Rapid Response Brief

What impacts can be expected from Benin's strategy to expand vocational education?

Benin's government has launched an ambitious multifaceted strategy to expand vocational education. This strategy, the *Strategie Nationale de l'Enseignement et la Formation Techniques et Professionnels* (EFTP) (2019-2025), was developed in line with a broader *Plan National de Développement* (2018-2025). This strategy aims to address issues such as high unemployment rates among educated Beninois youth and the need to expand key economic sectors.

Because this unique strategy was designed specifically for Benin, it is not possible to say exactly what its outcomes will be. Nonetheless, it joins a long history of governments around the world which have expanded access to vocational and technical education. This brief summarizes key points from rigorous research which has been conducted on the outcomes of related programming.

Key Findings

- There is no evidence of an overall employment advantage for students in substituting technical for general education, and there may be a disadvantage
- In general, building new schools and training teachers improves education outcomes
- Technical and skills training programs for youth, separate from school, yield small positive employment effects on average. However, these gains may only be for specific groups such as women or low performing students, and there may be unintended negative effects for men
- Ensuring fit between technical school subjects and existing labor market needs is essential
- There is some evidence from higher-income countries that vocational education provides labor market advantages in the short term, while general education does better in the long term

Key Recommendations

- Consider who should be targeted for enrollment – gains may be higher if out-of-school youth are targeted rather than general education students
- Develop a strategy to mitigate potential disappointment among graduates who do not obtain employment
- Ensure that vocational tracks correspond to existing labor market needs

3ie International Initiative for Impact Evaluation

WACIE West Africa Capacity-building and Impact Evaluation Program
Programme de renforcement des capacités et d'évaluation d'impact en Afrique de l'Ouest

Background

Benin's National EFTP Strategy was finalized in 2019, targeting an implementation period running through 2025. It was subsequently put into effect through a 2020 presidential decree and the creation of the *Agence pour le Développement de l'Enseignement Technique* in March 2021. Components of the strategy which are already underway include the construction of 90 technical high schools and the training of their teachers. The strategy targets an increase in the number of secondary students in technical schools from 27,970 in 2018 to 199,229 in 2025.

Details of available research

Benin's strategy includes several components, including 1) a policy shift encouraging students to opt for vocational education rather than general education; 2) the construction of new schools, and 3) the training of teachers. Research tends to address these components separately, partly because in other contexts they have been implemented separately.

Stepping back, in the vocational education domain researchers have identified a particularly large gap between what international policymakers believe that they "know to be true" and what findings are actually backed up by solid research, according to a 2012 overview by McGrath and Lugg. Those authors wrote: "we are faced with a fundamental problem for evidence-based policy: Vocational education training interventions will be funded because there is political will but there is no evidence base on which to do this." Since then, some new research has contributed new findings, but many limitations remain in available research.

The evidence that is available includes:

- A handful of studies that measure the effects of substituting vocational education for general education. These include two recent studies on China, a study from the Philippines, a study from Turkey, and a long-term study based on a 1973 reform in Romania.
- A larger number of studies measure the effects of technical and vocational training programs that operate outside of regular schooling institutions and target unemployed and disadvantaged youth in low- and middle-income countries.
- Several studies measure the effects of building new schools and training teachers in low- and middle-income countries, mostly addressing cases where the new schools and teachers would teach general education curricula.
- Several studies, mostly from high-income countries, measure the long-run returns to vocational schooling compared with general education.

Findings

There is no advantage of technical school as compared to general education

Studies have not consistently found any advantage in terms of employment for technical school graduates as compared to general education graduates. Studies from Indonesia, the Philippines, Romania, and Turkey found no differences in employment for technical graduates versus general education graduates. Results from China are mixed. A 2020 study found that low-performing students fared better on the job market if they attended vocational high school as compared to academic high school. However, a rigorous 2015 study from China found negative effects of vocational school relative to academic high school. Those authors wrote:

> Not only does vocational high school fail to teach any new general skills, it causes students to lose general skills they learned in the past. Taken together, our findings indicate that the promotion of vocational schooling as a substitute for academic schooling may in fact be detrimental to building human capital in developing countries. (Rozelle 2015 p. 37)

A study of long-run cross-national rates of return to education also found no difference between the returns from general and vocational education. One limitation of this type of research is that it cannot control for self-selection of different types of people into different types of school.

In general, building schools and structured pedagogy training for teachers improves education outcomes

Physical infrastructure improvements at schools tend to increase student enrollment, retention, and attendance rates. In the long run, the construction of new infrastructure also raises student test scores. This evidence comes from eight studies of interventions in Burkina Faso, Niger, and elsewhere.

