

# IDE Research Bulletin

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Research Summary based on papers prepared for publication  
in academic journals with the aim of contributing to the academia

## Skills Development for Youth in Africa

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Skills Development for Youth in Africa

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**Background and Objective**

Technical and vocational education and training (TVET) has become an important policy agenda for poverty reduction with expectation of assisting employment for the poor and young. African countries have substantially restructured and scaled up the TVET institutions, so that it effectively supports development of skills that fit with demand in labor market. While policy has been enhanced, few studies have investigated performance of TVET, in particular vocational education. This project fills the gap and examines vocational education in Ethiopia and Ghana, where institutional development has been proceeding ahead of other countries, in terms of performance of its graduates in a labor market, specifically skills and employability. It also explores effectiveness of vocational training in post-conflict region in Kenya, where economic and social capital was destructed and training program is expected to assist reconstruction of community through employment creation.

**Summary of Papers**

Effects of Vocational Education in Labor Market: The Case of Ethiopia

Takahiro Fukunishi and Tomohiro Machikita

Vocational education has been considered as one of important policy to address youth unemployment in low-income countries, but empirical evidence is scarce. This paper estimates effects of vocational education on employment outcomes in Ethiopia, where restructuring was implemented a decade ago. Comparing with workers with lower secondary education, young workers with entry-level vocational education have only slightly higher probability to be employed, whereas they are more likely to be employed in formal sector and with permanent contract. We also find that when proportion of workers with vocational education increases (decreases) in a local labor market, secondary education graduates are less (more) likely to have a job with permanent contract. It supports presence of negative externality to secondary graduates, caused by increase of vocational graduates, who benefit from either or all of skill development, signals and placement assistance provided at vocational schools. Though effects are small and short-lived, further expansion of vocational education may cause more serious adverse welfare impact for less educated workers.

## The Consequences of Educational Reform on Youth Employment: Evidence from an Enrollment Increase in Vocational Training in Ethiopia

Takahiro Fukunishi Tomohiro Machikita

Increasing access to basic-level industrial education in developing economies and its quality improvement are important to industrialization of low-income countries. It may also have impacts on individual labor market outcomes from industrial and entrepreneurial works. Increase in labor supply of a new cohort also induces overcrowded due to competition between new and old cohorts which received different types of basic-level industrial education. This paper examines the impacts of an educational expansion on youth labor market outcomes, exploiting an Ethiopian reform in technical and vocational educational training toward competency-based training which expects to foster human capital through adoption of new curriculum and removes information asymmetry through public certification of skill level. This paper tests whether improvements in human capital and information for a new cohort can exceed crowded labor markets due to the educational expansion. The large-scale and nation-wide administrative data suggest the industrial education reform decreased the likelihood to be employed at permanent, formal, or full-time jobs of a new cohort due to increase in competition with old cohorts. This effect of large enrollment increase in vocational training pushes youths to choose self-employment, in particular, male youths. The data also indicates that an industrial education expansion still have a lasting negative effect only for female on working at permanent, formal, or full-time jobs. Overall, expansion in vocational training has more negative impacts for female youths than male.

## TVET as the last educational chance: Employability and family background of Ethiopian urban youth

Kazue Demachi

This paper analyzes the effect of TVET schooling of Ethiopian urban youth on their employability using the Urban Employment and Unemployment Survey (UEUS). In estimating the personal returns of TVET experience, we put special focus on family background of workers, with the hypothesis that family characteristics strongly influence on the employability of workers. We find general positive effects of TVET on employability in benchmark regressions as well as sample selection model. However once we controlled endogeneity of TVET choice and family background, the TVET positive effect disappeared. The results suggest the possibility that public vocational school is viewed and chosen as a last resort of education or alternative to general education, especially for those who were denied to proceed to further education, failed to enter upper secondary schools, and females, but only if they are financially fit.

Supply-Demand Gap in the Skills of Young Workers in the Garment Industry of Ethiopia: The Workers' Skills Assessment and Questionnaire with the Employer and the Trainer

Shoko Yamada, Kyoko Taniguchi, Christian S. Otchia

Recently, the Ethiopian economy has grown significantly. Accordingly, the government has prioritized industrial skills development and expanded technical and vocational education and training (TVET). Regardless, the unemployment rate for TVET graduates is high, and little scholarly effort has been made to empirically identify the exact types and domains of skills where the supply-demand mismatches happen. The originality of this research lies in the fact that it tries not only to identify the specific areas where the mismatch between training and employment happens, but also to use an assessment module developed for this particular purpose. The analysis reveals that TVET trainers have generally high expectations and score workers' skills highly on three of the four domains. In contrast, factory managers have low expectations and score workers' skills critically. Differences in experiences and the realities factory managers and TVET trainers face contribute to the gap of perceptions on the skills they consider important for garment workers.

