

LABOR MARKETS IN SWAZILAND: THE CHALLENGE OF YOUTH EMPLOYMENT¹

Zuzana Brixiová^a, Robert Fakudze[‡], and Thierry Kangoye[¥]

^a United Nations Development Programme, Mbabane, Swaziland

[‡] Ministry of Labor and Social Security, Mbabane, Swaziland

[¥] African Development Bank, Development Research Department, Tunis, Tunisia

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Abstract

Utilizing the 2007 and 2010 labor force surveys, this paper documents that very high youth unemployment is a key feature of the Swaziland labor market and analyzes policy options that could help address this challenge. First, the paper characterizes the Swazi labor market and its youth segment with descriptive statistics. Second, it identifies determinants of the labor market position of different types of the young population through a multinomial logit model. Third, drawing on a search model, the paper analyzes impacts of active labor market policies at different segments of the population. While active labor market policies such as training or job search assistance for people leaving the public sector may speed up transition to the private sector, they would exacerbate inequalities. Besides improving the business environment, Swaziland needs to develop employment and entrepreneurship policies to integrate its youth into the labor market.

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I. Introduction

Despite strengths such as favorable location and climate, good infrastructure, diversified production base and skilled labor force, since mid-1990s Swaziland has been one of the least growing countries in Africa. Specifically, at 2.3% average annual growth rate during 2001 – 11, Swaziland's economic growth was well below the average of the sub-Saharan Africa (5.8% a year). The slow growth was accompanied by low job creation. The 2007 and 2010 Swaziland labor force surveys revealed unemployment rate of almost 30% of the labor force – one of the highest among Africa's middle income countries. At 63% of population poverty was widespread, while 29% of population lacked food security in 2010.²

The aggregate numbers hide substantial differences across subgroups, as unemployment is disproportionately high among the youth, adult women, less educated workers and population in rural areas. The country's socio-economic challenges are exacerbated by the highest prevalence of HIV and AIDS rates in the world (26.1% of population aged 15-49), which is also reflected in its very young population (40% of population is younger than 15 years).

Swaziland was impacted by the global financial crisis with delay, through SACU revenues that fell by 57% between 2008/09 and 2010/11. With the fall of SACU revenues and minimal accumulated buffers, the country went through a liquidity crunch in 2011, which has led to cuts in social and capital expenditures and government arrears to the private sector. These measures could weaken growth prospects and make the employment and poverty situation even more challenging. Specifically, the UN (2012) study found that the labor market (e.g., job losses, wage cuts, cuts in hours, close of business) was among key channels through which the 2011 fiscal challenges affected welfare of households in Swaziland.

At more than 50% of the labor force, youth unemployment in Swaziland is disturbingly high and ultimately not sustainable, as the early 2011 experiences in North Africa illustrated. The issue of youth unemployment in Swaziland is particularly concerning in urban areas, where it is almost triple of the adult unemployment rate. In contrast, in rural areas the difference between youth and adult unemployment is less pronounced and unemployment impacts the entire population. Unlike in North Africa, in Swaziland majority of the unemployed youth is less skilled than their employed counterparts.

The objective of this paper is to characterize Swaziland's labor market and point out its main challenges and policy options, with focus on its youth. The paper first outlines the key features of the Swaziland labor market in general and its youth segment with descriptive statistics. Second, it identifies determinants of the labor market position of different types of workers (by age, gender, etc.) through a multinomial logit model. Third, drawing on a search model, the paper analyzes impacts of targeting active labor market policies at different segments of the population on labor market outcomes.

The paper is organized as follows. After this Introduction, Section II outlines main characteristics of the labor markets in Swaziland. Results of a multivariate analysis based on the multinomial logit model are also presented in this Section, while the trade-offs involved in applying active labor market policies to different segments of population are in Section 4.

² These findings are detailed in the Government of Swaziland (2011). Also, the 2011 Human Development Report pointed to high income inequality (UNDP, 2011).

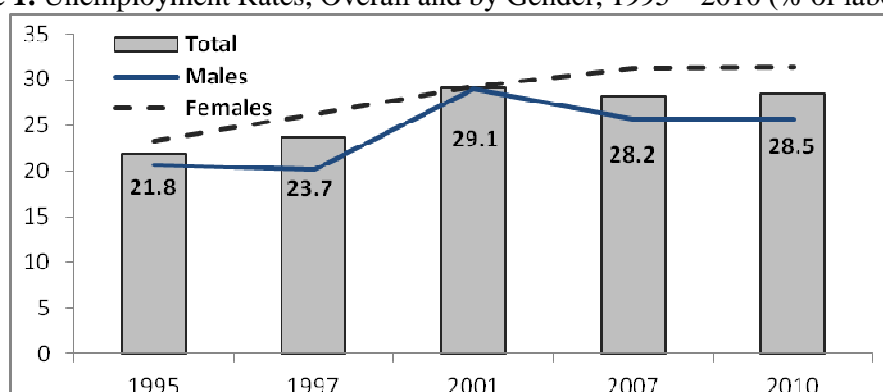
II. Labor Markets in Swaziland – Key Stylized Facts

Utilizing the first two integrated labor force surveys (2007 and 2010) and other sources, this section illustrates the main features and challenges of the labor markets in Swaziland, with focus on youth. Differences in employment, unemployment and other labor market outcomes across various population groups – especially the youth – are highlighted, so as to suggest areas for policymakers’ attention and actions. The analysis shows that in the late 2000s, Swaziland labor markets have exhibited the following features:³

(i) High unemployment, declining employment rates

In 2007 and 2010, the official unemployment rate reached 28.2% and 28.5% of the labor force (ages 15 years +), respectively (Figure 1). By late 2000s, the unemployment rate, which has been steadily rising since the mid-1990s, was one of the highest rates among Sub-Saharan Africa’s middle income countries.

Figure 1. Unemployment Rates, Overall and by Gender, 1995 – 2010 (% of labor force)



Source: Swaziland Integrated Labor Force Surveys (SLFIS), 2007 and 2010.

Even though official unemployment rate has not changed between 2007 and 2010, the labor market situation has deteriorated.⁴ Employment rates decreased across all major age categories, and in some age groups (e.g., 25 -34 years, and above 35 years) markedly (Figure 2). The seemingly stable unemployment performance is thus mostly due to declining labor force participation. Indeed, if the 2010 labor force participation was kept at the 2007 level (51.8% of working age population), the unemployment rate would reach 35.5% of the labor force. Moreover, under a relaxed definition of unemployment, with all discouraged workers included in the labor force, the 2010 unemployment rate would rise to 40.6% (Table 1).

