrialization is caused by shortage in experts (low labour productivity), low technology, financial exclusion, poor infrastructures (water, road, and railway) and unsteady supply of electrical energy (Li, Miao, Yang, Chai & Yang, 2019).

Following privatization and liberal market execution, relevant policies on the development of the manufacturing sector in Tanzania were enacted. These were aimed at transforming the socio-economic status of the country as applied by the Indian and Malaysian governments (Aggarwal & Kumar, 2015). This fact is consistent with what was proposed by Nixon (1980) in the theory of industrial societies and social transformation. As a result, in Tanzania the manufacturing sector contributes to about 8.4% of the national income just behind the agricultural tourism and construction which contribute about 28.4%, 24.7% and 13.7% respectively (Bank of Tanzania [BoT], 2019).

The slow development in the manufacturing sector (at <10%) in Tanzania is attributed to market inefficiency of the produced items (National Bureau of statistics [NBS], 2017). This is further escalated by a complicated flow of products from one location to the other. For instance, it is common for commodities in one region (eg Katavi) to lack market while in other areas such as Lindi, people are crying of food insecurity. It is common for agricultural products to rot in fields as a result of deficiencies in the supply chain among the manufacturing sector. In 2018, a lot of tomatoes decayed in the fields with a lot of farmers complaining of lack of market, yet manufacturers are available. Thus, the manufacturing sector was not sustainably growing to cater for market inefficiency and production of non-valued products. This prompted for the study to reveal the gap and suggest how the bond between manufacturing and agricultural sectors can be cemented to ensure that no more agriculture products are wasted in the field as a result of market inefficiencies and there by fostering development in the manufacturing sector and economic development at large.

Thus study intended to; i) determine the contribution of growth in manufacturing sector on achieving market efficiency important for economic development ii) examine the contribution of manufacturing sector on commercialization of manufacturing activities efficient for economic development ; and iii) analyse the impacts of development in manufacturing sector on creating value added goods necessary for economic development.

2.0 LITERATURE REVIEW

2.1 Theory Guiding the Study

The study applied the Chinery structural economic change model (1960). This model dictates on development of manufacturing industrial sector towards achieving the socio-economic transformation due to balancing of push and pull forces. Supporting this, Li (2018) reported that, the growth in industrial sector creates steady demand of raw materials (agricultural, mining, fishing extracts) which then creates steady supply in upstream supply chain (a push force). Development of the manufacturing industrial sector is the market by itself which therefore creates high sales which in turn lead into increase in individual and household income (Chang'ach, 2018). This then cause producers/famers, fisheries being financially included to be able to acquire the appropriate technology and enough quantity of inputs for increasing production. Therefore development in the manufacturing industrial sector (a pull force) leads into commercialization of primary activities such as agricultural economic activities, market proficiency and value creation over the finished products the issues not proposed by the theory (termed as a theoretical gap) thus explicitly uncovered by this study under discussion.

2.2 Empirical Studies

In Vietnam the 300 small and medium processing firms have created innovation over the cashew nut farming (Kilama, 2014). The cashew seed was revealed to be diversified into more other value added products such as the cashew cake and

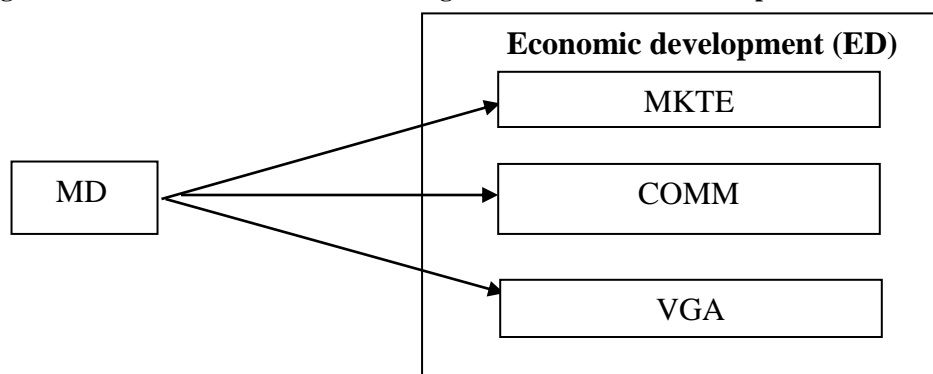
sugar extract. In Tanzania, while the cashew apple is thrown away as non-useful by-product, in Vietnam, the cashew apple is further processed to produce cashew wine, salt, soap, and cashew cake for feeding livestock. The study by Kilama (2014) was descriptive with the strata multistage sampling technique was applied to derive 67 samples of respondents from the 700 target population. Different from the study under discussion is that contextually three issues were addressed. These were the market efficiency, commercialization and value creation over the finished product. Moreover the study was explanatory while systematic sampling technique being applied to obtain 210 respondents from 400 targeted population.

