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The Role of Ethiopian Medium and Large Scale Manufacturing Industries in Strengthening Rural-Urban Linkages

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Abstract
Contemporary economic theory sees the manufacturing industry as a strategic tool for strengthening rural-urban linkages and for bringing overall economic development and poverty eradication. This is due to the interdependence of the rural and urban economies in developing countries. However, the Ethiopian medium and large scale manufacturing industry does not appear to be on the right track in their relationship to the agricultural sector as required by the Agricultural Development Led Industrialization [ADLI] policy. Most Ethiopian manufacturing establishments are known for their high dependence on imported raw materials and for their operating below capacity. Past studies failed to realize the potential benefits of creating production linkages by reinforcing rural-urban links across the country. The objective of this paper is to evaluate the capacity of medium and large scale manufacturing industries (MLSMIs) to forge rural-urban relationships that will assist towards achieving the goals of ADLI. The methodology for putting the paper together is by drawing results from the ongoing doctoral research[1] by the author. That study is based on a mixed data approach using both quantitative and qualitative methods and with a questionnaire survey as the main data collection tool. The research question addressed in this paper is what role can medium and large scale manufacturing industries play to strengthen rural-urban economic linkages? There is every reason to believe that manufacturing industries have the capacity to expand their demand for local agricultural raw material. Rural areas, on the other hand, have an equally dependable appetite for agro-allied products such as fertilizers, pesticides, and farming machinery. Unfortunately, the paper finds from the study that as high as 52.7 percent of existing industries in the four case-study areas are wholly or partially dependant on imported raw materials and that only 9.9 percent appear involved in the production and supply of agricultural inputs. Strangely, however, as much as 44.6 percent of the study's respondents chose the main reason hindering linkages as the unavailability of preferred and export quality raw materials in the local market. The paper is structured into five sections; the introduction, literature review, methodology, findings and conclusion (incorporating some suggested recommendation).

Key Words: rural-urban, forward/backward integration, interdependence, export-quality raw material, agro-allied manufacturing,

INTRODUCTION

Enhancing agricultural productivity can contribute greatly to strengthening rural-urban linkages by providing raw materials for industry as well as creating new markets for manufactured consumer goods. Industrial development such as agro-based industries can equally play a greater role in the linkage through agricultural input provision and agricultural product utilization. African countries can exploit the potential complementarities between agriculture and industry through a judicious use of policies to promote a mutually-beneficial relationship between them (UNIDO, 2011:3).

However, most development policies in developing countries tend to focus on the differences between 'rural' and 'urban' rather than on the potential complementarities that exist and are waiting to be grasped. This indicates gaps in policy planning and integration where, for instance, urban planners appear to concentrate more on the urban area with little or no attention to rural complementarities to the city. Similarly, rural/regional development planners tend to also ignore urban centers.

In Ethiopia, the Agricultural Development Led Industrialization (ADLI) policy of 1993 is the Federal Government's main growth strategy to realize its goal (Lulit et al., 2010:2). The objective of ADLI is to strengthen the linkages between agriculture and industry by increasing the productivity of farmers, promoting

[1] *Factors affecting the performance of Medium and Large Scale Manufacturing Industries in Ethiopia: Case study of selected cities in Ethiopia* by the Author

private commercial farms, and by reconstructing the manufacturing sector to utilize the anticipated increase in agricultural output. Industry-Agriculture linkage is the key to the success of Ethiopia's industrialization drive as envisioned by ADLI (GRIPS Development Forum, 2009:13). The major objective of the industrial development strategy is to increase the benefits earned from economic integration towards improving the living standard of the people.