Table 1. Unemployment Rates in 2010 (% of labor force) 1/

	15 - 24	25 - 34	35 +	Total
Regular definition	52.4	30.5	16.0	28.5
Relaxed definition	64.0	40.7	28.6	40.6

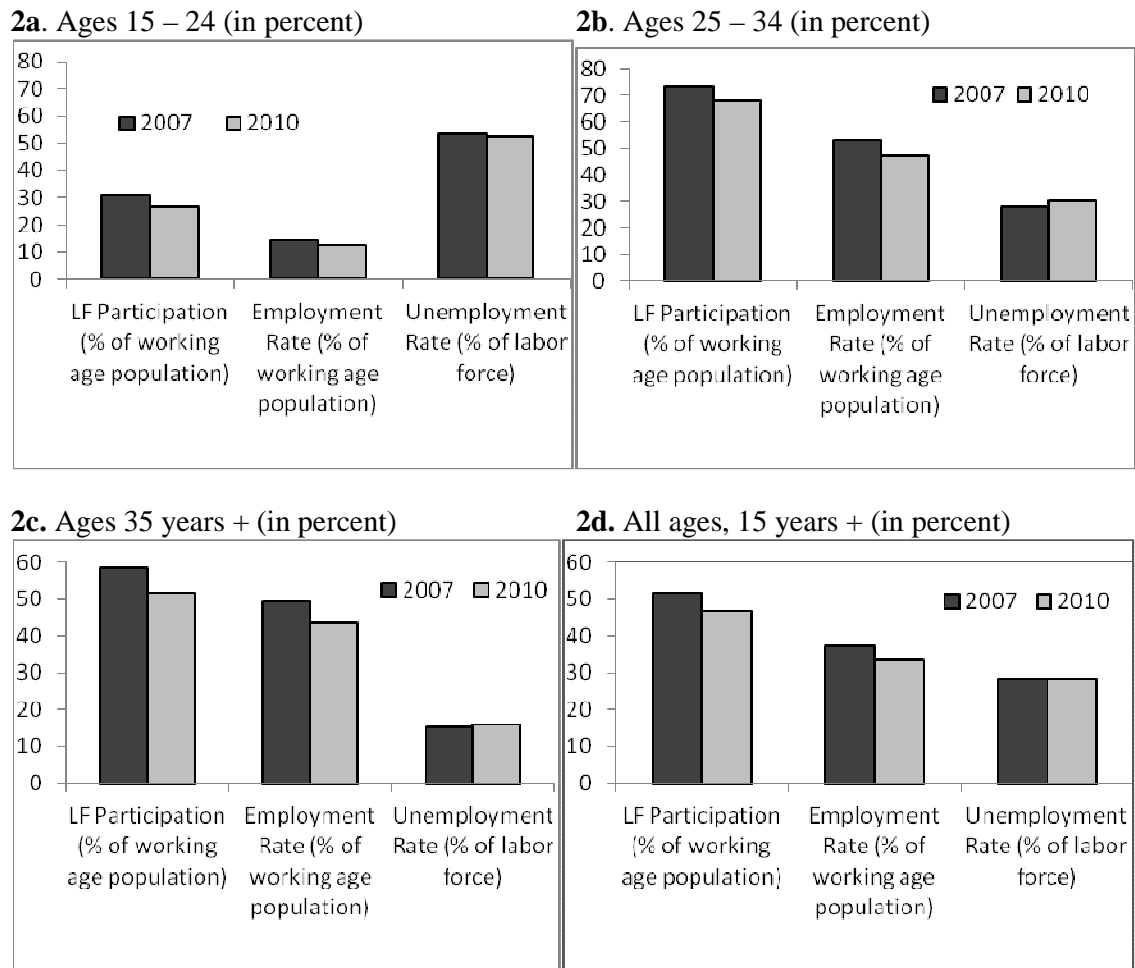
Source: Authors’ calculations based on the 2010 Labor Force Survey.

1/ Note: Relaxed definition counts discouraged workers as in the labor force.

³ The labor market characteristics listed in this section are not exhaustive, but instead focused on those that underpin the empirical and policy analysis in Sections 3 and 4.

⁴ The deterioration was in part because of the negative impacts of the global financial crisis on selected sectors (e.g., manufacturing) and the overall challenging economic situation. According to SACU (2011), at least 3,000 workers lost jobs in the textile sector alone in 2009.

Figure 2. Swaziland: Labor Market Outcomes in 2007 and 2010, by age categories



Source: Authors' calculations based on the 2007 and 2010 Swaziland Integrated Labor Force Surveys. 1/ The youth is defined as population aged 15 – 24 years, while adult population are people aged 25 years and above.

In 2011, Swaziland experienced a fiscal (liquidity) crisis, which the government mitigated in part by accumulating arrears to the private sector, especially small and medium enterprises. The labor markets were thus a key channel in transmitting the fiscal crisis to households.

Specifically, a cross-sectoral, nationally representative survey carried out by the UN Swaziland in November 2011 found that out of 1334 interviewed households, 7.3 % had at least one member who lost job during the past 12 months. Moreover, 4.4% of households experienced wage cuts, 4.9% reduced operations in their businesses, and 4.7% were told that their member may lose job or experience wage cut in the future. These shocks impacted disproportionately vulnerable households, such as households with members living with HIV, female-headed households (UN Swaziland, 2012).

(ii) Long unemployment duration, including among the youth

Another notable feature of the Swaziland labor market is the long duration of unemployment and/or underemployment periods, reflecting low utilization of available human resources. For example, about 80% of respondents in 2007 Labor Force Survey indicated that they have

been available for work for over a year, and more than half of respondents have been available for more than two years (Table 2).⁵

Table 2. Average duration of unemployment or underemployment by age, 2007 1/

	15 to 24	25 to 34	35 to 44	45 to 64	65 and above	Total
Less than 3 months	3.1%	1.8%	0.7%	0.3%	0.0%	5.9%
3 months - 1 year	7.3%	4.1%	1.2%	0.7%	0.2%	13.4%
1 - 2 years	13.9%	5.5%	2.5%	1.1%	0.1%	23.0%
over 2 years	17.8%	17.9%	9.9%	11.0%	1.2%	57.7%
Total	42.0%	29.3%	14.3%	13.1%	1.4%	100.0%

Source: Authors' calculations based on the 2007 Swaziland Labor Force Integrated Survey. 1/ The question underpinning this table was 'For how long has the person been available for work?'