The study by Katabaro (2011) on the contribution of the rural industrialization on achieving economic transformation reported that Uganda has been striving to attain socio-economic transformation through undertaking structural economic change programmes in which 65% of the activities conducted in rural areas are non-agricultural activities such that of manufacturing industrialization. Then the remaining 35% was reported to be invested on agricultural activity which then was more capital intensive. The study underhand might be different from that of Katabaro (2011). This study explicitly reveals innovations behind development in the manufacturing sector which are aimed at achieving efficient distribution of income among Tanzanians thereby fostering individual economies. Moreover while the study by Katabaro (2011) was descriptive in which simple frequency, percentages and graphs were used for data analysis this study under discussion was explanatory employing Structural Equation Modelling (SEM) in data analysis.

The study by Mutayoba & Kusiluka (2018) in Mtwara-Tanzania on the importance of small scale industries to be the feeder of the large scale industries revealed that sustainability of large industries depend on the certainty and steady supply of raw materials from small scale industries. The study underhand is in consistent with Mutayoba and Kusiluka's (2018) study in the sense that that they both acknowledge the existence of small scale processing industries sustained by the raw materials produced by small scale farmers. However, this current study further insisted on achieving the small scale industrialization for small holders' farmers' commercialization of their farming activities. Through taking into action what has been suggested by this study underhand, then the socio-economic transformation will be achieved when >70% of Tanzanians employed in agricultural sector are free from poverty. Moreover while the study by Mutayoba & Kusiluka (2018) applied thematic data analysis, the study under discussion has employed inferential statistical tools which were principal component analysis, the discriminant analysis and Q-Sorting.

From three research objectives formulated fifteen unobserved variables were revealed and aggregated into five observable variables as shown in conceptual model (See Figure 1). It is from these five observed variables where literature review was undertaken by reflecting them. Moreover from the five observed variables, the manufacturing sector was an independent variable; market efficiency, commercialization of manufacturing sector supply chain, and value creation were mediating variables; and economic development was a dependent variable.

Figure 1: Contributions of manufacturing sector on economic development



Key: MD = Manufacturing sector development; MKTE=Market efficiency; COMM= Commercialization; VAG= Value addition

Source: Researchers' Own Drawn Model (2019)

3.0 METHODOLOGY

The study employed a cross sectional survey research design. The study was carried out in Mbeya City Council. Mbeya City was chosen as it is expected to continue growing, populated and industrialized. The area of Soweto is highly distributed with small manufacturing industries. It is at the same area where SIDO soap and sunflower oil processing industries are located. The area around Iyunga is a localized area for large manufacturing industries where TBL is also

found in this locality apart from SBC and Coca-Cola manufacturing companies. With reference to the study underhand this area was selected due to having a concentration of the group of small scale processors who were targeted by this study.

The target population included the key informants i.e. large and small scale manufacturers. More other who were non-key informants but important over gathering the facts regarding the study under discussion involved in the supply chain of manufacturing activities were SIDO officials, Ministry of industry and Trade officials, and Ministry of Agricultural sector officials. It is from a population of 400 registered small and large scale processors of sunflower oil, soap, fruit juices and more other agricultural extracts the sample was drawn by applying the systematic sampling technique. According to Bruton (1975) cited by Ogunkuya (2008), the level of precision, $\alpha = 10\%$ is for a target population $>50,000$, $\alpha = 5\%$ is for population $<5,000$ and $\alpha = 1\%$ is for the population $\geq 1,000,000$ people. Thus from the field area with population size of 400 ($<5,000$ people) then the level of precision used was $\alpha = 5\%$. Hence from the formula, sample size, $n = N/1 + N(\alpha)^2$, thus $n = 400/1 + 400(0.05)^2 = 200$. Moreover in the interval of 2 given $N = 400$ and $n = 200$ from the formula $N/n = 400/200$ then the systematic sampling technique was employed to derive to $n^1 = 150$ (the small scale processors) and $n^2 = 50$ for the large processing firms. Other economic development stakeholders including government officials noted above involved in the supply chain of manufacturing sector were sampled by using simple random sampling technique to derive to a total sample size of 210 respondents shown in Table 1.