There are several studies undertaken concerning the manufacturing industry and rural-urban linkages in Ethiopia; the Quarterly Manufacturing Industry Business Survey (QMIBS) undertaken by Central Statics Agency (CSA,2009), the Fostering New Development Pathways: Harnessing Rural-urban Linkages to Reduce Poverty and Improve Environment in the Highlands of Ethiopia (Gete, et al., 2007), Economic Development in Africa Report(2011) and many others. Findings of all these studies indicate the underperformance of manufacturing industries (MIs) in terms of contribution to the GDP, the poor productive and export earnings characteristics of MIs, and the importance of strengthening rural-urban linkages to reduce poverty and improve the environment. The studies did not investigate the status and strength of medium and large scale manufacturing industries and the critical importance of the role they can play to reinforce the rural-urban links in the country. This study intends to fill this gap.

Statement of the Problem

There is little evidence that Ethiopian industries are aware of the immense opportunities that exist and can be realized under a truly structured and performing rural-urban economic atmosphere. The core problem addressed in this paper is the failure of the Ethiopian medium and large scale manufacturing industry to deliberately encourage a forward-and-backward production-marketing linkage between agriculture and manufacturing such as to strengthen the rural-urban interdependent economy. It is generally expected that enhancing the sector holistically can manifestly expand economic development and drastically cut poverty through job creation.

Objective

The objective of this paper is to examine the role of medium and large scale manufacturing industries in strengthen rural-urban production linkages in the context of dependence on locally-sourced agricultural raw material and, conversely, the role of these industries in providing agricultural inputs and domestically produced manufactured goods.

Significance

In the Growth Transformational Plan (GTP), it is proposed that creating conditions for industry, especially agro-processing industries, to play a key role in the economy is of critical importance for economic development and poverty eradication through a strengthening of rural-urban linkages. In this context, the paper explores the role of the Ethiopian medium and large scale manufacturing industries in creating forward and backward linkages, considers factors hindering the linkages between industry and agriculture, and suggests measures to come out of the present situation. This goal of addressing such an important socio-economic challenge underscores the significance of the paper.

Scope of the Paper

The paper follows the same locations of the main study namely, Addis Ababa (Akaki-Kaliti sub-city), Dire Dawa, Hawassa, and Kombolcha. These cities contain the major industrial zones of Ethiopia with the largest being in the Akaki-Kaliti sub-city, which also represents the central industrial parts of Oromia Regional State.

LITERATURE REVIEW

The Concept of Rural-Urban Linkage

The positive links between the urban location and the surrounding countryside was first noticed by J.H,Von Thunen. In 1826, he undertook an early classical analysis of the spatial allocation of economic activities. Using a model of agricultural land use, he showed how market processes determine land use in different geographical locations and, more specifically, how land use is a function of transport costs to markets and the farmer's land rent. His model generated concentric rings of agricultural activity around a central city, with dairy and intensive farming closest to the city, followed by timber and firewood in the second circle, grain production in the third, and finally, ranching and livestock activities in the fourth circle. Clearly, urban demand is a key driver of spatial allocation of economic activities already in this basic model of marginal returns to assets and labor (Joachim Von Braun, 2007). This implies that the livelihoods of the urban and rural communities are interdependent to each other. At the same time the spatial allocation of land use of economic activities are also determined on the strong bondage of economic production linkages.

The need for approaches to poverty reduction that cover both urban and rural areas has also gained urgency in the face of increasing disparities in the levels of income, economic opportunities and the quality of

life between these areas. Poverty reduction in rural and urban areas requires an integrated approach which, on the one hand, provides rural population with access to urban opportunities for rural population, and urban employment opportunities for rural population. On the other hand, it is necessary to modify urban structures such as jobs and good markets, and service provision and delivery to accommodate the specific needs of the rural population (United Nations, 2005). In other words, there is a need for strengthening rural-urban linkages in a number of areas, particularly economic linkages (market, employment) and physical linkages (infrastructure, transport, communication). It should also be noted that linkages will be increasingly important in open and globalizing economies. The starting point of this strengthening will be a planning approach that covers small towns and surrounding rural areas. Rural-urban linkages take many different forms; In general, "rural-urban linkages" refers to the flow of people (migration, community), capital (public and private), and goods (trade and in kind of family support) between rural and urban areas. It is important to add to these three economic flows the flow of ideas, innovation and information (Northern Ireland Statistics and Research Agency, 2005:2).