Unemployment duration is slightly lower for the youth (ages 15 - 24 years) than for the older cohorts. While more than 70% of young people were unemployed or underemployed for more than a year, for ages 45 and above the share was more than 90%. Nevertheless the still very long unemployment and underemployment duration for young people is of concern, as the negative impact on their skills at the earlier stages is likely to impact their employment opportunities for the rest of their lives. On the aggregate scale, it may also hamper Swaziland's human capital accumulation and inclusive growth.

(iii) Unemployment impacts heavily several groups

Unemployment in Swaziland is especially widespread among: (i) the youth, (ii) women, (iii) population living in rural areas, and (iv) the less educated workers. Sections below discussed challenges faced by these groups in more detail.

(1) The youth, especially in urban areas

At 53.3% of the labor force aged 15 – 24 years, the unemployment was a key challenge for the youth already in 2007. The situation deteriorated further between 2007 and 2010: As Figure 2a shows, while the official unemployment remained almost unchanged (52.4% of the labor force), both employment rate and the labor force participations declined. If the 2010 labor force participation remained at 31% as in 2007, the unemployment would amount to 58.8% of the labor force. These calculations raise concern about young people getting discouraged from participating in the labor market. The more detailed analysis carried out in the context of the 2010 survey confirms this trend: if all discouraged young people (ages 15 – 24) were included in the labor force, the youth unemployment would amount to 60.4%.⁶

Other indicators also point to youth unemployment as a key issue for the policymakers. In 2007, the young people accounted for 42.3% of all unemployed, while people aged 25 – 34 years constitute another 34%. The challenge was particularly pronounced in the urban areas, where the youth unemployment rate (ages 15 – 24) was triple the adult rate. Moreover, in urban areas the unemployed youth accounts for 44.8 % of all unemployed, while almost one out of five young people is unemployed (Table 2).

⁵ According to the labor force survey, this deteriorated from 2007 to 2010, as 58.2% of respondents indicated that they were available for work for over two years, while 57.3% provided the same answer in 2007.

⁶ At 28.2% in 2007, unemployment rate was high also for the 25 – 34 years old; it increased further in 2010. The 2010 rate would again be markedly higher if all discouraged young workers were counted as unemployed.

Table 3. Rural and Urban Labor Markets in 2007, by young and adult worker categories

	Unemployment rate youth / un. rate adult (ratio)	Youth unemployment rate (% of LF)	Adult unemployment rate (% of LF)	Youth in total unemployment (%)	Youth unemployment to youth population (%)	Adult unemployment to adult pop. (%)
Rural	2.3	57.8	25.1	41.2	15.5	14.3
Urban	3.0	45.8	15.4	44.8	19.0	12.0
Total	2.5	53.3	21.0	42.3	16.5	13.5

Source: Authors' calculations based on the 2007 Swaziland Integrated Labor Force Survey 1/ Youth is defined as population 15 – 24 years old, while the adults are 25 years old or above.

As far as the absolute numbers of people impacted by unemployment, both 2007 and 2010 labor force surveys illustrated that the largest number of unemployed were in the 20 – 24 years age category, amounting to more than 30% of all unemployed in both years. OF concern is also the declining employment rate for this age group, from 22.9% of population aged 20 – 24 years in 2007 to 21.8% in 2010.

With these rates and trends, the youth unemployment is not sustainable and ceases to be an economic issue only. As the 2011 experiences from North Africa showed, if unaddressed, the low and declining youth employment could lead to social and political unrests.

(2) Adult women

While the difference in unemployment rates between women and men is not as high as between the youth and the adults, women are more affected by unemployment than men. For example, while unemployment among men decreased from 29.7% in 2001 to 25.7% in 2010, it rose from 29.7% to 31.3% during the same period for women.

Dividing the gender unemployment data further by age groups reveals that the gap between male and female unemployment rates is the most pronounced among the 40 -- 44 group, with the unemployment rate among women being almost double the rate for men. More broadly, the unemployment gap is significant mostly for adults ages 25 – 44, where unemployment for men is 'only' 21.2 % of the labor force while the unemployment rate for women is 28.2%. At the same time, unemployment rate for women over 45 years is lower than for their male counterparts, even though women's labor force participation in this age increases relative to that of men. As in many other Sub-Saharan African countries, labor force participation for women is notably lower than for men across all age categories except ages 15 – 19 (Figure 3).

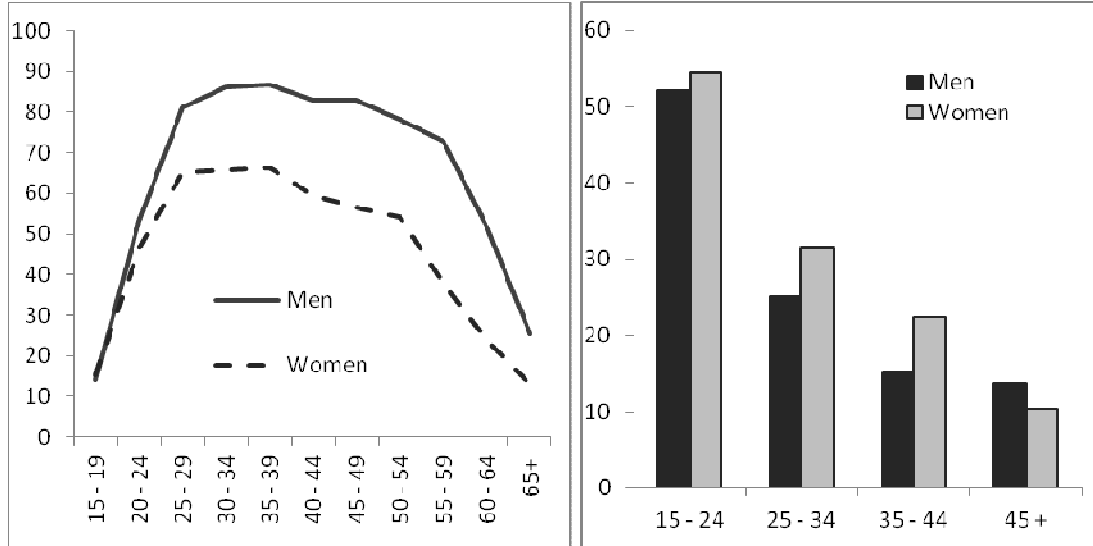
Besides lower participation and unemployment rates among women, the labor market in Swaziland is characterized by a substantial gender wage gap, with the overall (unadjusted) average wage of women in the formal sector 30% below that of men. Women receive higher average wage than men in only four sectors (agriculture, utilities, transport&communication, and financial intermediaries), which account for less than 10% of total employment. Otherwise, women are disproportionately employed in low paying sectors such as retail and wholesale trade as well as community and social services (over 40% of total employment).

