



POLICY Brief

Ethiopian Economics Association (EEA)

Professionalism and Economic Thinking for Development!

No. 06/ December 2022

Vision

The EEA is envisioned to become a premier economics association in Africa by 2030.

Mission

The mission of EEA is to provide a platform for networking, access to information and learning; to contribute to a better understanding of the global, national and local economic issues; to inform and influence economic policymaking and investment decision; to offer training and foster the advancement of the discipline of economics.

Values

Professionalism, integrity, independence, quality, efficiency, inclusiveness, teamwork, accountability and transparency.

Copyright © Ethiopian Economics Association

Disclaimer: This publication was produced with the financial support of the **European Union**. Its contents are the sole responsibility of the team of experts of the Ethiopian Economics Association, external consultant and advisors. The Authors do not necessarily reflect the views of the European Union.



Agriculture-Industry Linkages for Employment and Economic Transformation in Ethiopia

Solomon Tsehay¹, Zewdie Adane², and Adem Feto³

1. Summary

The quest for structural transformation, sectoral linkages, and employment creation are among the primary development aspirations of Ethiopia. This study investigated sectoral linkages between agriculture and agro-processing and the contribution of technical change to the total change in total production of various activities. The results in general showed that there was a weak linkage between the agriculture and agro-processing sectors over the period from 2005 to 2016. The result revealed that all key agricultural activities have strong backward linkages. However, except for cereals and livestock, all agricultural activities have weak forward linkages, which entails that there is no strong agro-processing sector that intensively uses domestically produced agricultural outputs as intermediate inputs. Some agro-processing activities have strong backward linkages while the rest of the agro-processing sectors have weak forward and backward linkages.

The results displays that there was a significant change in the production of various activities in the economy. However, the change was due to a massive increase in final demand than to technical changes. The analysis further signified that the agricultural sector creates more demand for labor than agro-processing activities. Lack of adequate quality raw materials along the value chains of various agro-processing activities in the domestic economy is one of the striking causes of weak linkages between agriculture and agro-processing sectors. Thus, it is important to strengthen the linkages between the agricultural and industrial sectors by focusing on technological upgrades and fixing the looseness in the value chains of each agro-processing activities.

¹ College of Development Studies, Addis Ababa University, Addis Ababa, Ethiopia.

² Ministry of Planning and Development, Addis Ababa, Ethiopia.

³ Ethiopian Economics Association, Addis Ababa, Ethiopia.

2. Introduction

Strengthening linkages between manufacturing and agriculture as well as linkages within manufacturing and agriculture themselves are the key focuses in designing development plans, policies, and strategies. Empirical evidence also shows that strong sectoral linkage is one of the most salient sources of economic development because of the fact that the expansion of key sectors will have a significant impact on competitiveness, output, income, and employment.

Ethiopia has made huge strides in terms of economic growth, social development and physical infrastructure establishments. Yet, this has not been accompanied by adequate structural transformation, which should be reflected by a sustainable shift from low productivity and labor-intensive activities, such as agriculture to a high productivity and skills-intensive activities both within and between sectors and subsectors. For instance, the share of the manufacturing subsector to GDP remains low which is less than 6.7%, and its share in merchandise export earnings stands at 12% in 2021/22. This signifies that the contribution of manufacturing subsector to the national economy is very low, and that the desired transformation is far from being achieved. The realities call, for instance, a drastic policy shifts in the country. Thus, a proper understanding of sectoral linkages between agriculture and industry is necessary for designing appropriate long-term policies, plans and strategies to achieve sustainable development.

3. Key Findings

Forward and backward linkage

- ◇ There is weak linkage between the agricultural and agro-processing sectors in Ethiopia. Agro-processing sectors, in particular, have weak links with agricultural activities. It has been very weak especially in the fruits and vegetables subsector. On the contrary, cereals have strong forward linkage, showing that agro-processing is concentrating on flour production and bakery business.
- ◇ The change in the production of goods and services in the economy occurred because of a boom in consumption rather than improvements in the nature of the production function.
- ◇ The change in production of activities over the past few decades were caused by the change in consumption rather than technical changes, implying weak structural transformation of the economy.
- ◇ Pulses, oilseed, livestock, vegetable oil, bakery and grain mills, and agro-processing exhibit positive technology effects, although for all these activities final demand remains the main source.

Household welfare effect

- ◇ Agricultural activities, namely pulses, oilseeds, fruits and vegetables, cash crops, Enset, and livestock induce higher impact on household's income compared to manufacturing activities.
- ◇ Agro-processing activities that intensively use domestically produced agricultural goods as intermediate inputs, and which are labor intensive, induce higher impact on the income of households. From agro-processing activities, vegetable oils, dairy, bakery and grain mills, sugar, and alcohol ensure higher income gain compared to other manufacturing activities.