The role of manufacturing industries in bringing overall economic development and poverty eradication through strengthening rural-urban linkages development approach is increasingly becoming the accepted approach (Okpala, 2003:1-5). According to Kapunda (2005:2) industrialization has several advantages and the ones most relevant to a rural-urban economy are those that relate to the diversification from export orientation towards manufacturing to reduce risks and vulnerability to commodity terms of trade and associated loss in real income; and the forward and backward linkages between industry and agriculture. The extent to which industrial development effectively decreases poverty and inequality depends on the pattern of industrialization. Industries which employ a high proportion of unskilled workers and/or use domestic inputs and, particularly, agricultural products as raw materials can have positive effects on incomes of the poor (ECA, 2011: 2-3).

The practice of industries outsourcing activities associated with the acquisition of agricultural raw material to business functionaries in the rural community instead of providing it internally adds to the growth of the rural economy. For instance, the transport of farm product to the factory gate can be easily performed by small private individuals or enterprises in the given rural community at lower operating cost to the manufacturer (Aminul I. and Farid A., 2008).

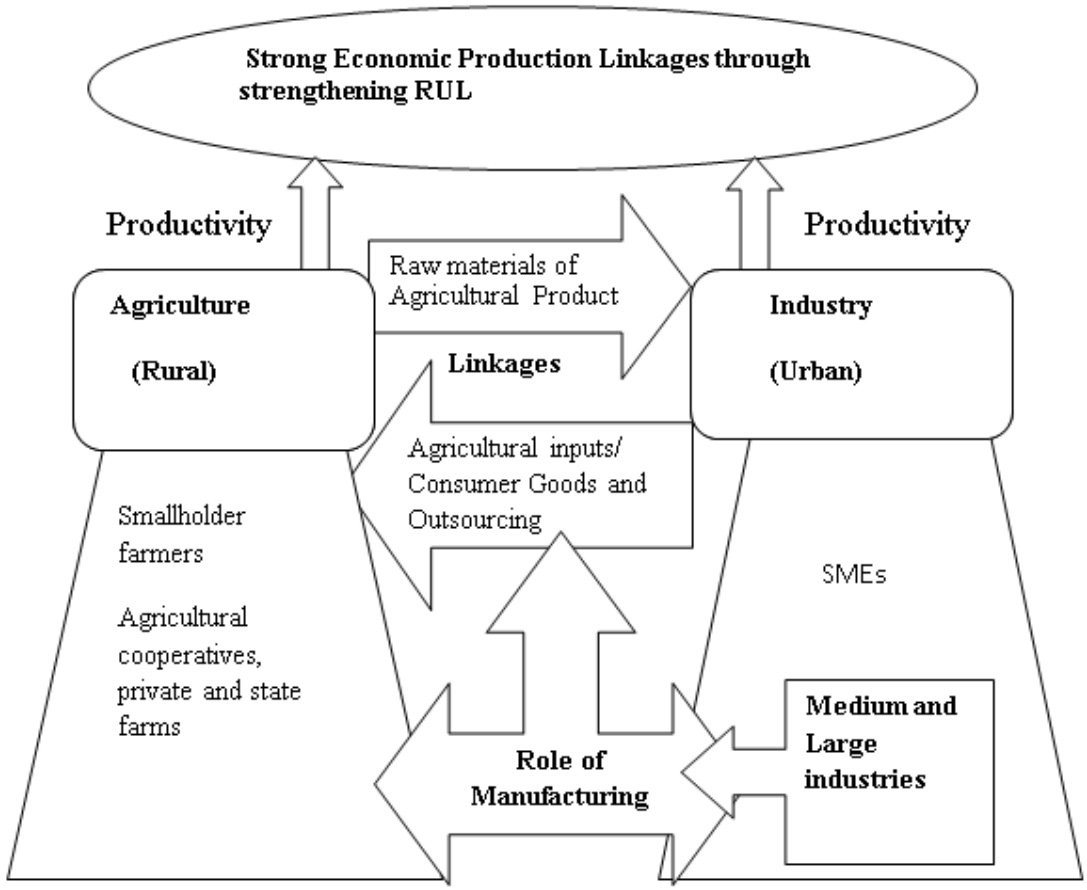
Conceptual Framework