Table 1: Derivation of sample

Target population	Population size	Sample size
Small scale processors	320	150
Large scale processors	80	50
SIDO Officials	10	5
Ministry of Commerce and Industry officials	5	3
Ministry of Agriculture officials	5	2
TOTAL	420	210

Source: Pilot survey (2019)

Primarily the data were collected through questionnaire with Likert scale questions and observation while secondary data were gathered from the reports published by NBS, BoT, Ministry of Agriculture, Ministry of Industries, Businesses and Investment in the time interval of the year 2015 to 2019. The collected and screened data were analysed by using Structural Equation Modeling (SEM). The three structural equational models guiding the study were:-

$$MKTE = 0.0621SP + 0.0042FP + 0.004CI + 0.0053Me + 0.0037NG + 0.0039IP + 0.0036Pe + 0.15 \dots \dots \dots 1)$$

Where: MKE= market efficiency; SP=substitute products; FP= fashioned products;
 CI= customer insight; Me = market equilibrium; NG= normal goods;
 IP= innovative products; Pe = Producer equilibrium

$$COMM = -0.84MPP - 0.62AI - 0.65T - 0.69S - 0.63Me - 3.65 \dots \dots \dots 2)$$

Where: COMM=Commercialization of the supply side of the supply chain value of manufacturing sector;
 MPP=Productivity; AI=Access to inputs; T=Appropriate technology; S=Sales;
 Me= steady market extracts

$$VAG = 0.025Tr + 0.0295TQI + 0.0235Pre + 0.0255Pa + 0.0245La + 0.25 \dots \dots \dots 3)$$

Where: VAG= Value addition; Tr=transformation; TQI =Technical quality Ingredients;
 Pre= Preservation; Pa= Packages; La= Labels.

Moreover SEM was fostered from the established intermediating variables which were the market efficiency, commercialization of processing supply chain value and the value creation. To effectively use the SEM, 20 variables both the observed and latent/un-observed ones were associated in the operationalization. Moreover SEM was the appropriate tool of analysis because of the sample size of 210 which is between 200-400, the accepted level the same as it is with the accepted number of variables which is 10-20 for SEM to be adopted (Morris, Elston & Stein, 2011). The tools used under SEM were employed in Normality testing, Non-parametric testing and dealing with missing values were Principal Component Analysis, Discriminant analysis, Q-Sorting and Walds' chi²- test analysis tools with the aid of Statistical

Package for Social Science in Analysis of Moment Structures (SPSS AMOS) version 21. The PCA, Discriminant analysis were used for parametric and normality testing. The Q-sorting was used for parametric testing and the Walds' Chi-square was applied for non-parametric testing and capturing of missing values.

4.0 FINDINGS AND DISCUSSIONS

4.1 Development in Manufacturing Sector and Market Efficiency

With this objective, the study was motivated to investigate the innovation over development in manufacturing sector in sustaining market efficiency. With this investigation it was revealed that the market efficiency is the equilibrium concept which illustrates the trade-off between the quantity demanded (Q_d) and quantity supplied (Q_s). Contrary from Say's Law in which with development of manufacturing sector the $Q_d = Q_s$ is sustained while Q_s prior created. It was found that the presence of demand (pull force) following development in manufacturing industries promote a steady push force over supply from primary economic sectors. More facts from the field were analysed and presented in Table 2.

Table 2: Principal Component Analysis

S/N	(N=210)	1	2	3	4	5	6	7
1	SP	0.51	0.34	0.54	0.51	0.40	0.69	0.53
2	FP	0.42	0.21	0.10	0.32	0.13	0.11	0.15
3	CI	0.14	0.21	0.40	0.30	0.24	0.25	0.25
4	Me	0.45	0.49	0.50	0.34	0.53	0.51	0.31
5	NG	0.14	0.37	0.21	0.25	0.17	0.32	0.20
6	IP	0.29	0.30	0.31	0.10	0.24	0.21	0.39
7	Pe	0.17	0.35	0.31	0.36	0.15	0.20	0.01

Key: SP=substitute products; FP= fashioned products; CI= customer insight; Me = market equilibrium; NG= normal goods; IP= innovative products; Pe = Producer equilibrium

Source: Source: Researchers' own computations (2019)

Table 2 above indicated the development of manufacturing sector in which differentiated (substitute) products are produced. The substitute products are unique/differentiated product which attracts more demand. Substitute products are quality products which illustrate elastic demand ($E_d > 1$) if not perfect elastic demand ($e_d = \alpha$) where C=cross elasticity of demand. This is then a message that through industrial sector development then differentiated -value added products are obtained which then sustain market efficiency (Chakarvarty & Mitra, 2008). This is from the fact that the supply is not just a supply but that meets customer insight or satisfy customers or meet customers' expectation with PCA= 0.69 at a redundancy index of 9%. Thus, due to low developed manufacturing sector in Tanzania, then what is mainly found in the local markets are raw-non differentiated materials. These unprocessed/non-differentiated products are mainly subjected to low price and therefore loss to the supplier/farmers. What was actually found in the open/local markets were the non-unique /homogeneous materials causing a cross elasticity of demand to be negative while theoretically it was supposed to be positive. Growth in manufacturing sector is the source of production of substitute products with its positive sign over the cross elasticity of demand.