Employment effect

- ◇ Agricultural activities induce more demand for labor than manufacturing activities.
- ◇ From agro-processing activities, bakery and grain mills, dairy, and vegetable oil induce more demand for labor than other subsectors.
- ◇ Other agro-processing activities do not create more employment opportunities because they either intensively use intermediate inputs or capital in their production systems.

Challenges identified in the sectoral linkages

- ◇ Poor quality and inadequate provision of strategic raw materials domestically along the value chains (e.g., fabric and important chemicals).
- ◇ Weak coordination and poor alignment of investments in each subsector to achieve strong forward and backward linkages.
- ◇ High prevalence of illegal trade particularly in the livestock sector.
- ◇ Challenges to access financial services hindering optimal operation scale.
- ◇ Lack of access to reliable markets, information, and efficient logistic services.

4. Conclusions

Results confirmed the presence of weak linkages between agriculture and agro-processing activities and within agro-processing activities themselves. The linkage is very weak especially in the fruits and vegetables activities although several other activities have also exhibited weak intersectoral linkages. Cereals have strong forward linkage showing that the agro-processing concentrates in flour processing and bakery business.

There have not been effective policies that promote systemic and sustainable linkages between agriculture and manufacturing. As a result, the main issue with weak linkages stems from the economy's structure and poor implementation of plans, policies, and strategies, rather than the mere existence of such documents.

It will remain an uphill to achieve sustainable development without building high quality value chains and linkages within and between agriculture and manufacturing; fostering structural transformation; and ensuring a vibrant business environment for the private sector to flourish. There is a long way to inducing effective structural transformation and creating jobs in Ethiopia if policymakers and implementers continue to do things as business as usual.

5. Policy Implications

The study recommends that policy making should focus on improving implementation capacity to transform agriculture and promote systematic linkages between agriculture and manufacturing to sustainably improve the overall productive capacity. Specifically, the followings are recommended:

- ◇ There is a need for comprehensive and detailed diagnostic assessment along the value chain of priority agro-processing activities and careful examination of subsector level potentials and complementarities that could serve as a basis for developing robust intersectoral linkages;
- ◇ The domestic production space and policy is expected to respond to the change in demand pattern of the economy whereas the quality of domestically produced commodities should be enhanced through research and development;
- ◇ There is a need to promote joint planning across sectors to foster sectoral linkages and to squash input shortages. The planning, implementation and monitoring systems should be synchronized and coordinated across sectors and line ministries to ensure sectoral linkages;
- ◇ Strategic raw materials in each sector should be identified and investment should be geared towards priority sectors to gain nationwide comparative advantage while “potential first” needs to be used as a criterion to select growth corridors in different areas to ensure linkages; and
- ◇ The government need to solve administrative and bureaucratic bottlenecks that hinders investments and development; improve implementation capacity to promote systemic linkages between the agriculture and manufacturing; and revise investment policy and launching incentive structures that gives prime attention to sectors which enhance linkages.



Further inquiries and information:

Email: info@eea-et.org

Website: <http://www.eea-et.org>



<https://twitter.com/EthioEconAssoc>



<https://facebook.com/EEAEthio>



<https://www.youtube.Ethiopian Economics Association>

Ethiopian Economics Association

Yeka Sub-city, Woreda 11

CMC area adjacent to St. Michael Church

Tel: +251 - 11 - 645 32 00/645 30 76/645 30 41

Fax +251 - 11 - 645 30 20

P.O.Box 34282, Addis Ababa, Ethiopia

Selected References

Hirschman, A. (1958). *The Strategy of Economic Development*. New York, Yale University Press.

Newman, C., Page, J., Rand, J., Shimeles, A., Söderbom, M., & Tarp, F. (2016). *Manufacturing Transformation: Comparative Studies of Industrial Development in Africa and Emerging Asia*. Oxford University Press.

PDC (Planning and Development Commission). (2021). Ten-Years Development Plan-2020/21-2029/30: A pathway to prosperity. The Federal Democratic Republic of Ethiopia, Planning and Development Commission. Addis Ababa, Ethiopia.

Randriamamonjy, J. & Thurlow, J. (2015). Social Accounting Matrix for Tanzania: A Nexus Project SAM. International Food Policy Research Institute, Washington DC, USA.

Welteji, D. (2018). A critical review of rural development policy of Ethiopia: Access, utilization, and coverage. *Agriculture and Food Security*, 7(1), pp. 1-6.

Conflict of Interest

There is no conflict of interest among researchers.