The conceptual framework diagram illustrates the mutually-benefitting relationship between the medium and large scale manufacturing industries and agriculture in a typical rural-urban scenario. As the linkages between the agriculture and manufacturing sector become strong, productivity could be enhanced in both sectors through strengthening rural- urban economic linkages.

RESEARCH METHODOLOGY

This paper issues from an ongoing doctoral research by the author. The study has conducted both primary and secondary data surveys as well as professional and focused group interviews and considerable information gathered there from provide the foundation for this paper. The paper uses selected variables to systematically address the basic research question: the dependant variable is strengthening rural-urban production linkages or strengthening the linkages between the industry and agricultural sector economic linkages and the independent variables are forward and backward production linkages and the level and type of outsourcing secondary activities.

Figure 1 Conceptual Frame Work of the Study

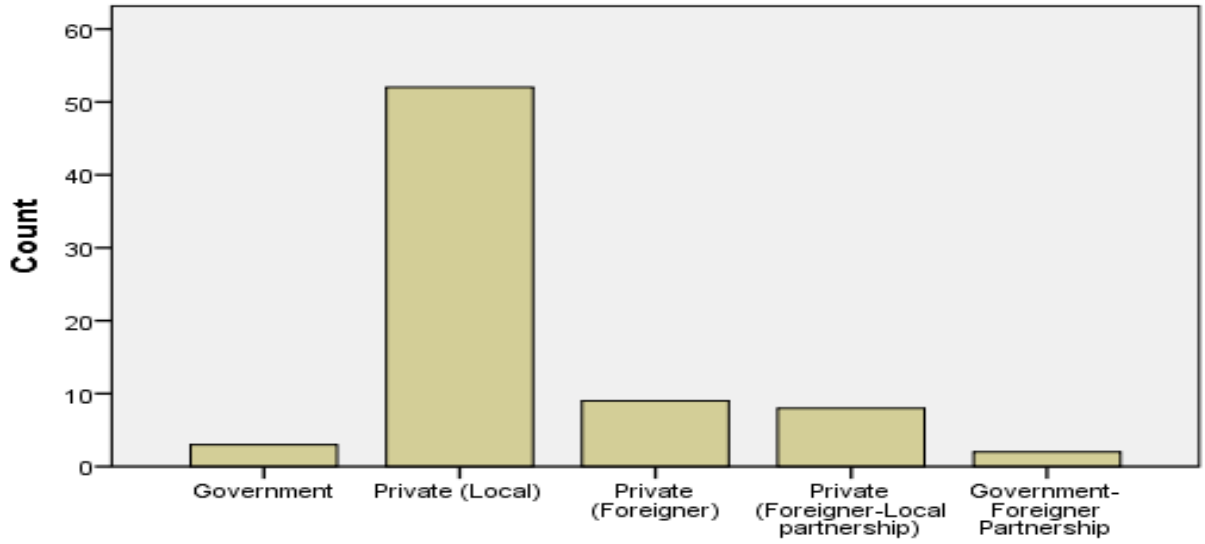


Source: Developed by the Researcher

FINDINGS

The paper finds that the four study areas contain some of the prominent medium and large scale industries in Ethiopia. The study survey indicates the ownership structure of industries in the country with 70.3% of the firms being are privately owned by Ethiopians, 12.2% being privately owned by foreigners, while 4.1% is owned by government.