In sum, as other developing countries Swaziland has experienced overall feminization of unemployment, where women are more likely to be unemployed or outside of the labor force than men. This especially applies to the 25 - 44 years age group. However, no significant differences in the main labor market outcomes (e.g., labor force participation, unemployment

or employment) by gender emerged for the youth (ages 15 – 24), indicating that for the young people the unemployment challenge cuts across both genders.

Figure 3. Labor force participation and unemployment by gender, 2007

3a. Labor force participation (% of population) **3b.** Unemployment (% of labor force)



Source: Authors' calculations based on the 2007 and 2010 Swaziland Integrated Labor Force Surveys. 1/ The youth is defined as population aged 15 – 24 years.

(3) The less educated

Unemployment has been also disproportionately concentrated among the less educated segments of the population, namely people with primary or no education. While in 2007 unemployment rate for people with tertiary education was only 7.9%, it reached 34% for those with primary education or less. Moreover, the 29% unemployment rate for high school graduates points to a relatively high return to tertiary education.

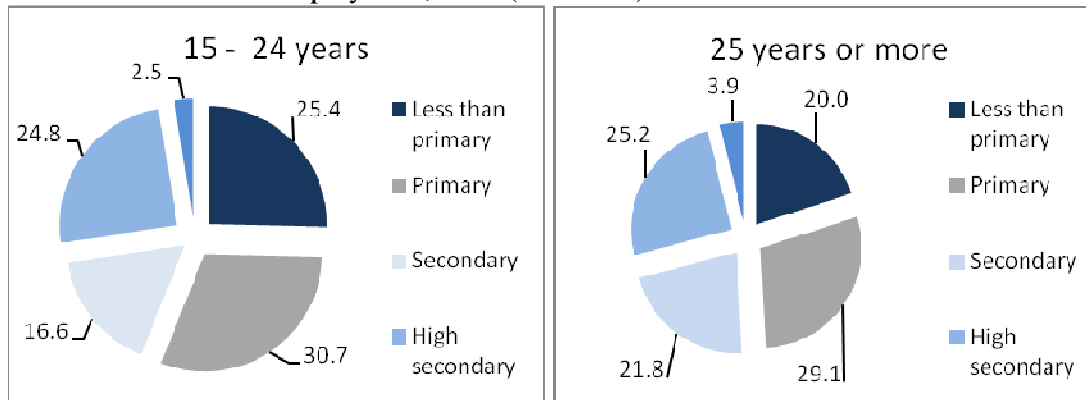
The importance of education seems to have increased over time. For example, in 2007 the unemployment for those with less than primary education has been even more concentrated among the young people (25.4% of the unemployed aged 15 – 24 years) than for the population aged 25 years or more (52% of the unemployed aged 25 years or more) (Figure 4a). In 2010 a larger share of the 25 – 34 years old (almost 50%) who were employed had at least completed secondary education relative to the 35 - 59 age group (Figure 4b).

(iv) The youth is disproportionately employed in low value-added sectors

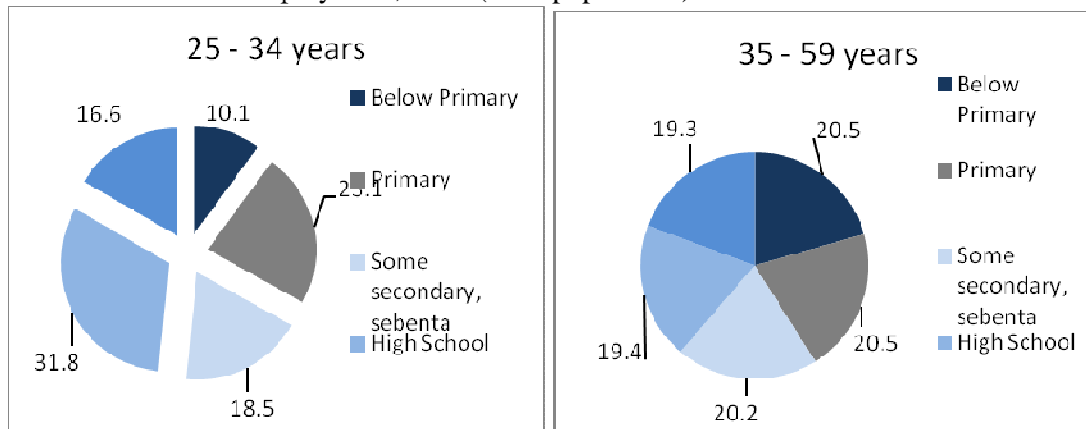
The Swazi people are largely involved in low value added and low paid activities in subsistence agriculture and low-productivity services. Relative to the total population, the youth is even more engaged in low value added and low paid activities such as agriculture and especially community services. The youth is thus underrepresented in high-paying sectors such as the public service, the financial sector and business activities (Table 4).

Figure 4. Distribution of Unemployment and Employment, by Education and Age

4a. Distribution of Unemployment, 2007 (% of total)



4b. Distribution of Employment, 2010 (% of population) 1/



Source: 2007 and 2010 Swaziland Labor Force Surveys. 1/ Employment rates by education for the 15 – 24 years age group are not reported, as most these young people could not even complete tertiary education.

Table 4. Sectoral distribution of employment by age groups, 2007 (% of total)

	15 +	Youth (15 – 24)	Adults (25 +)
Agriculture, forestry, fishing	9.0	10.7	8.8
Mining, manufacturing, electricity	23.0	22.0	23.2
Construction	5.5	6.5	5.3
Trade, hotels	17.4	17.2	17.5
Transport and communication	6.2	6.1	6.3
Financial intermediation	6.1	2.8	6.6
Real estate, renting, and business activities	7.9	5.2	8.4
Public sector services (education, health)	13.1	4.7	14.6
Other community services	11.7	24.8	9.5

Source: Authors' calculations based on the 2007 Swaziland Integrated Labor Force Survey.