Since industrial sector is to be linked to the down-stream supply chain system, then always manufacturing firms are struggling to meet customer need and always they would like to be updated with the new varieties/products called new fashion (Dhéret & Morosi, 2014). Therefore it is from the fact that growth in manufacturing sector produce fashion products which meet customers' demand and thus the supply of fashioned/new products sustain individual/market demand and therefore market efficiency being achieved. This was clearly proved by having PCA = 0.42 at the redundancy index of 1%.

Further, the customer insight was achieved with PCA =0.40 at a redundancy index of 1%. This is due to the fact that manufacturing transforms raw/extracts obtained from farms, Earth ground (minerals), and forest into finished products. Thus this transformation leads into new appearance, colour and form which then create uniqueness that increases demand (Naudé & Szirmai, 2015). Homogeneity of raw materials in the markets causes the decrease in demand of which the burden goes to the supplier and if those raw materials are demerits, then consumers are harmed. Raw materials are local and non-tested commodities and are not known if they meet quality standards for consumption. They have to be subjected to laboratory testing by Tanzania Bureau of Standards (TBS) lest they become a demerit for human health.

The market equilibrium of PCA=0.53 at a redundancy index of 1% shows the product market efficiency to be achieved following development of manufacturing sector. This is the fact from what is obtained from processing activity. This is because processing is associated with production of substitute products, new products with new appearance, colour and form different from its original raw material speculates. In the country of Romania sustainability in market efficiency

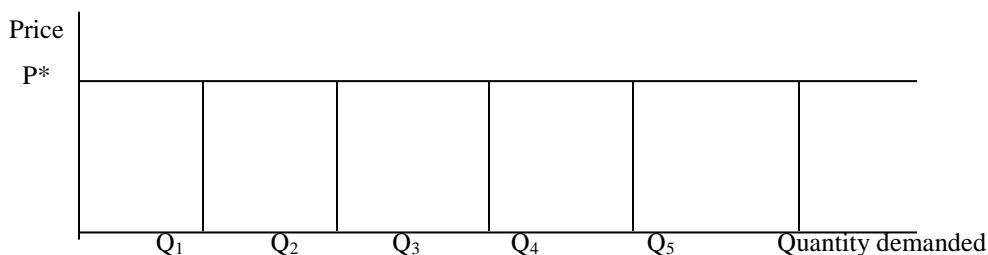
following growth in manufacturing subsectors has led into growth in economy by >50%. Growth in the manufacturing has been caused by development in subsectors such as Food , beverage & tobacco; Motor Vehicles, Trailers and Semi-trailers; Basic metals & metal products; and Wearing Apparel (Herman,2016).

With development in manufacturing sector the normal goods are revealed to be produced. Normal goods are value added goods in which its demand increases with increases in consumer/individual income. It is with this co-concurrent situation which proves the fact that the $PCA = 0.37$ at a redundancy index of 1% is the truth that growth of manufacturing sector creates normal valued goods, though from the field, growth in the manufacturing sector was found insignificant. This is what makes most of goods found in the markets (especially in the local market) become inferior if not Veblen. It is from the presence of these inferior goods (non-valued products caused by low technology and less developed manufacturing sector) that their demand becomes negative even if the income of consumers is high. Usually what was expected following increase in individual income was the rise in demand of value added/normal goods and the opposite would be true with unprocessed/inferior goods, causing a negative income elasticity of demand. The noted different results over inferior/Veblen goods with regard to the income elasticity of demand by becoming negative implied loss to a supplier.

The stipulated findings above are associated with low technology or less development in industrial sector which cause income elasticity of demand become negative signified by Walds' χ^2 test results =1.031 at $p=0.003$ (Refer Table 5). This fact does not differ much from Mafuruki (2019) that we from the lumbering sector, only 30% is what is exported and the rest is sold by producers locally to the manufacturers of home furniture such as chairs, beds, and tables. This is what is extracted from lumbering in which only thirty percent out of hundred and therefore this means that about 70% of the timber products is thrown away as useless –by products. To developed countries other by-products such as saw dusts are used as a source of energy, for manufacturing of saw dust charcoal, and the barks are used as source of heat energy. Moreover the saw-dusts are used in manufacturing of furniture which are then sold back to developing countries (the exporters of raw timbers). This is a proven case study that developing countries are sellers/exporters of non-substitute/non processed/non-valued products and that is why in most cases the primary activities have revealed to be non-beneficial especially to small scale actors/suppliers/extractors.