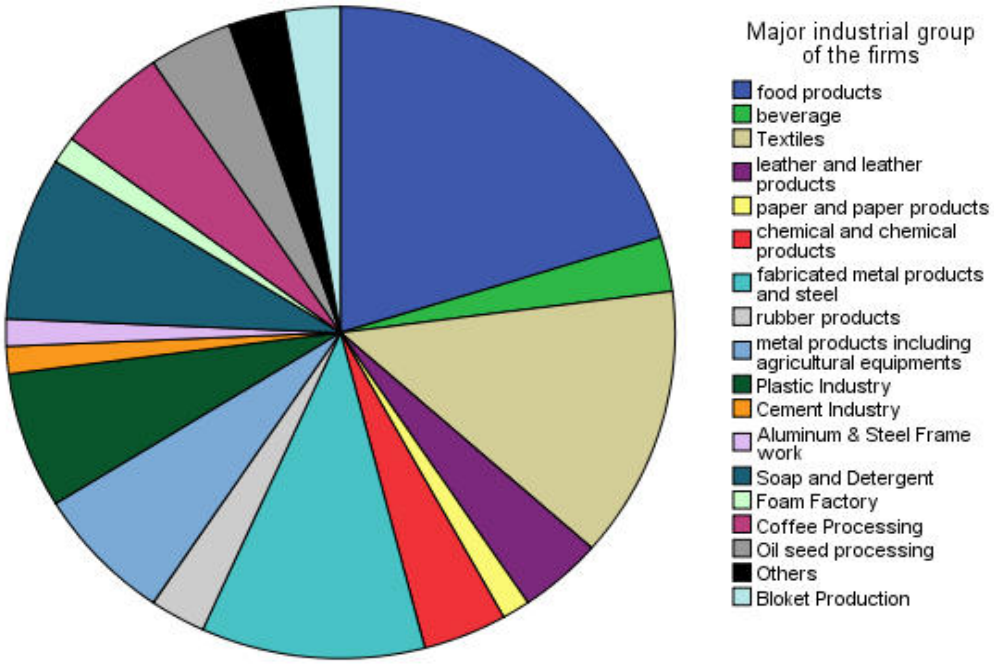
Chart 1: Structure of Ownership



Source: Sample Survey of the Ongoing Research Study

In terms of the classification of products the study found that a greater number (50.1%) of the industries are agro-based and produce items such as textiles, leather, food and beverage. This shows that forging a rural-urban agro-based industrial linkage will have a greater chance of succeeding.

Chart 2. Industrial Classifications by Product



Source: Sample Survey of the Ongoing Research Study

A CSA (2012) report on large and medium scale manufacturing industries indicates that 45.7% of medium and large scale manufacturing industries of Ethiopia are agro-based industrial groups which have a direct connection in creating production linkages with the agricultural sector. Another CSA (2013) report on manufacturing suggests that a majority of the agro-based industries are highly dependent on imported raw materials.

Table 1 Sources of raw materials for manufacturing industries in the case study cities

Valid	Frequency	%	Valid Percent	Cumulative %
Imported	26	35.1	35.1	35.1
Local	35	47.3	47.3	82.4
Both imported & local	13	17.6	17.6	100.0
Total	74	100.0	100.0	

Source: Sample Survey of the Ongoing Research Study

As specified in the table above 52.7% of the medium and large manufacturing industries are fully or partially dependant on imported raw materials. From this data it is possible to conclude that majority of the manufacturing industries are dependent on imported raw materials. This implies that more than 50% of the manufacturing industries are not creating backward production linkages by using local agricultural products as raw materials, thus confirming the CSA report.

