

SOFTWARE AND APPLICATION INNOVATION

AGRICULTURE PRODUCTIVITY IN ETHIOPIA

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Background

- Agriculture is the backbone of Ethiopia's economy. Agriculture sector employs 66.63% of Ethiopian on 2021, and therefore contribute to 80% of exports and 40% from whole Ethiopia's GDP.
- With huge labor forces and water resource, Ethiopia has marvelous opportunities for the commercialization their agriculture product. However, Ethiopia's current fruit, vegetable, and animal production for export are low values because of fragmented cultivation and lack of quality products.
- Agricultural productivity is a major challenge for sustainability as it has a direct impact on the country's food security, economic growth, and poverty reduction.

Source :

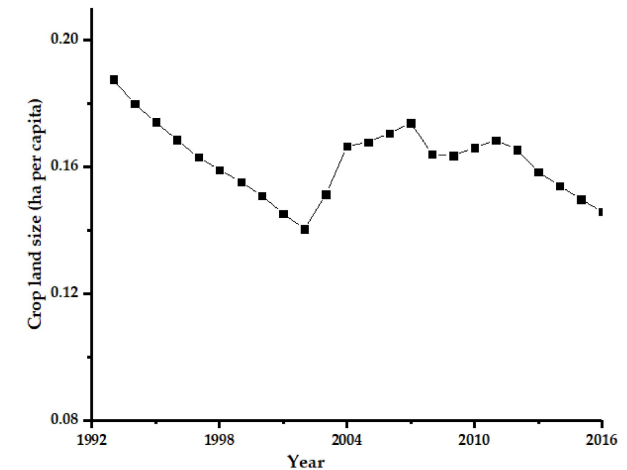
https://www.theglobaleconomy.com/Ethiopia/Employment_in_agriculture/

<https://data.worldbank.org/?locations=ET>

<https://www.usaid.gov/ethiopia/agriculture-and-food-security>

General challenges

- Lack of modern equipments & poor infrastructure
- Low literacy rate of citizens
- Shortage of farmland
- Land degradation/soil erosion
- Pest and disease outbreaks
- Political instabilities.



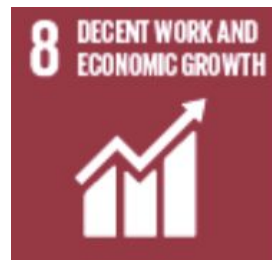
Development of cropland area (per capita) in Ethiopia from 1993 to 2016. Source: MoARD, Taffesse et al., CSA [27,28,36].

Reasons for the challenges

- **Human actions and climate change:** Land degradation happens because of overgrazing and over-cutting, shifting cultivation and agricultural mismanagement of soil and water resources as well as drastic climate change.
- **Limited investment in the sector:** Government's focus has been on industrialization. Additionally, political instability, conflicts, and economic challenges results in less interests from investors.
- **Lack of access to technology and inputs:** Smallholder farmers who cannot afford to purchase. Also many regions in Ethiopia are geographically isolated and difficult to access, which limits the supply.
- **Fragmentation of farmland:** Land is allocated by the state and the tradition is 40-50 years old. Allocated based on the size of the family and the number of cattles they own.
- **Lack of knowledge and skills:** 40% of the Ethiopians are less than 15 years old(*CIA (Central intelligence agency) World Factbook, 2019*), and one of the main reasons is the country's high poverty rate. In addition, the country's rural areas often lack basic educational infrastructure, such as schools and qualified teachers.

Impacts of challenges

- SDG 1: No Poverty - Low agricultural processing technology, makes it difficult for farmers to earn a sufficient income to support their families and thus they fall behind poverty line.
- SDG 2: Zero Hunger - Low agricultural processing in Ethiopia contributes to food insecurity and malnutrition, which are major barriers to achieving SDG 2.
- SDG 8: Decent Work and Economic Growth - Even though more than half of the population employed by agriculture industry, due to the low technology, they only works as farmhand.
- SDG 9: Industry, Innovation and Infrastructure: Lack of modern technologies, seeds and improved transportation can help increase the agricultural productivity.
- SDG 5: Gender equality - Due to previous reasoning, women who can not works as farmhand, got lower wages. With better agriculture technology, this problem can be solved.



We are focusing on...



Lack of modern equipments & poor infrastructure.



Low literacy rate of citizens.

References

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