



Research briefing:

**The Impact of SENAI's vocational training programme on employment, wages, and mobility in Brazil: What lessons for Sub Saharan Africa?**

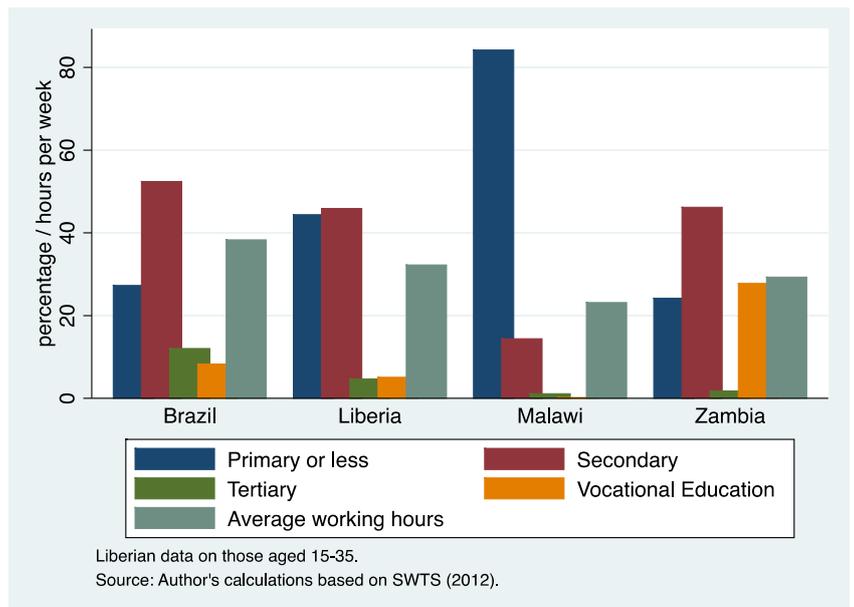
**Summary**

- In many Sub-Saharan countries, high rates of youth unemployment and underemployment, deficient skill endowments, high rates of rural-urban migration, and poorly functioning labour market institutions lead to a difficult school-to-work transition. Large portions of the rural youth either remain trapped in the declining traditional/agricultural sector, or migrate to urban areas experiencing poor labour market conditions and low standards of living. Consequently, managing this transition of young people to productive employment in the non-agricultural sector is crucial for policy-makers as urbanization continues. Acquiring the required skills is one crucial element in this transition.
- In Brazil, the National Service for Industrial Training (SENAI) has historically been considered the leading institution providing professional skills in the country. Created in 1942, it is the principal building block of a larger set of vocational training institutions, called the S-system, which is financed with public money and managed by the private sector.
- Today, SENAI and the S-system provide about 15% of all training and it has a significant effect on labour market outcomes for young people. Young graduates increase their productivity levels (by about 20%), monthly earnings (by about 30%) and employment probabilities (by about 12%). Amongst workers, S-system graduates (mostly from SENAI) are more likely to work in the formal sector (by about 16%) and in the same area of training (by about 31%). However, the impact of the SENAI training is quite heterogeneous. It depends on the geographic areas (rural/urban), gender, position within the household (head of household, spouse or children) and age, amongst others dimensions.
- Young employed males with a completed secondary education are those most likely to enrol and benefit from the SENAI's training. Consequently, concerns regarding the ability of the S-system to meet the needs of disadvantaged groups (including women) are valid.
- Our analysis of the performance of SENAI over the last 60 years indicates that the sustainability of the institution relies on its racial neutrality (no signs of discrimination against a certain racial group), its financing scheme balancing a market-driven component combined with stable public funding, its territorial neutrality (as the S-system is present in the 27 states of the country, and the region of residence does almost not affect the enrolment probability) and on its productivist orientation.