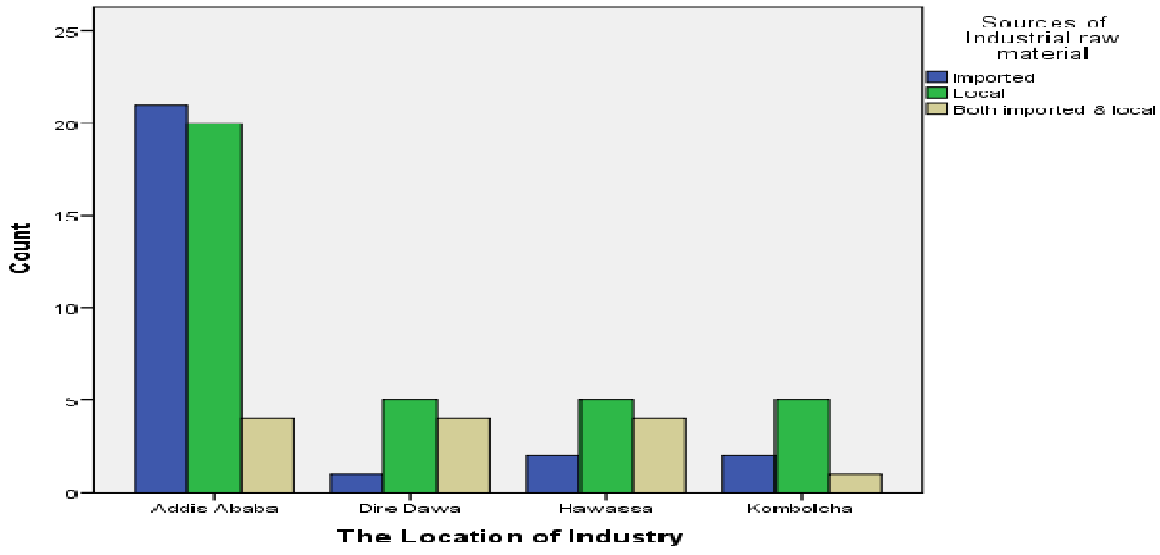
Table 2 Kinds of local raw materials used by medium and large scale MIs

Valid	Frequency	%	Valid Percent	Cumulative %
Not used local product	20	27.0	27.0	27.0
Farm crops(cereals, oil seeds, coffee Cotton)	30	40.5	40.5	67.6
Fruits and vegetables	3	4.1	4.1	71.6
Animal skin and hides	5	6.8	6.8	78.4
Industrial Product	10	13.5	13.5	91.9
Mining	1	1.4	1.4	93.2
Forest	3	4.1	4.1	97.3
Others	2	2.7	2.7	100.0

Source: Sample survey of the Ongoing Research Study

The study further found (see Table 2 above) that as much as 40.5% of manufacturing industries are using agricultural products such as wheat, maize, and cash crops such as coffee, cotton and oil seeds; 6.8% use animal products such as goats, sheep and cattle; 4.1% use fruit and vegetable products. Other potential sources of agro-based industrial such as dairy, horticulture and meat packing are not well exploited.

Chart 3. Sources of Industrial Raw Material in the Study Cities



Source: Sample survey of the Ongoing Research Study

The chart above is a comparative display of the relative sizes of imported raw material usage by industries in the four study areas. While Addis Ababa leads the country in importation, it is gratifying to note the positive trends, though in much smaller proportions, of the other cities - namely Dire Dawa, Hawassa and Kombolcha.

Table 3 Forward production linkages created by the medium and large scale MIs.