With $PCA = 0.39$ at a redundancy index of 1% for innovative products to be produced with developed manufacturing sector is a proven fact that the two variable correlates. With developed manufacturing sector then product like paddy does not end by producing a single products i.e. normal rice product. But from a paddy many (differentiated and innovative products are created). This is why it is said with developed manufacturing sector, there is increase in employment to many people but only if human resource are involved. Processing of paddy, gives rise to other useful products which may be sugar, processed oil, starch and rice cake. Thus it is from these innovative and differentiated products which sustain individual /market demand.

Since manufacturing transform a raw extracts into other innovative form, appearance and sometimes taste then what is launched to the market must meet the demand of the consumers. Thus, a developed manufacturing sector does not only sustain the customer with innovative quality products but with the right quantity of the suppliers. This then creates a so called a clause to perfect competitive market which bears a graph as shown in figure below:-



Source: Komleh (2018)

It is with these elements of perfection in which manufacturing sector development is said to curb the dead weight loss which occur due to $Q_d > Q_s$ (Producer surplus created) or $Q_d < Q_s$ (Consumer surplus being made). If this happens, the market efficiency cannot be achieved though in most of local markets of Tanzania the dead weight loss or monopoly loss is obvious. Though this hold to different factors behind market inefficiency such as that of information asymmetric but the major factor for this discrepancy in most of local markets is the presence of non-differentiated/unprocessed /non-unique products/sales. Thus with this situation then equilibrium consumer surplus = Producer/Supplier surplus is not more efficiently met with $PCA=0.36$ at a redundancy index of 1%.

From the research area it was found that the market for wheat extracts from Uyo Agricultural Research Institute has efficiently been sustained by the presence of TBL Mbeya plant. It is with the TBL products, the sour drinks, less alcoholic soft drinks such as Grand Malt in which the Southern Highland internal market has been sustained. Moreover it was revealed that the TBL Mbeya Plant products are also sold to other parts of Tanzania and East Africa regional market block thus the market being sustained. This fact holds contrarily to what is over the scarcity of food in the areas such as Karatu-Arusha, Singida, and Pwani while in Katavi, Ruvuma and Songwe and more other regions leading in growing of food crops such as maize, paddy the small holders' farmers are suffering of loss because of lack of market. Lack or deficiency of market occur when $Q_d > Q_s$, the area where there is shortage of supply of food crops and when $Q_d < Q_s$, in the area where supply is excessive. When $Q_d > Q_s$ (the source of inflation) the consumer/buyer is exploited and when $Q_d < Q_s$ (the root cause of deflation) then a supplier/ small scale farmers are exploited.

4.2 Commercialization of Primary Economic Activities and the Development in Manufacturing Industrial Sector

In here the study intended to reveal the impacts of development in manufacturing sector on commercialization of the activities involved in the supply chain of manufacturing sector. From the field it was found that commercialization of farming and more other primary economic activities was influenced by development in manufacturing sector. Elastic demand created due to growth in manufacturing industries was revealed to be the source of increase in sales as was reported by Dasgupta & Singh (2005). Indeed the development of manufacturing industries was revealed to catalyse more supply or production. Increase in production is the marginal productivity which leads into surplus outputs. Increase in outputs/surplus ensures for food security and increase in sales. Increase in sales lead into increase in per capita income. Increase in individual income help SMEs become financially capable to acquire technology and other inputs such as agrochemicals, quality seeds, fertilizers and agro-machinery for agricultural growth. More facts obtained from the field are presented in Table 3.

Table 3: Discriminant Analysis

S/N	Sub constructs (N=210)	Un-standardized discriminant Value	Standardized discriminant Value	Standard error estimate
1	MPP	-0.84	0.94	-0.89
2	AI	-0.62	0.91	-0.68
3	T	-0.65	0.95	-0.68
4	S	-0.69	0.93	-0.73
5	Me	-0.63	0.92	-0.67

Key: MPP=Productivity; AI=Access to inputs; T=Appropriate technology; S=Sales; Me= steady market extracts

Source: Researchers' own computations (2019)

The development of manufacturing sector creates a steady market especially for small scale farmers and other firms involved in primary economic activities. As for steady processing/manufacturing sector to grow then a steady supply is to be achieved. Large quantity of supply of extracts is the key factor for growth of the manufacturing sector. Thus the small scale firms become suppliers to meet the large quantity of raw materials needed in these types of industries. This is what causes a discriminant value to be 0.92 greater than 0.9 the minimum acceptable threshold value.

The presence of steady market increases sales. However, the said increase in sales is because of developed manufacturing sector which is equals to standardized discriminant value=0.93. Moreover, the increase in sales lead into increase in per head income especially with small scale suppliers of raw materials .This then capacitate the said small scale firms financially which helps them have power of acquiring adequate inputs necessary for increasing production. This has been proved with standardized discriminant value equals to 0.91. This was actually revealed from research area by small scale processing firms of fruit juice at Soweto, Mbeya who confirmed that they have been a good market for raw avocado from Tukuyu, Mbeya.