The public sector, consisting of the public service and public enterprises, accounted for over 40% of overall employment and 49% of male employment in 2007. Moreover, activities of the many of the small and medium-sized enterprises depended on the government contracts. Further, with the public sector offering the better paid and most secure jobs, the public sector employs the majority of (60%) workers with tertiary education (Table 5). Some university

graduates 'que' for jobs in this sector, recognizing public employment as entry into better paid private industries, such as banking. Hence a vibrant private sector that would generate high paying and productive employment opportunities (e.g., banking, ICT sub-sectors) is key to inclusive growth and lasting reduction in unemployment, including for the youth.

Table 5. Sectoral distribution of employment by education (% of the education category)

	Public	Formal private	Informal private	Domestic workers	Total
Primary or less	8.7	60.5	27.0	3.7	100.0
Secondary (incl. High)	21.4	63.0	14.4	1.2	100.0
Tertiary	58.2	37.7	4.1	0.0	100.0

Source: Authors' calculations based on the 2007 Swaziland labor force survey.

(v) Multivariate analysis of employment states of the youth

This section presents the results of multinomial logit regression that assessed the determinants of labor market status for Swazi youth aged (i) 15-24 years; (ii) 20-24 years; and (iii) 20-29 years in 2007. The 20-24 years age group was analyzed separately because in absolute terms, the highest number of the unemployed was in this group, while including the age group 20-29 allowed examining tertiary education. Among five labor force states, unemployment was the reference state. The independent variables were: age in years, gender, area (urban, rural), length of the stay in the area, educational level and the interaction term between gender and education. The results were weighted to account for the survey sampling.

The descriptive statistics for the variables included in the regression are in Table 1, Annex I. They show that the most frequently reported labor force status for the youth aged 15–24 years is 'unemployment' (53.31%), followed by 'wage employment in the formal private sector' (33.7%) and 'self-employed' (5.4%). In contrast, the least frequently reported categories were: 'wage employment in the informal private sector' (3.8%), 'wage employment in the public sector' (2.3 %), and 'Inactive' (1.1%). Women account for a larger share of this age group than men (52.4% vs. 47.7%). Youth are more likely to come from rural areas compared to urban areas (62.9 % vs. 37.1%). Among education levels, the most frequently reported levels are primary education (56.33 %), junior high school education (22 %) and high school education (18.0%). Results for the 20-24 and 20-29 years age categories are very similar.

The multinomial logit regression results are shown in Table 2, Annex I. Columns (1) to (5) indicate the labor market status, *i.e.* whether the interviewee is employed in the public sector, the formal private sector, the informal private sector, is inactive, or is self-employed. Beyond age, gender, education, the area of residence (e.g., rural, urban) and the length of the stay in the area, the regression model also tested interactive effects between gender and education. The main results are as follows.

First, for the group of the young people aged 15 – 24 years, the likelihood of being employed in the public or the private sector (formal) rather than unemployed significantly rises with age. For the group of young people aged 20 – 24 years (which contains the largest number of unemployed), age has a positive relationship only with the likelihood of being in the formal private sector rather than being unemployed. Second, compared with men, young women in both age groups are notably more likely to be inactive than unemployed. Being a young woman in the 20-24 years age category also significantly decreases the likelihood of being self-employed or employed in the public sector rather than unemployed. Third, for both age

categories, living in urban areas increases likelihood of being employed in the formal private sector rather than unemployed (Tables 2a and 2b, Annex I). Fourth, for all three age categories considered, the regression results indicate that the longer the young people stay in the area, the less likely they are to be employed in the private sector (formal and informal) or self-employed.⁷ Results from the interactive variables specification in tables 2a and 2b indicate that being a young woman decreases the impact of primary and secondary education on the likelihood of being inactive rather than unemployed.

Regarding education, having completed primary (and secondary) education raises the likelihood of being employed in the public sector or inactive rather than unemployed for both age categories. Having completed primary and secondary education lowers the likelihood of working in the informal sector. Having a primary or a secondary education level raises the likelihood of being in the public sector rather than unemployed for both men and women. For young women in both age categories (15 – 24 and 20 – 24), education lowers the likelihood of being inactive rather than unemployed. For 20 – 24 year old women, it also raises the likelihood of being self-employed rather than unemployed (Tables 2a and 2b, Annex I).

For the 20-29 years age group, age has a significant and positive relationship with the likelihood of being employed in the formal private sector, the public sector or self-employed, rather than being unemployed. Tertiary education raises the likelihood of being employed in the public sector, while having achieved primary, secondary and tertiary education raises the likelihood of being inactive rather than unemployed. For both men and women, education significantly decreases the likelihood of being employed in the private sector.

Compared with men, women in the 20 – 29 years age category are more likely to be inactive and less likely being employed in the formal private sector, the public sector or self-employed than unemployed. The regression results indicate that being a woman decreases the positive impact of education on the likelihood of being inactive rather than unemployed. Conversely, being a woman increases the positive impact of secondary and tertiary education on the probability of being employed in the public sector and the positive impact of primary and secondary education on the probability of being self-employed (Table 2c, Annex I).

III. Labor Market Institutions and Policies Towards the Youth

Labor market policies and other measures that impact labor market outcomes for the youth are discussed in this section.

(i) Institutions – Flexibility and Protection

Overall the lack of flexibility of labor market institutions is not considered a main obstacle to job creation, including for the youth (Table 6), in part because the existing laws, including labor regulations, are not well enforced. Swaziland ranked as No.132 out of 140 countries on the Global Competitiveness Ranking 2011/12, reflecting the disconnect between the labor productivity and the real wages and one of the highest public sector wage bills (in terms of GDP) in Africa. The high wage levels make it difficult for the new entrants to the labor market to find employment in the public sector. The lack of labor exchange offices that would help match searching workers with suitable vacancies exacerbates the challenges.

⁷ This may reflect the fact that the youth with better education strongly prefer public sector employment.