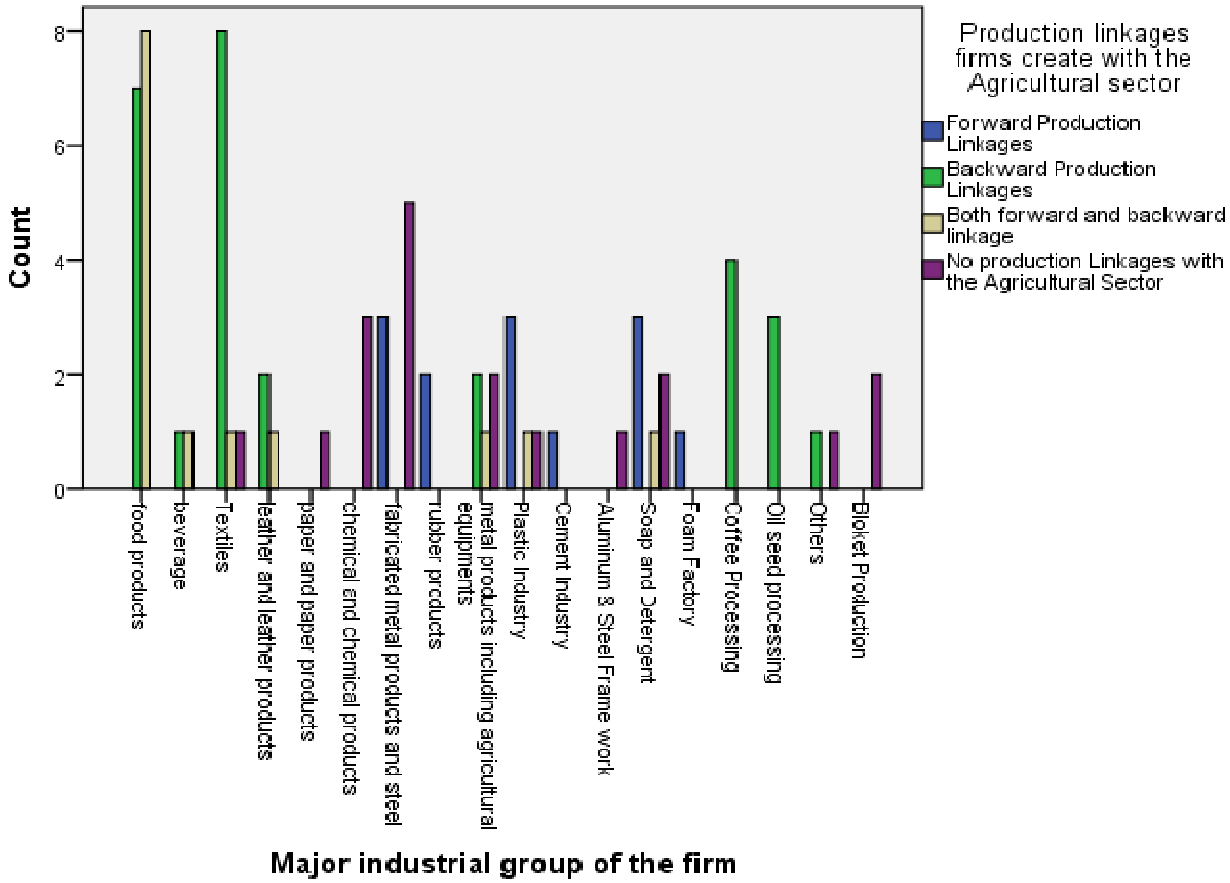
Valid	Frequency	%	Valid Percent	Cumulative %
Not supplying agricultural input	26	86.7	86.7	86.7
Agricultural tools and metal products	1	3.3	3.3	90.0
Irrigation equipments	1	3.3	3.3	93.3
Pesticides	1	3.3	3.3	96.7
Others	1	3.3	3.3	100.0
Total	30	100.0	100.0	

Source: Sample survey of the Ongoing Research Study

The study also found as shown in the table above that only 9.9 percent of the industry are engaged in supplying agricultural inputs implying that the medium and large scale manufacturing industries are presently not significant to the agricultural sector. It also means that the agricultural sector is highly dependent on the imported inputs. A study by Altenburg (2010:17) put the figure of intermediate inputs demanded by agriculture produced by the domestic manufacturing industry are only 5 percent also implying that the role of Ethiopian medium and large scale manufacturing industries is insignificant in strengthening rural-urban linkages.