Access to enough quantity of resources leads into surplus outputs called marginal physical productivity (MPP).This then become a source of economic transformation (Dhéret & Morosi, 2014). It is with surplus extracts obtained that causes movement of labour force (La) from traditional agrarian sector to the modern industrialization sector. This means that surplus outputs creates a push force or shifting of non-productive labour force employed in subsistence farming, mining, fishing, economic activities to modern manufacturing and other down-stream service activities. The marginal physical product said is the result of increase in food thus creating food security with the surplus being sold to sustain individual economies.

The marginal product (MP) said is expressed as $\frac{\Delta P}{\Delta Q}$ where P = product/ surplus Outputs

Q= Inputs. In a short run the 'Q' is contributed by one variable (varying inputs) i.e. either K (Capital) or L(Labor) derived from Cobb Douglas , Q= f(K,L). In a long run where both 'K' and 'L' are changing is that the isocost should be equal to isoquant called producer equilibrium or the so called marginal technical substitution (MTS) .This variable describes change in capital and labour expressed as the marginal productivity of 'L'.

This then means that:

$$MP_{KL} = \frac{MP_K}{MP_L}$$

Where, $MP_K = \frac{\Delta Q}{\Delta K}$ (Application of first derivative principle showing increase in capital

machinery/technology and $MP_L = \frac{\Delta Q}{\Delta L}$ (Application of first derivative principle meaning change /increase in labour input)

The marginal productivity comes as a result of acquisition of those inputs (economic resources) capacitated by financial capability following increase in per capita income and sales. As it has been noted above, development in manufacturing sector creates steady market which then increases sales and therefore individual income. Increase in per capita income results from increase in economic growth shares measured in terms of GDP shares given that the population growth is maintained from the formula, per capita income, $PCI = \frac{GDP}{\text{Total Country Population}}$

Thus, what was reported by United Nations (2016) hold the truth over the importance of development in manufacturing sector and rise in GDP shares, per capita and household incomes in China. It was revealed that following the growth in manufacturing sector in China by 2007 the shares contribution by manufacturing sector was at 19% while that of developing(lowly developed industrialized) countries was at 12%.

It is from the Neo-Classical theory by Solow & Swan (1982) which dictates on the importance over change in technology in relation to increase in quantity and quality of the outputs. But access to modern technology becomes successful when individuals are financially inclusive. This is the reason as to why the small scale firms such as small holders' farmers, small scale processors have continued to run their activities at small scale now and then and large scale farmers and manufacturers with steady accessed to finances have been growing. Indeed the revealed gap propounding between the haves and the have nots is because the said commercialization of primary economic activities such as agriculture, fishing is with the large scale firms and not with small scale firms with Walds' chi2 test=1.231 at p=0.001 insignificant (See Table 5 and figure 2). This then hold a controversial results over perception response over development in manufacturing sector to promote commercialization of primary economic activities/extractive industries shown in Table 4 with standardized discriminant analysis results >0.9 (the acceptable threshold level).

4.3 Manufacturing Industry and Value Addition over Extracts

In here the study aimed at examining the influence of growth in manufacturing industry in creating value added products. From the field it was revealed that value added goods are processed, well packed and branded products. It was therefore concluded that it was through development in manufacturing industries in which the processed value added products are formed. According to Haraguchi & Chin-Cheng (2016) growth of manufacturing sector in China give rise to value addition shares to grow to 30% both at current and constant prices by 2011 while that of developing countries the MVA was at 14% because most of developing countries are lowly developed with manufacturing sector. The value added goods are transformed with its unique colour, form and appearance. What makes a processed raw materials/extracts become value added is over labels (visual and verbal elements).Visual elements of the product are visual labels such as country of origin while the verbal elements are those which are determined once a product is consumed. The verbal elements of a product influences the post-purchase consumer decision. The facts from the field were revealed and presented in the table 4.

Table 4: Q-Sorting

S/N	Sub-constructs	Value
1	Tr	0.50
2	TQI	0.59
3	Pre	0.47
4	Pa	0.51
5	La	0.49

Key: Tr=transformation; TQI =Technical quality Ingredients; Pre=Preservation; Pa= Packages; and La= Labels.