## Labour market transitions in Sub Saharan Africa: Lack of productivity

The lack of skills of many young people without a post-secondary qualification in rural areas, results in large portions either remaining trapped in the declining traditional sector, or migrating to urban areas. There, the scarcity of skills translates into poor labour market outcomes and a problematic school-to-work transition. This not only hurts the affected young people, but also the economy as a whole, as skilled workers are critical for a country's productivity, growth, and international competitiveness.

In Sub-Saharan Africa, there is ample evidence of the significant role that education plays on shaping the labour market transition of young people. When comparing Brazil with some countries in the region, the data suggests that the higher levels of education in Brazil (Figure 1) have a positive impact on the probability of finding a full-time job. However, higher education does not necessarily translate into lower levels of unemployment for young individuals who are not in employment, education or training (Figure 2).



**Figure 1: Education levels and working hours of the youth population in selected countries as of 2012**

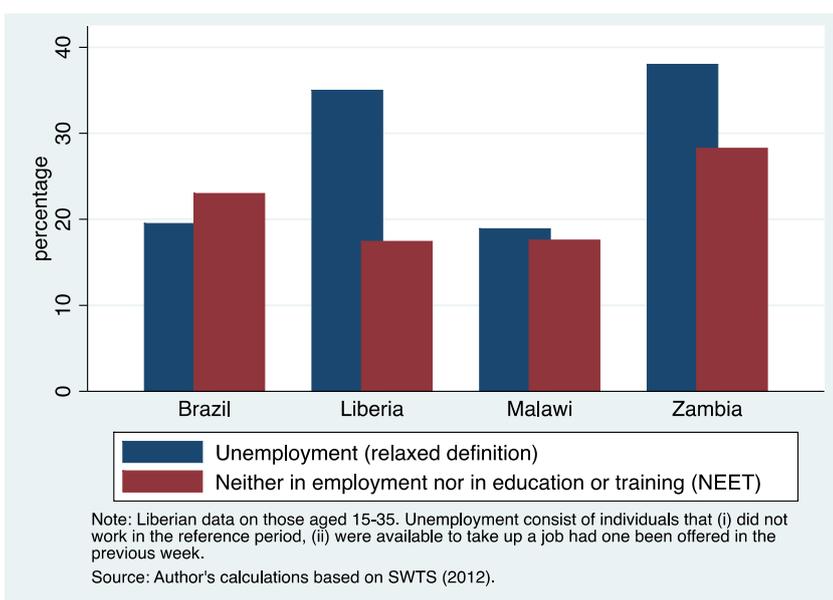
With these challenges of Sub Saharan Africa in mind, we investigate the Brazilian vocational training system with emphasis on the National Service for Industrial Training (SENAI) to determine what lessons this system of training can offer to Sub Saharan African countries.

## The Financing of SENAI and the supply of training

Established in the 1940s, SENAI was principally financed by all industrial companies, with a tax of one per cent on all payrolls serving as a contribution to the social security system. A fully levy-based financing framework tends to generate a monopoly in the training market by binding enterprises to the training institution. It reduces the incentive for employers to provide on-the-job training and the lack of competition in training results in reduced opportunities for shop-floor workers.

However, since the 1990s the revenues associated with the sale of training services to enterprises have

**Figure 2: Proportion of the youth population unemployed and those neither in employment, nor in education or training as of 2012**



grown rapidly, encouraging the supply of ad-hoc training courses at an affordable cost. Thus, enterprises that are unable to run their own training courses (including informal firms) now have greater possibilities to find relevant vocational training courses in a context of an increasing interdependence between economic sectors, high levels of informality, the incorporation of other agents (universities, technical schools, consultants) and training modalities such as distance education.

### Who is most likely to enrol in the SENAI's vocational training?

On average, our study finds that younger males, currently employed in the formal sector with a completed secondary education and from relatively more educated families are most likely to enrol in the SENAI's vocational training. Consequently, the current patterns of enrolment in vocational training confirm the concerns that vocational education does not particularly attend to the needs of the less skilled and disadvantaged populations, who are more likely to become unemployed. At the same time, the ethnic and geographical dimensions do not appear to play a significant role in determining the enrolment probability.