The training of teachers in structured pedagogy programs which include new instructional materials yielded positive changes in students' test scores, according to a systematic review drawing together results from 21 studies of such interventions, most in Sub-Saharan Africa.

Technical and skills training programs for youth outside of school yield small employment gains on average, but may have no effect or negative effects for some

Technical and skills training programs outside of regular schooling have yielded slight improvements in employment outcomes for participants on average. This finding comes from a systematic review drawing together studies on programs of varying types and lengths from 29 interventions in high-income countries and 38 interventions in low- and middle-income countries. Participating youths' earnings and employment rates rose after skills training programs in countries across the income spectrum, although the effects were smaller in high-income contexts. Earnings, in particular, rose substantially more in low- and middle-income countries than in high-income countries.

Similar results – small positive effects or no effects – were found by two other reviews of studies on vocational training programs targeting the unemployed in developing countries. One author writes: "vocational training shouldn't be expected to deliver much different returns from schooling itself." (McKenzie 2017 p.7)

Several studies have identified larger effects for women than men. Two recent studies from Latin America suggest that only female participants benefit from these programs, with no positive effects for men. One of those studies actually shows a negative effect for men in the short term – they did not gain new skills, but the program raised their expectations for what they should receive on the job market. When those gains did not materialize, they were even more disappointed than those who were never trained.

Ensuring a match between the vocational programs and existing job openings is critical

In Namibia, a vocational education program actually resulted in *lower* employment rates among those who completed the program. The analysis of this result cited the mismatch between the skills in which youth were trained and existing job market openings. These problems occurred in the absence of an active relationship between the vocational programs and employers.

In general, vocational and technical training programs – including those which exist outside of education systems – tend to be more effective when they include on-the-job training and active employer involvement (Betcherman et al 2004).

Detailed labor market information and predictions require the type of data generated by advanced labor market information systems. According to a typology developed by USAID, "advanced" labor market information systems provide useful information not only to policymakers and researchers, but also to jobseekers and employers. In these systems, employers and private sector actors contribute data voluntarily to a labor market observatory because they profit from the services and information provided by that observatory. However, the USAID report classifies most labor market information systems in Africa as "basic," in that they only generate macro-level statistics of limited usefulness to employers of jobseekers.

Vocational education may have more short-term benefits while general education may have long-term benefits

One study using data from 18 countries, mostly in Europe, found that wages for vocational education graduates may be slightly higher in the short term after they graduate, but that general education graduates may end up with higher wages in the long run. This result matches the theory that general education allows workers to better update their skills to match changes in the labor market. One limitation of this type of research is that it cannot control for self-selection of different types of people into different types of school.

In low- and middle-income countries worldwide, most students are in general education

According to 2018 World Bank data, the proportions of secondary education pupils in vocational education were 5.5 per cent in low-income countries, 6 per cent in lower middle-income countries, and 15.2 per cent in upper middle income countries.

Recommendations

The effects of expanding vocational schooling offerings will depend on who attends – and whether they are replacing other schooling, idle time, or low-skill work. Consider orienting expanded vocational education offerings to those youths who would otherwise not attend school, rather than those who would otherwise be in general education schools.

Anticipate that graduates of new vocational schools will have higher labor market expectations. If those expectations are not met, that has the potential to lead to lower employment rates in the short run and lower self-esteem in the long run. Consider developing a strategy to identify potentially disappointed individuals and mitigate these negative effects.

The labor market success of vocational school graduates will depend in large part on whether there are open positions in the fields in which they were trained. Ensure that vocational tracks match existing needs in the labor market and consider investing in improving labor market information systems to generate and publicize reliable data on labor market needs.

This Rapid Response brief is based on the following

McGrath, Simon, and Rosemary Lugg. "Knowing and doing vocational education and training reform: Evidence, learning and the policy process." *International Journal of Educational Development* 32.5 (2012): 696-708.

Technical versus general education

Bennell, Paul. "General versus vocational secondary education in developing countries: a review of the rates of return evidence." *The Journal of Development Studies* 33.2 (1996): 230-247.

Guo, Dong, and Anyi Wang. "Is vocational education a good alternative to low-performing students in China." *International Journal of Educational Development* 75 (2020): 102187.

Olfindo, Rosechin. "Rethinking Vocational Education in the Philippines: Does It Really Lead to Higher Wages?." *Journal of Southeast Asian Economies* 35.1 (2018): 79-100.