Source: Source: Researchers' own computations (2019)

A developed manufacturing sector assures that raw materials are transformed into value added products. This is proven by the score of Q-Sorting = 0.50 at a significance level of 5% that value added goods attract more sales and therefore equal distribution of income. Normally the value added products sustain the balance of payment or balance of trade as more exports which attract good price will be attained the fact which is consistent with that was reported by (Tregenna, 2018). But because of low development in manufacturing sector, that is why developing countries like Tanzania are exporting more raw materials which are later subjected to low price in the World market. Indeed exporting raw materials has been revealed like exporting the labor force and therefore this has been a tantamount (creating jobs juncture to other people) outside and not the indigenous ones. This is then a truth that exporting a raw cashew nut is not like exporting several useful extracts or products such as the cashew nut seed oil, palm oil for running airplanes, cashew nut toxic chemicals/sprays for controlling pests and cashew cakes. Similarly, due to underdeveloped processing sector the cashew apple is considered a useless product, yet a lot of valued products could be extracted and provide employment to people. Other useful products that could be obtained from cashew apple apart from its juice are the cashew sugar, cashew salt, cashew soap and more other liquid chemicals (Popescu *et al.*, 2015).

The change in form, colour and appearance of the raw materials equals to Q-Sorting = 0.59 at a significance level of 5% indicate that growth in manufacturing sector lead into materials differentiation. It is this differentiation which attracts more sales as was reported by (Spelman, 2016). But because of most of small processing firms are not empowered technologically and skills wise, many of these products are sold in their raw form like majority of orange sellers at Soweto local market.

With Q-Sorting = 0.47 at a significance level of 5% is a clear proof that development in manufacturing sector help to facilitate preservation. This facilitates sustainability over steady supply of a product all of the time not only the time of harvest. The processed product is easily preserved than raw one, thus ensuring its availability even at that season of none-harvest. Under development in the manufacturing sector is the reason as to why the mango juice manufactured by SMEs is there only during harvest time but on other time they are not there therefore creating market deficiency due to $Q_s < Q_d$ relation being created.

Packaging is one of the industrial activities which help to create convenience or easy handling of a product. Though packing/containerization was revealed to be done even with the raw materials/extracts but the point here was the development which equate the Q-Sorting = 0.51 at a significance level of 5%. But what was observed from the field is that much of displays/retailed products were not packed. The processed soap by small scale manufacturers were observed not packaged nor branded. The facts over development in manufacturing sector and creation of value added products hold the same over increase in wage employment rate to 15.9% in 2010 from 11% in 1970 in China (Banister, 2005).

With labelling equals to Q-Sorting = 0.49 at a significance level of 5% is an indicator that development in manufacturing sector lead into value addition brought through labelling. Labelling includes both visual and verbal elements. The visual elements of a label include the country of origin, the brand name, the manufacturing date and expiry date (Szirmai & Verspagen, 2017). The verbal elements include the contents of the products; and the quality label. These labels add value to the products.

The discrepancy observed from the field area are the found in agricultural products especially groundnuts which were packed in the unlabelled white plastics. Further still, most of the fruit juice products found were packed in the tin which had fruit like decorations (in-fact those were not labels) because the content of the juice had no direct relationship to the decorations. It was moreover revealed that the container may be filled with mango juice, but outside the container the decoration would depict that of an orange fruit. All of these are proofs of the facts that less development in manufacturing sector was the cause of non-labelled products which were mostly found in local markets. Thus, this was also a proof why the Walds' chi2 test result in Table 5 was 0.446 at p= 0.002 insignificant.

Table 5: Hypothesis Testing

Walds' test				
Null hypothesis H ₀ : MD≠MKTE; MD≠COMM; MD≠VAG				
		Value	df	Prob.
Chi-Square test	MKTE	1.031	(7,203)	0.003
	COMM	1.231	(5,205)	0.001
	VAG	1.102	(5,205)	0.002

Source: Researchers' own computations (2019)

Since $H_{a1} > 1$ ie $X^2 = 1.031$, then this shows the variable (market efficiency, MKTE) to fit the model though statistically insignificant. This indeed shows that manufacturing sector development (MD) has a positive contribution towards development of individual and country economy. But because of its less or insignificant growth that is why insignificant market efficient is experienced which later has caused economic underdevelopment (<ED). The same has been revealed with 2nd sub-construct, commercialization (COMM) where $H_{a2} = 1.231$ and with the 3rd sub-construct, Value addition (VAG) where $H_{a3} = 1.102$. The structural model for the interaction among five constructs or variables as shown in Table 4 above is as shown in figure 2:-