Table 6. Labor Market Flexibility 1/

	Pay relative to Productivity	Flexibility of wage determination	Labor - employer relations	Hiring and Firing Practices	Redundancy Cost (weeks)	Professional Management
Ranking (index), unless otherwise indicated						
Swaziland	132 (3.0)	106 (4.4)	85 (4.1)	111 (3.3)	8.7	74 (4.2)
Global average	3.9	4.9	4.4	3.9	11.8	4.3
SSA median	3.3	4.9	4.1	3.9	9.1	4.0
<i>SACU countries</i>						
Botswana	69 (3.9)	94 (4.7)	65 (4.3)	101 (3.5)	16.8	36 (4.9)
Lesotho	139 (2.7)	97 (4.7)	103 (4.0)	90 (3.6)	10.7	86 (3.9)
Namibia	99 (3.5)	88 (4.9)	99 (4.0)	120 (3.1)	5.3	52 (4.5)
South Africa	130 (3.0)	138 (3.0)	138 (3.3)	139 (2.5)	5.3	18 (5.5)
<i>Fast growing small economies</i>						
Estonia	7 (5.1)	6 (6.0)	34 (4.8)	28 (4.5)	4.3	25 (5.2)
Mauritius	74 (3.8)	107 (4.4)	43 (4.7)	82 (3.8)	6.3	60 (4.4)
Rwanda	46 (4.2)	38 (5.5)	30 (4.9)	43 (4.3)	8.7	37 (4.9)
Singapore	1 (5.5)	7 (6.0)	2 (6.1)	2 (5.8)	0.0	11 (5.9)

Source: Global Competitiveness Report 2011/2012 and World Bank Doing Business 2012. 1/Index takes values on the scale 1 – 7, with higher values indicating greater flexibility. Note: Pay relative to productivity – indicates extent to which pay reflects productivity; flexibility of wage determination – wages are set (1) by centralized bargaining or (7) by individual companies; labor - employer relations are (1) confrontational or (7) cooperative; hiring and firing practices are (1) impeded by regulations or (7) flexibly determined by employers; professional management -- senior management positions are determined by (1) merit or (7) connections.

While the labor regulations and the matching process should be improved, the key factor behind the youth unemployment in Swaziland is the weak business environment. In general, Swaziland seems to miss entrepreneurial culture that would encourage the youth to open and run their own businesses. Instead the young people prefer to work in the public sector. Entrance into high-tech industries that may appeal to the youth is particularly challenging since Swaziland lags other countries in the ability to innovate and in its technological readiness (World Economic Forum, 2011). Barriers to competition (e.g., the monopoly) in the telecommunications sector explain partly the slow take-off of the ICT sector.

Given the high unemployment and the youth unemployment, the absence of formal social protection – especially against life-cycle risks such as the loss of employment – could be addressed through active labor market policies (e.g., training, job search support). Besides the skill mismatch, the shortages of skills are also an obstacle, with many job seekers, including the educated ones, lacking skills demanded by employers.

(ii) Initiatives for Youth Employment and Entrepreneurship

If unaddressed, the uncertain employment prospects of the youth would have negative implications for the country's human capital and inclusive growth. Recognizing the youth unemployment – and youth development more broadly – as a challenge, the government has undertaken some steps to tackle it, including by development of the National Youth Policy and establishing the Youth Enterprise Fund in 2009. Among non-state initiatives, since 2006

TechnoServe – an international NGO specializing in social entrepreneurship – has been also providing support to SMEs in Swaziland. These initiatives are now briefly discussed.

The Youth Enterprise Fund (YEF) aims at alleviating unemployment among people of ages 18 – 35.⁸ Since acquiring productive assets for generating income is a key impediment to youth entrepreneurship, the YEF provides start up business capital – without collateral – for individual young entrepreneurs as well as associations and companies led by young people; it also finances growth of existing enterprises. The lack of business skills among the youth is another major hindrance to productive entrepreneurship. The Fund thus facilitates training for young entrepreneurs as well as their linkages with large corporations so as to create demand for SME services and stimulate positive technology and management spillovers.

In the first phase of the YEF during 2010, the fund distributed Emalangeni (E) 5.8 million (580,000 euros) to about 400 applicants. In 2011, the Fund distributed only about E 2 million, even though the demand amounted to E 25 million.⁹ While collateral is not required and the interest rates (10%) are set below commercial rates, the amounts of loans extended are small. Despite of the development character of the loans, repayment rates have been low, suggesting weaknesses in assessment of the business proposals submitted to the Fund, weak incentive structure, and the lack of proper monitoring. Moreover, so far the Fund has remained fully dependent on the Government financing and has not created a viable recapitalization strategy. The Youth Fund initiative would thus need to be redesigned and markedly scaled up to become an effective policy tool in reducing youth unemployment.¹⁰

Similarly to the Youth Enterprise Fund, the *TechnoServe* has centered its activities around training, mentoring, networking and providing seed capital to entrepreneurs, including the youth. Regarding sectors, in Swaziland TechnoServe focuses especially on agriculture and tourism. In an effort to make up for the lack of official entrepreneurship classes in school curricula and to equip young people with elements of business skills early on, it has also developed an innovative School-Age Youth Entrepreneurship after-school program.

Access to credit remains a key obstacle for entrepreneurs in Swaziland and constitutes a severe barrier for the youth who lack collateral and are considered ‘higher risk’ because of their limited experience. To help entrepreneurs overcome these obstacles, TechnoServe launched a \$25 million loan guarantee facility, which was taken up by the Standard Bank and the Nedbank Swaziland. The initiative seems to have played a catalytic role, as similar scheme – on a larger scale – is now being rolled out jointly by the Nedbank, SEDCO and the Central Bank SME credit guarantee scheme. Under the arrangement, the Nedbank will extend credit covered by the Central Bank Guarantee Scheme and the SEDCO will provide training.

Despite some challenges, the above initiatives provide useful lessons on removing impediments to entrepreneurship and employment in Swaziland. Overall though, Swaziland

⁸ Sections on the Youth Enterprise Fund are based upon authors’ discussions with the Youth Fund staff.

⁹ The loans for individuals are up to E 20,000; for companies up to E 50,000 and for associations up to E 100,000. Entrepreneurs have up to 3 months to start their business upon receiving the funds; they are asked to repay loans within 24 months. Repayment rates have been low.

¹⁰ Other government-initiated or run employment creation initiatives – in this case focused on rural Swaziland – include the Rural Youth Programme under the Ministry of Agriculture and the Youth and Tourism Programme under the Swaziland Tourism Authority. Some good practices in youth-based community tourism have emerged which could provide examples in others. Overall though, the programs are small and their funding has been also reduced due to the liquidity challenges that Government faced in 2010 and 2011.

is yet to develop a comprehensive set of employment and entrepreneurship policies and initiatives (either public or private sector driven) to integrate the youth into the labor market.