Returns to educational attainment in urban Ghana: The role of job-to-job transition

Christian Otchia and Takahiro Fukunishi

It is well-established that additional educational attainment above lower secondary yields higher returns. We find that these returns are higher for workers who moved from school to job than for those who experienced job-to-job transition. We study the job-to-job transition effects on explaining the difference in the returns to educational attainment. We find significant effects that are concentrated among upper secondary general and tertiary levels. We find evidence of positive returns of the movement from employee to self-employed. This results partially explain why self-employment is the top final destination for many workers in developing countries.

Enterprise Promotion in the Road Construction Sector in a Conflict-ridden Area in Kenya: a Solution for the Nexus of Developmental Problems?

TAKAHASHI Motoki

Overcoming the missing middle syndrome by promoting growth or micro and small enterprises by means of training would be a key to solve at least partially the nexus of developmental problems including industrial stagnation, inequality, and ethnic confrontation in Africa. In this paper, we focus on collaborative interventions by an international NGO and the Kenyan government to disseminate labor-based technology of road construction and strengthen

managerial skills of youth self-help groups in a county severely ridden by an ethno-political conflict, called the Post-Election Violence. The NGO and the government tried to help selected groups formalize themselves as corporations and develop their businesses through training programs. The field research, especially interviews with leaders reveal that ethnically homogenous groups might have better chances to obtain construction business contracts but it may because of not only ethnicity but also trust among permanent members and thus lower internal transaction costs. In conclusion, formalization and development of micro and small firms are to a certain extent determined by education of leaders and internal relations of members. Interventions to break the nexus of problems should take account of these factors.

### **Findings of the Research Project**

Four papers investigate effectiveness of the vocational education in Ethiopia, in which restructuring and scaling up have been implemented for a decade. In sum, those studies show that while graduates of vocational education perform better than those of secondary education, the reform has neither implemented as designed nor improved employment outcomes, and even generates adverse effects to workers with non-TVET education in short-run.

Three papers investigate general effectiveness of the Ethiopian TVET based on a large sample of the national labor surveys. The first paper by Fukunishi and Machikita found positive effects for TVET graduates on employment outcomes (e.g. having a job in formal sector) in comparison with workers with lower secondary education. However, the second paper by Fukunishi and Machikita suggests that restructuring of TVET in 2006 is not followed by improvement of employment outcomes, and rather the post-reform cohorts performed worse than the pre-reform ones. The post-reform graduates suffer from competition in the labor market due to rapid growth of number of TVET graduates after the reform. Negative externality is found also among lower and higher secondary graduates by the first paper. These results suggest that the increase of TVET graduates is not followed by sufficient growth of labor demands and workers competing in a labor market, including TVET graduates themselves, are adversely affected. The paper by Demachi found weak effects of parent characteristics (e.g. earnings) on employment outcomes for TVET and secondary graduates. It is noted that these results needs further investigation to confirm clear causal relationships.

The paper by Yamada, Taniguchi and Otchia addresses a more specific issue of TVET: relevancy of skills learned in TVET and those demanded by employers. Since such relevancy is a key to effectively link TVET to employment, the reform of Ethiopian TVET includes defining occupational standards of skills and designing curriculums so that trainees satisfy the standards. Through unique assessment practices of machine operators in textile industry, the study found that trainers and factory supervisors have different expectation for skills of entry-level workers, and more

importantly factory supervisors' standards differ with the occupational standards. It shows that the reform has not attained full implementation of market-oriented policy despite ten years of experience. This may partly account for the finding that post-reform cohorts did not perform better. Further investigations with larger sample and more diversity of skills will effectively demonstrate obstacles of the reform.

The paper by Otchia and Fukunishi examined returns to vocational education in Ghana, in which restructuring is in process. It shows that the returns to secondary-level vocational education is significantly larger than the returns to lower and higher secondary education. It is somewhat surprising, since vocational education is generally considered as a track for those who cannot enroll to higher secondary education.

Vocational training after education is investigated in the context of post-conflict society by Takahashi's paper. In the community once divided by serious ethnic conflicts in Kenya, employment creation is expected to assist reconciliation in the community through raising income and providing opportunity to work with people of other ethnic origin, though business opportunity is quite scarce. The study picks up the public vocational training program for road construction, and examines performance of micro firms established by program participants. While the firms are either ethnically heterogeneous or homogeneous, a few successful firms are established by well-educated participants, and they have single-ethnic composition. Effectiveness of the training program was limited.

Six papers suggest both potential and constraints of vocational education and training to assist youth for getting better employment, which, we expect, are suggestive for formulation of TVET policy in low-income countries.