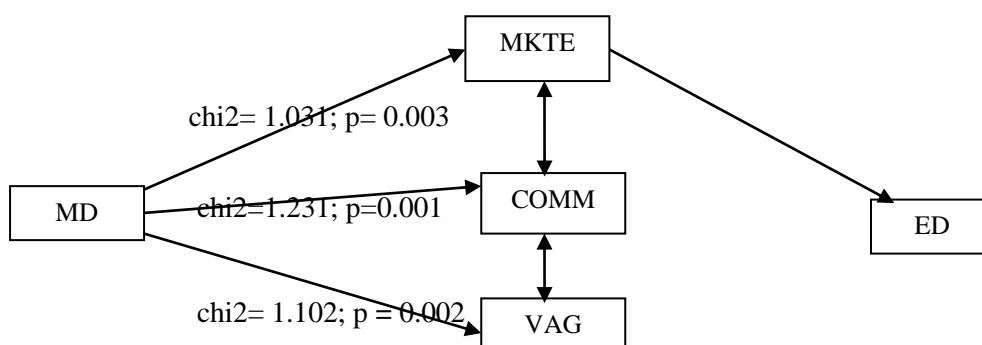


Figure 2: Path Analytic Model

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Growth in manufacturing sector and economic development are two inseparable variables. This was revealed from the field in which it was found that development in manufacturing sector lead into market efficiency. Moreover it was revealed that, development in manufacturing sector is mere start over commercialization of traditional primary activities especially to small scale firms say small holders farmers. Indeed it was found that developed manufacturing sector give rise to value added products which are actually the major source of attaining good terms of trade, favourable balance of trade and balance of payment.

Despite these innovations brought by developed manufacturing sector, in Tanzania little growth has been experienced. This stagnant growth in the manufacturing industries was revealed to be caused by i) lack of steady and adequate electrical power ii) poor technology iii) lack of innovative human resources iv) poor access to modern technological machinery and v) financial incapability of most of small scale producers and manufacturers. Based on the findings, this study recommends the following to different categories of economic development stakeholders:-

5.2 Recommendations for the policy makers/government (Ministry of Agriculture, SIDO, Chamber of Commerce, TICC, Ministry of energy, Ministry of Commerce, Industry)

- i. Assurance of sustainable energy source (supply) should be promoted. This either is to be sustained by coming with steady electrical energy supply through extraction of hydro-electrical power, the effort the government of Tanzania has shown up over the Mwl. Nyerere hydro-electrical Power harnessing Plant at Rufiji River Basin however much needs to be done to ensure that the obtained power is cheaply supplied to users.
- ii. The government should think of coming with more others sustainable sources of energy such as Natural gas, Wind, Solar, biogas.
- iii. The steady energy supply should be made accessible both in rural and urban areas.
- iv. The government has to link farmers in supply chain value of manufacturing sector.

- v. The promotion over small scale manufacturing and rural industrialization should be the priority
- vi. The government should promote manufacturing sector by providing subsidies to small scale processors and small scale farmers.
- vii. The government should encourage the small scale processors to form groups or corporations/partnership to easily accessed financial services/products and more other business services.
- viii. Agricultural extensions officers should act effectively in assisting farmers to acquire necessary agronomical services.
- ix. Processors should be enabled with good processing technology and machinery.
- x. The packages which adhere to TBS and ISO standards (if necessary for the start) should be made available to small scale processors.
- xi. The government should encourage contract farming while intervening the relationship between the parties of the contract.
- xii. The credits provided by the government such that of 10% to productive youth and disabled persons should be subjected to concrete follow up and monitoring.
- xiii. The government should support small scale farmers with agro-implements /inputs if not credits.

5.3 Recommendations for Financial Institutions

- i. Financial Institutions should be mentors of SMEs, agro-firms, small scale processors on how efficiently the borrowings is to be allocated to earn expected returns.
- ii. The Financial Institutions should create different packages over the loan to promote for universal accessibility. The different packages said in here may be the SMEs and large scale firm credits/loan; the Women credit; the productive youth credit; short term credit; long term credit; and group loan.
- iii. The financial Institutions encourage SMEs to form group so as to get joint tenancy which may help them access financial assistance.
- iv. The financial Institutions should charge a little and affordable interest on borrowings asked by processors say a single digit, small as <2%.

5.4 Recommendations for the Manufacturers/Processors, (Small and Large Processors)

- i. Small scale manufacturers should organize into groups. This will help them be easily accessed in terms of training, and financial support.
- ii. Manufacturers should be confined to good processing technology.
- iii. Processors should attend seminars and trainings on better processing mechanisms.
- iv. The processed goods should be packaged, preserved, contained, packed and labelled.

6.0 RECOMMENDATIONS FOR FURTHER STUDIES

Due to the fact that the study has not satisfactorily presented everything with regard to the growth in the manufacturing sector and economic development, other studies can investigate on the following;

The study may be laid down to-wards investigating on the impacts of growth on manufacturing sector on market efficiency.

Another study could focus on assessing the influence of development of manufacturing sector on commercialization of activities in the supply chain value of manufacturing sector.

An investigation on the impacts of growth on manufacturing sector on creation of value added goods could also be taken.

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