Despite the poor report, it does appear that there is a gradual improvement on the horizon. The chart below is proof that backward linkages are growing in respect of textiles, coffee processing, oil seeds, leather and leather products, and food products, while fabricated metal products, plastic products, soaps and detergents are strongly leading the way to creating forward linkages.

Chart 4 Production Linkages by classification of industries



Source: Sample survey of the Ongoing Research Study

A very significant support function of rural-urban linkage is outsourcing. Unfortunately, the table 4 below shows that 54 percent of medium and large scales manufacturing industries are not outsourcing secondary activities.

Table 4 Production linkages through outsourcing of secondary activities

Valid	Frequency	%	Valid Percent	Cumulative %
No outsourcing at all	40	54.1	54.1	54.1
For Small and Micro Enterprises	7	9.5	9.5	63.5
For Agricultural Cooperatives and Unions	2	2.7	2.7	66.2
For private Enterprises	20	27.0	27.0	93.2
For SMEs and Agricultural Unions	1	1.4	1.4	94.6
For SMEs and Private Enterprises	1	1.4	1.4	95.9
For Agricultural Unions and Private Enterprises	1	1.4	1.4	97.3
For, SMEs, Agricultural Unions and Private Enterprises	2	2.7	2.7	100.0
Total	74	100.0	100.0	

Source: Sample survey of the Ongoing Research Study

Finally, the paper finds that the main reason responsible for the non-use of local raw materials by more industries is the non-availability of specified quality raw material in the local market. In the study, nearly 45 percent of respondents confirmed this situation which was further made definite by the First Quarter Manufacturing Business Survey (2013) of the Central Statistical Agency of Ethiopia.

CONCLUSIONS AND RECOMMENDATIONS

The paper sets out to assess the capacity of medium and large scale manufacturing industries to forge beneficial linkages between rural agrarian systems and urban industrial systems to bring about increased economic production and, thereby, reduce poverty. It is generally believed that the Ethiopian economy will benefit greatly once the rural economy is effectively linked to the urban to create an efficient transfer and exchange system of support for agricultural products as raw material for industrial production. Conversely, an expanding agricultural sector will impose profitable demands on manufacturers of a range of products needed for farming and general rural use.

The greatest concern, therefore, is why manufacturing industries in the country have not mustered the will and determination to encourage, by deliberate action, the growth of a virile forward and backward product exchange market to strengthen rural-urban linkages. Another concern raised in the paper deals with the capacity of medium and large scale manufacturing industries to outsource secondary activities to rural-based enterprises as additional effort to strengthen rural-urban linkages. Clearly, it can be concluded that Ethiopian medium and large scale manufacturing industries are not playing a significant the role expected of them under the ADLI initiative to contribute to the development of the economy and alleviate poverty by strengthening rural-urban linkages. However, it must not also be overlooked that one of the major reasons hindering the industry from integrating backwards in their production chain is the unavailability of quality raw materials in the local market.

The paper sees a concerted re-awakening of policy-makers, farmers, industry, urban and rural managers and planners, and the investment community to the invaluable potentials of a sustainable harmony between manufacturing and agricultural under a strengthened rural-urban economic linkage as quickest solution to rural, if not urban, poverty eradication. The following are hereby suggested as recommendations:

- Enhance agricultural productivity and improve the raw material quality of agricultural products such as coffee, cotton, cereals, oil seeds, animal skins and hides.
- Introduce export quality meat processing
- Introduce export quality dairy farming and processing
- Expand the utilization of local farm products as raw materials for factory processing such as wheat to flour
- Encourage industry to outsource secondary activities through the tax code as well as motivating relationships between local agricultural unions and industry
- Implement import substitution privileges for agro-based manufacturing industries
- Improve transparency in the agro-based food products industries which are mainly patronized by WFP and a few NGOs
- In future industrial clustering the location of agro-based industries should be based on the resource potentials of localities.
- Provision of infrastructure within the industrial zone as well as expanding into the hinterland to strengthen the rural-urban linkages.

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