Torun, Huzeyfe, and Semih Tumen. "Do vocational high school graduates have better employment outcomes than general high school graduates?." *International Journal of Manpower* (2019).

Chen, Dandan. "Vocational schooling, labor market outcomes, and college entry." World Bank policy research working paper 4814 (2009).

Malamud, Ofer, and Cristian Pop-Eleches. "General education versus vocational training: Evidence from an economy in transition." *The review of economics and statistics* 92.1 (2010): 43-60.

Rozelle, S, Park, A, Wang, S, Zhang, L, Rong, W, Song, Y, Loyalka, P and Shi, Y, 2015, *Investment in vocational vs. general schooling: evaluating China's expansion of vocational education and laying the foundation for further vocational education evaluation, 3ie Grantee Final Report*. New Delhi: International Initiative for Impact Evaluation (3ie)

School construction

See earlier WACIE Rapid Response Brief: *What impact does upgrading physical school infrastructure to permanent materials have on students?*

Teacher training via structured pedagogy programs

Snilstveit, B, Stevenson, J, Phillips, D, Vojtkova, M, Gallagher, E, Schmidt, T, Jobse, H, Geelen, M, Pastorello, M, and Eyers, J, 2015. *Interventions for improving learning outcomes and access to education in low- and middle- income countries: a systematic review*, *3ie Systematic Review 24*. London: International Initiative for Impact Evaluation (3ie)

Non-school Technical and Vocational Education Training (TVET)

Kluve, Jochen, et al. "Do youth employment programs improve labor market outcomes? A quantitative review." *World Development* 114 (2019): 237-253. (Or we can cite the 2017 3ie version)

McKenzie, David. "How effective are active labor market policies in developing countries? a critical review of recent evidence." *The World Bank Research Observer* 32.2 (2017): 127-154.

Betcherman, Gordon, Amit Dar, and Karina Olivas. "Impacts of active labor market programs: New evidence from evaluations with particular attention to developing and transition countries." (2004).

TVET programs in Latin America

Acevedo, Paloma, et al. "How vocational education made women better off but left men behind." *Labour Economics* 65 (2020): 101824.

Camargo, Juliana, Lima, Lycia, Riva, Flavio and Souza, André Portela. "Technical Education, Non-cognitive Skills and Labor Market Outcomes: Experimental Evidence from Brazil" IZA Journal of Labor Economics, vol.10, no.1, 2021, pp.-. https://doi.org/10.2478/izajole-2021-0002

Namibia

Borkum, Evan, et al. *Evaluation of MCC's Investments in Community Skills Development Centers in Namibia*. No. 45805b53759348d48f2d0d569356f69c. Mathematica Policy Research, 2017.

Borkum, Evan, et al. *Evaluation of the Vocational Training Grant Fund in Namibia: Final Report* Mathematica Policy Research 2017

Labor Market Information Systems

Sorensen, Kjartan, and Jean-Michel Mas. "A roadmap for the development of Labor Market Information Systems." *FHI* 360 (2016).

Long-run returns to vocational versus general education

Hanushek, Eric A., et al. "General education, vocational education, and labor-market outcomes over the lifecycle." *Journal of human resources* 52.1 (2017): 48-87.

What is the WACIE helpdesk?

The WACIE helpdesk, an initiative led by 3ie's WACIE program in collaboration with IDinsight, provides rapid synthesis and evidence translation to help policymakers in West Africa understand what evidence exists for specific policy questions. The helpdesk can also connect interested policymakers with further resources to meet additional needs. It is staffed by the WACIE Secretariat in Cotonou and the IDinsight regional office in Dakar, with engagement from the wider 3ie and IDinsight technical staff and other experts as needed.

To submit a policy question, or for additional information, contact wacie@3ieimpact.org.

What is WACIE?

The West Africa Capacity Building and Impact Evaluation (WACIE) program, a partnership between 3ie and the Government of Benin, was launched to help build evaluation capacity in the eight countries that comprise the West African Economic and Monetary Union (WAEMU): Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. Program goals include increasing evaluation capacity in targeted countries, ensuring that policymakers have access to relevant evidence and promoting takeup of high-quality evidence by relevant stakeholders.

The International Initiative for Impact Evaluation (3ie) promotes evidence-informed, equitable, inclusive and sustainable development. We support the generation and effective use of high-quality evidence to inform decision-making and improve the lives of people living in poverty in low- and middle-income countries. We provide guidance and support to produce, synthesise and quality assure evidence of what works, for whom, how, why and at what cost.

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February 2022

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