IV. Impact of Labor Market Policies

In this section, the likely medium term outcomes of introducing active labor market policies (ALMPs) targeted at youth and raising minimum wages are examined in a dynamic search model is utilized. Specifically, the model outlined below is a dynamic version of Van Ours (2007), which incorporates participation of the unemployed workers in job search and/or training programs in the framework of Mortensen and Pissaridies (1999). The focus is on the effect of labor market reforms on incentives for the unemployed to participate in training programs or search for jobs and for firms to create jobs.

In the model, workers can be either employed in the private sector or unemployed (that is working in the informal sector). Unemployed workers receive income from the informal sector b , and search for jobs or put effort in training with intensity $x \geq 0$ while incurring cost $k(x) = \frac{x^2}{2\gamma}$, where $\gamma > 0$. Employed workers receive wage w . Firms post vacancies to fill jobs at cost c . Each filled job results in output y , with $y > w$. The key component of the model is a matching function $A = A(xu)^{1-\eta}v^\eta$, where $A > 0$ denotes the efficiency of the matching and $\eta \in (0,1)$ is the elasticity of matches with respect to vacancies. The workers' search/training effort results in job offers, which arrive at rate $\mu(\theta)x = A\theta^\eta$, where $\theta = \frac{v}{xu}$ denotes the ratio of vacancy rate, v , to effective unemployment rate, xu , *i.e.* it describes the tightness of the labour market from firms' perspective. Conversely, firms fill their vacancies at rate $\frac{\mu(\theta)}{\theta} = A\theta^{\eta-1}$. With normalizing the labour force to 1, that is $1 = e + u$, and all job matches dissolving at rate δ , the employment rate, e , and unemployment rate, u , change according to:

$$\dot{e} = -\dot{u} \tag{1}$$

$$\dot{u} = \delta(1 - u) - A\theta^\eta xu \tag{2}$$

The steady state equilibrium unemployment thus becomes:

$$\bar{u} = \frac{\delta}{\delta + A\bar{\theta}^\eta \bar{x}} \tag{3}$$

A scenario where all unemployed workers participate in the job search assistance or retraining programme is considered to illustrate the impact of participation in ALMPs on workers' search/training effort. Participation in such programmes lowers workers' income from the informal sector by a fraction z and reduces the rate of search or training cost by a fraction $\sigma \in (0,1)$. Workers enter formal employment only when the value of formal employment, V_E , exceeds the value of unemployment/informal employment, V_U :

$$\rho V_U = \max_x \left(b(1 - z) - \frac{(1 - \sigma)x^2}{2\gamma} + A\theta^\eta x(V_E - V_U) \right) + \dot{V}_U \tag{4}$$

$$\rho V_E = w + \delta(V_U - V_E) + \dot{V}_E \quad (5)$$

where ρ is the discount rate, \dot{V}_U and \dot{V}_E denote change in the present discounted value of being unemployed and employed in the formal sector, respectively. The equilibrium search/training intensity x can be derived from (4) as:

$$\bar{x} = \frac{\gamma}{(1-\sigma)} A \theta^\eta (V_E - V_U) \quad (6)$$

Denoting J_E as value of filled job and J_V as value of vacancy, the Bellman equations are:

$$\rho J_E = y - (1 + \tau)w + \delta(J_V - J_E) + \dot{J}_E \quad (7)$$

$$\rho J_V = -c + A \theta^{\eta-1} (J_E - J_V) + \dot{J}_V \quad (8)$$

where y is the output from the filled vacancy, $w\tau$ is the social employers' contribution tax paid, and \dot{J}_E and \dot{J}_V denote change in the value of filled job and vacancy over time, respectively. To complete the characterization of unemployment, a solution for the tightness of the labour market, θ , needs to be obtained through deriving wages. Regarding wage determination, the model assumes that private sector wages move with productivity changes: $w = \phi y$, where $\phi \in (0,1)$. From this assumption, $\dot{J}_E = 0$. Moreover, with free entry into the job creation, value of posting a vacancy is $J_V = 0$. Hence (7) and (8) become:

$$\frac{y - (1 + \tau)w}{\rho + \delta} = \frac{c \theta^{1-\eta}}{A} \quad (9)$$

From (9), vacancy-to-(effective) unemployment, that is job-finding rate, rises with higher private sector profits (and lower wage and tax rate), improved efficiency of matching (A), and lower discount and destruction rates (ρ, δ), respectively. From (1), (2) and (6), these factors impact positively the equilibrium level on intensity of job search or participating in the training program and hence on job creation during transition as well as on the steady state level of formal private sector employment (Table 6). The impact of rising minimum wages is ambiguous since the positive impact on workers' incentives to search for jobs or undertake training are hampered by disincentives of the private sector to create jobs.

Table 6. Comparative statics of the model

First round effect of an increase in	Intensity of training (search) effort of workers in the informal sector	Employment in the formal private sector
Matching efficiency A	+	+
Increase in binding minimum wage w_{\min}	+	?
Income in the informal sector b	-	-

Payroll tax τ	none	-
Discount rate ρ	-	-
Separation rate δ	-	-

V. Conclusions

Utilizing the 2007 and 2010 recent labor force surveys, this paper systematically characterized the main features of the Swaziland labor markets, with focus on the youth segment (ages 15 – 24 years). It also analyzed options for labor market policies with a view to bring down the stubbornly high unemployment, especially among the youth.

First, features of the labor market and its youth segment were documented with descriptive statistics, showing that the youth and women have less favorable labor market outcomes than other segments of the population. Second, the paper identified determinants of the labor market position of different types of workers aged 20 – 29 years through a multinomial logit model, showing that age, gender (being a male) and education have negative relation with the likelihood of being unemployed. Third, drawing on search model, the paper analyzed impacts of labor market policies. While active labor market policies such as training or job search would speed up transition to the private sector, they would exacerbate existing inequalities if they are geared only at the public sector employee. Effective employment policies to integrate the vulnerable groups, especially the youth, into the labor market still need to be developed and implementing.

