Unemployment and Rural-Urban Migration in Ethiopia

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Almost 80% of the Ethiopian population is living in rural areas (Central Statistics Agency, 2017). Although the unemployment rate in rural areas is estimated to be around 2% (Ministry of Agriculture and Natural Resources, 2017), majority of rural population is young people with limited access to land and other means of agricultural production and most of them plans to quit agricultural production in near future (Bezu & Holden, 2014) despite rural non-farm employment opportunities are quite limited (Schmidt & Bekele, 2016). The lack of job opportunities in rural areas is among the core reasons of migration of young people to urban areas (Atnafu, Oucho, & Zeitlyn, 2014). According to a recent study by IFPRI, 28% of the young people in the Blue Nile Basin in Amhara and Oromia have permanently migrated to the urban areas between 2010-2014 (Kosec, Ghebru, Holtemeyer, Mueller, & Schmidt, 2017). However, an already high rate of unemployment in the urban areas with 16.5% (Ministry of Agriculture and Natural Resources, 2017) indicates that those who move to the cities for better job opportunities face significant constraints in finding jobs.

Ministry of Agriculture and Natural Resources (MoAaNR) of FDRE has developed and adopted a Rural Job Opportunity Creation (RJOC) Strategy for Ethiopia (Ministry of Agriculture and Natural Resources, 2017) to address these issues. RJOC strategy is targeting rural job seekers, primarily the unemployed and underemployed women and men, above 15 years of age, literate and illiterate, and those without regular and sufficient income. Furthermore, landless and school drop outs, technical and vocational trainees, and university graduates, farmers evicted from their land due to the expansion of urbanization and industrialization and those who need special support because of disability will be potential beneficiaries of the strategy.

The aim of this paper is to analyse the impact of the RJOC strategy on the Ethiopian economy and to develop policy recommendations for the prioritization of government investments. To this end we will first present a qualitative analysis of the RJOC strategy based on a series of in-depth interview and focus group discussion with the officials from MoANR and other concerned bodies, a review of best practices from other countries experience and an assessment of existing policies and strategies related to job creation and migration. Then we will employ a country level CGE model to quantify the impacts of RJOC strategy by using a recently developed SAM for 2014.

Model and Data

The CGE model used in this paper is based on Arregie et al. (2017)and improved further to better handle the migration flows. Number of people moving from one region to another is driven by the following equation:

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$$FSIM_{t,f,h,f',h'} = FS_{t-1}\left(h',f'\right)\left(\eta_{t,h,h'}\pi_{t,h,h'}\phi_{t,f,f'}\right)^{\varepsilon_{f,h,f',h'}}$$

where the indices f and h stands for factors (i.e. skilled, semi-skilled and unskilled labour) and households (i.e. according to regions and rural/urban) that receives immigrants respectively, f' and h' are factors and households; ε is the elasticity parameter; t is the simulation period, $FSIM$ is the number of immigrants, FS_{t-1} is the number of people in each household and labour type in the previous time period; η is the migration driver factor based on household income, π is the migration driver factor based on public spending and φ is the is the migration driver factor based on factor prices. The migration drivers are defined as follows:

$$\eta_{h,h',t} = \frac{\dfrac{YH_{t,h}}{\sum_{f} FSI_{t,h,f}}}{\dfrac{YH_{t,h'}}{\sum_{f} FSI_{t,h',f}}} \times \frac{\dfrac{YH_{t-1,h'}}{\sum_{f} FSI_{t-1,h',f}}}{\dfrac{YH_{t-1,h}}{\sum_{f} FSI_{t-1,h,f}}}$$

$$\pi_{t,h,h'} = \frac{\dfrac{QPub_{t,h}}{\sum_{f} FSI_{t,h,f}}}{\dfrac{QPub_{h'}}{\sum_{f} FSI_{t,h',f}}} \times \frac{\dfrac{QPub_{t,h'}}{\sum_{f} FSI_{t-1,h',f}}}{\dfrac{QPub_{t-1,h}}{\sum_{f} FSI_{t-1,h,f}}}$$

$$\phi_{t,f,f'} = \frac{\dfrac{\sum_{a} W_{t,f} FD_{t,f,a}}{\sum_{f} FD_{t,f,a}}}{\dfrac{\sum_{a} W_{t,f} FD_{t,f',a}}{\sum_{f'} FD_{t,f',a}}} \times \frac{\dfrac{\sum_{a} W_{t-1,f'} FD_{t-1,f',a}}{\sum_{f'} FD_{t,f',a}}}{\dfrac{\sum_{a} W_{t-1,f} FD_{t,f,a}}{\sum_{f} FD_{t-1,f,a}}}$$

where YH_h is income of household h, $FSI_{h,f}$ is factor supply (i.e. ownership) of labour type f by household h, $QPub_f$ is household consumption of education and health services, W_f is wage rate for factor f and $FD_{f,a}$ is factor demand (i.e. employment) of factor f by activity a. The three equations above imply that the migration is driven by the change in the per capita household income, per capita consumption of education and health services and average wage rate received by household.

The data used to calibrate the model follows from a new SAM developed by Ethiopian Development Research Institute (EDRI) for 2014. We further disaggregate the SAM to represent more agricultural activities and to take into account main features related to the rural employment and migration: Introduction of home-production-home-consumption, multi-output activities, different skill groups for households, factor ownership by households in quantity terms, irrigation etc…

Simulations

The RJOC strategy has four strategic pillars:

- Pillar 1: Entrepreneurship/ Self-Employment -- Private development
- Pillar 2: Wage Employment, Labour markets
- Pillar3: National Rural Employment Guarantee Scheme: Expanded Productive Public Workfare Program
- Pillar 4: Livelihood Diversification

and has the ambition to harness all the achievements registered so far in social services and infrastructure developments in the rural areas, among which:

•   Rural Road Development: Expansion and access to road connectivity;

•   Human Health Care Services: Health Posts, Health Centres and Hospitals; Animal Health Services: Veterinary posts/clinics;

•   Provision of Potable Water: Putting in place institutions responsible for the provision of drinking water both for humans and livestock;

•   Education: Pre-school and adult education, elementary, secondary, technical and vocational training institutions;

•   Training Centres: Farmers and Pastoralists Training Centres;

•   Irrigation facilities; water users' associations, construction and maintenance crews, and

•   Other rural infrastructure facilities such as market infrastructures and the forthcoming agro-industrial parks

In order to analyse the impact of the RJOC strategy on the economy we will simulate the following scenarios and present the results in relation to the 4 pillars mentioned above and impacts on the migration flows. Specifically the simulations that will be run are:

1 – Road and other infrastructure development: We increase the investment demand for construction sector related to road and other infrastructure development and link this investment to the trade margins on commodities

2 – Increased spending on health and education services as well as extension services in rural areas: We increase the public spending on health and education and link it to higher labour productivity and increased labour force participation.

3 – Increased investment in irrigation and potable water infrastructures: We increase the investment demand for construction activities related to irrigation and potable water development, and link it to an increase in agricultural yields and water availability

A sensitivity analysis is held to see the sensitivity of the model results to the model parametrization, especially the elasticity of migration function (ε).

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