Finally, we do not find that the S-system training used as a substitute for formal education.

### SENAI's training outcomes: improving labour market performance

Based on the Brazilian household survey PNAD 2007, our impact evaluation in Table 1 shows a significant labour earnings premium of about 30% for male workers aged between 15 and 29, with a higher impact in rural areas and lower in urban settings.

These results are mainly driven by productivity differentials. It means that higher levels of productivity per hour translate into significant improvements in monthly labour earnings. In general, vocational training is associated with higher levels of formality. Unfortunately, women do not benefit from training in terms of productivity even though they increase their chances of employment by about 18%.

Regarding mobility, we find that S-system graduates are, on average, more likely to migrate than their non-trained counterparts. Therefore claims suggesting that vocational training can induce labour immobility are not supported by our evidence.

**Table 1: Average treatment effect of professional qualification training on selected variables in 2007: The S-system and other training institutions**

Vocational Training (all courses)										
Labour market outcomes	Monthly earnings (Reais 2007)		Monthly working hours		Hourly labour earnings (Reais 2007)		Formality (proportion)		Employment (Proportion)	
Populations	S-system	Other inst.	S-system	Other inst.	S-system	Other inst.	S-system	Other inst.	S-system	Other inst.
Absolute effect of training (Reais 2007, hours, proportion)										
Men and women aged 15-29	168	63	-1.1	2.0	0.86	0.35	0.09	0.09	0.07	0.09
Urban men and women aged 15-29	87	54	-0.4	1.6	0.26	0.25	0.06	0.08	0.07	0.06
Urban Women aged 15-29	0	16	-0.2	2.0	-0.23	-0.02	-0.03	0.04	0.09	0.09
Outcome without training (Reais, hours, proportion)										
Men and women aged 15-29	593	607	182	182	3.74	3.85	0.54	0.56	0.58	0.59
Urban men and women aged 15-29	637	645	183	183	4.03	4.12	0.58	0.60	0.62	0.63
Urban Women aged 15-29	595	600	170	171	4.24	4.26	0.59	0.61	0.49	0.51
Relative effect of training (percentage)										
Men and women aged 15-29	28.3	10.4	-0.6	1.1	23.1	9.0	16.1	16.6	12.3	14.7
Urban men and women aged 15-29	13.7	8.4	-0.2	0.9	6.5	6.0	9.9	13.4	10.5	10.0
Urban Women aged 15-29	0.0	2.7	-0.1	1.2	-5.5	-0.5	6.0	6.0	17.6	17.6

Source: Authors calculations based on PNAD 2007.

According to our estimates, training contributes to equalizing regional disparities, as it explains an additional migration flow of 82,000 workers from 2003 to 2007.

Training contributes to reducing the rural-urban wage-gap as across the whole distribution of skills, rural workers benefit the most in relative terms.

Finally, SENAI and S-system training premium on monthly labour earnings increases the gender pay gap since for all workers with the same qualification: returns to training are higher for men than for women.

## Policy implications

In Africa, policymakers should ensure that any intervention to create or modify the vocational training system can offer different ethnic/racial groups the same development chances - as it does the SENAI.

They should find a proper financing structure that avoids fluctuations and uncertainties. The SENAI financing balance of a market driven component with a stable public source can be a model in African given high levels of informality.

The focus should be on improving labour market outcomes of men and women, in urban and rural areas without increasing occupational segmentation.

This briefing is based upon IRIBA working paper 5 'The Impact of SENAI's Vocational Training Programme on Employment, Wages, and Mobility in Brazil: What lessons for Sub Saharan Africa?' by Stephan Klasen and Carlos Villalobos Barría, available at <http://www.brazil4africa.org>

### Further reading:

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