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Annex 1

Table 1. Descriptive statistics

	Frequency (% of total)		
	<i>Youth population aged 15-24 years</i>	<i>Youth population aged 15-24 years</i>	<i>Youth population aged 20-29 years</i>
Employment state			
Unemployed	53.81	53.14	40.83
Public sector employment	2.28	2.96	7.18
Formal private sector employment	33.65	34.44	40.03
Informal private sector employment	3.77	2.51	2.34
Inactive	1.05	1.14	0.85
Self-employed	5.43	5.82	8.77
Sex			
Female	52.36	53.96	54.64
Male	47.64	46.04	45.36
Area			
Urban	37.10	43.09	46.24
Rural	62.90	56.91	53.76
Education			
Primary school	56.33	42.95	41.51
Junior high school	22	21.47	20.62
High school	17.99	28.35	28.93
Post-secondary	3.68	7.24	8.93

Source: Authors' calculations based on the 2007 Labor Force Survey.

Table 2. Multinomial logit regression of determinants of the labor market state, 2007

Table 2a. Determinants of the labor market state for people aged 15 – 24 years, 2007

	<i>Panel A: youth population aged 15-24years</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
	Public sector employment	Formal private sector	Informal private sector	Inactive	Self-employed
Age	0.33***(0.11)	0.06*(0.03)	-0.19***(0.07)	0.01 (0.17)	0.09 (0.07)
Gender (female)	-0.8568	-0.85 (0.66)	-.80 (.83)	18.60***(3.14)	-0.20 (1.47)
Urban	-0.49 (0.48)	0.36**(0.15)	-1.12***(.40)	-0.94 (0.84)	-0.12 (0.30)
Stay length	-0.67 (0.48)	-0.68***(.15)	-1.43***(.37)	-1.11 (0.82)	-1.27***(.31)
Primary	18.04***(.258)	-0.59 (0.43)	-1.99***(.60)	16.74***(.346)	-0.66 (1.10)
Secondary	18.13***(.291)	-0.71 (0.44)	-22.93***(.82)	17.40***(.401)	0.24 (1.08)
Female × primary	0.68 (.)	0.64 (0.68)	1.22 (.92)	-18.09***(.330)	0.96 (1.54)
Female × secondary	0.98 (0.96)	0.26 (0.7)	21.19 (.)	-18.77***(.385)	-0.01 (1.53)
Intercept	-27.86 (.)	-0.8 (0.79)	4.20***(.141)	-20.42 (.)	-6.4416
<i>Obs</i>	1141	1141	1141	1141	1141

Source: Authors' calculations based on the 2007 Labor Force Survey. 1/ Dependent variable is employment status (formal public, formal private and informal private wage employments, inactivity, self-employment, unemployment). Unemployment is the base state.

Table 2b. Determinants of the labor market state for people aged 20 – 24 years, 2007

	<i>Panel B: youth population aged 20-24years</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
	Public sector employment	Formal private sector	Informal private sector	Inactive	Self-employed
Age	0.20 (0.17)	0.11**(0.06)	-0.25 (0.17)	0.09 (0.21)	0.17 (0.11)
Gender (female)	-1.60*** (0.72)	-1.03 (0.83)	-0.55 (1.10)	18.93*** (4.20)	-21.56*** (1.37)
Urban	-0.47 (0.49)	0.48*** (0.18)	-0.90 (0.57)	-1.6856	-0.07 (0.32)
Stay length	-0.75 (0.49)	-0.74*** (0.18)	-1.26*** (0.52)	-1.218	-1.37*** (0.34)
Primary	17.70*** (3.81)	-0.53 (0.49)	-1.98*** (0.92)	17.33*** (4.96)	-1.12 (1.15)
Secondary	17.74*** (4.07)	-0.67 (0.50)	-23.34*** (0.98)	16.94*** (5.16)	-0.11 (1.10)
Female × primary	1.12 (.)	0.86 (0.86)	1.39 (1.29)	-18.73*** (4.85)	22.67*** (1.47)
Female × secondary	1.35 (0.97)	0.39 (0.86)	21.24 (.)	-18.31*** (4.89)	21.29*** (1.44)
Intercept	-24.46 (.)	-2.07 (1.31)	5.19 (3.96)	-22.23 (.)	-13.8533
<i>Obs</i>	877	877	877	877	877

Source: Authors' calculations based on the 2007 Labor Force Survey. 1/ Dependent variable is employment status (formal public, formal private and informal private wage employments, inactivity, self-employment, unemployment). Unemployment is the base state.

Table 2c. Determinants of the labor market state for people aged 20 – 29 years, 2007

	<i>Panel C: youth population aged 20-29 years</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
	Public sector employment	Formal private sector	Informal private sector	Inactive	Self-employed
Age	0.29*** (0.04)	0.15*** (0.02)	0.06 (0.06)	-0.01 (0.08)	0.24*** (0.04)
Gender (female)	-20.01*** (0.55)	-1.18** (0.56)	-1.15 (0.95)	18.33*** (2.21)	-21.46*** (0.67)
Urban	-0.38* (0.22)	0.51*** (0.13)	-0.30 (0.34)	-1.53*** (0.68)	-0.15 (0.20)
Stay length	-0.80*** (0.23)	-0.81*** (0.13)	-1.21*** (0.35)	-1.72*** (0.63)	-1.10 (0.21)
Primary	0.02 (1.08)	-0.66* (0.36)	-1.61*** (0.66)	17.43*** (2.12)	-0.99 (0.56)
Secondary	0.92 (1.06)	-0.81*** (0.36)	-3.37*** (0.91)	17.56*** (2.07)	-0.77 (0.55)
Tertiary	2.11* (1.10)	-1.08*** (0.49)	-42.51*** (0.63)	18.47*** (2.51)	-0.27 (0.67)
Female × primary	18.95 (.)	0.70 (0.59)	1.35 (1.05)	-18.23*** (2.43)	21.70*** (0.73)
Female × secondary	19.45*** (0.61)	0.69 (0.58)	2.22 (1.24)	-18.53*** (2.32)	21.37*** (0.71)
Female × tertiary	20.28*** (0.71)	1.52** (0.72)	-0.38 (1.01)	-61.13*** (2.51)	20.62 (.)
Intercept	-8.99*** (1.52)	-2.67*** (0.62)	-1.60 (1.75)	-19.84 (.)	-6.20*** (1.06)
<i>Obs</i>	1881	1881	1881	1881	1881

Source: Authors' calculations based on the 2007 Labor Force Survey. 1/ Dependent variable is employment status (Formal public, formal private and informal private wage employments, inactivity, self-employment, unemployment). Unemployment is the base state.

Note: * denotes significance at 10%; ** denotes significance at 5%; *** denotes significance at 1%