

# 3

## Unemployment and the Labor Market

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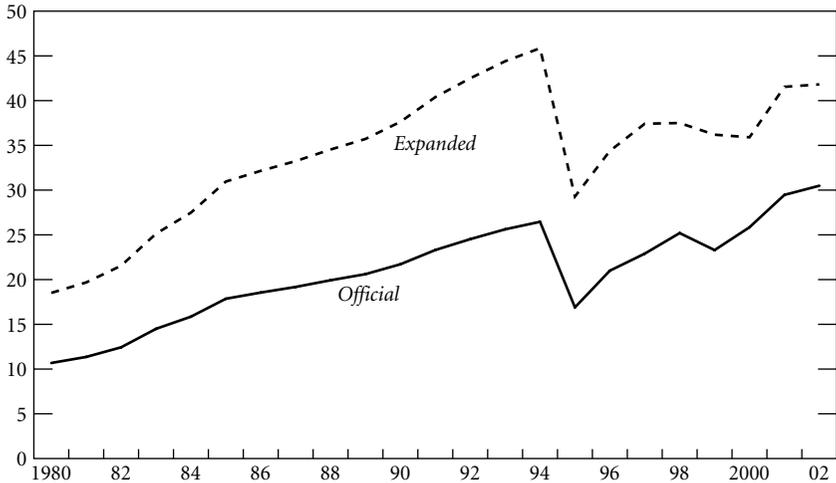
### Trends in Employment and Unemployment Since 1994

Notwithstanding the improved economic growth performance in South Africa since the end of apartheid, unemployment remains high and poses a significant social and economic policy challenge. In 2004, the official rate of unemployment stood at 26 percent of the labor force, roughly the same as in 1994 (see Figure 3.1).<sup>1</sup> Unemployment is particularly concentrated among historically disadvantaged groups and is higher among the rural, female, uneducated, and young segments of the population (see the Appendix).

Although higher employment growth has accompanied the increase in economic growth since 1994, it has not kept pace with increases in the labor force. During 1995–2003, employment increased by around 1¼ percent annually, while the labor force grew by 4 percent annually. Moreover, all of the increase in employment represents gains in informal employment. Formal employment contracted steadily, falling by 1¼ percent annually during the period 1994–2002. These trends were broken in late 2003, when formal employment growth turned positive. Changes in the composition of the economy explain part of the generally weak employment performance. These include a scaling back of mining operations, owing in part to a decline in gold prices during the period; the rationalization of the manu-

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<sup>1</sup>The data used in this chapter are those reported by Statistics South Africa. The unemployment rate may be somewhat overestimated owing to weaknesses in the official statistics, but the bias is hard to quantify.

**Figure 3.1. Unemployment Rates***(In percent)*

Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

Note: The expanded definition of unemployment includes discouraged workers, that is, those who have stopped looking for work.

facturing sector, which followed the opening up of the economy to international trade; slower construction activity associated with lower public sector investment in infrastructure; and a reduction in public sector hiring.

A recent study by Kingdon and Knight (2004) finds that even the size of the informal sector is surprisingly low given the extent of unemployment, when compared to other countries in Africa, Asia, and Latin America. The authors find that unemployment is mainly an involuntary phenomenon as unemployed individuals are substantially worse off than employed (even in the informal sector), in terms of numerous socioeconomic indicators. This suggests that unemployment in South Africa is mainly due to factors that limit labor demand. Such a conclusion is consistent with the strikingly rapid rise in unemployment—albeit from low levels—among young people with tertiary education in the past decade (see the Appendix). Youth unemployment is a common feature of many countries, even advanced economies such as in Europe.<sup>2</sup> However, in a country with a high skills mismatch, such as South Africa, the inability of highly educated people to find a job may be an indication of labor market rigidities.

<sup>2</sup>See Mauro, Prasad, and Spilimbergo (1999); and Isengard (2001).

This chapter focuses on the main labor market factors that limit demand for labor.<sup>3</sup> The domestic labor market is characterized by a shortage and mismatch of skills between available workers and the employment needs of the productive sectors. Some labor market practices and regulations (such as centralized collective bargaining and labor standards) may also influence unemployment by representing a significant cost to employers and deterring employment creation.

## Unemployment: The Role of Unions

Unionization (the share of employees who are members of a union) among black South Africans fluctuated between 30–40 percent during 1995–2001 (see the Appendix). Black unionization was particularly concentrated in sectors such as mining (with a unionization rate of almost 80 percent), manufacturing and electricity (around 50–60 percent), and among the highly skilled such as professionals and technicians (around 60–70 percent).

Unions have a fundamental economic role in balancing the bargaining power of large firms against individual workers during wage and other labor negotiations. As unions become large, however, their bargaining power may affect the ability of small firms to recruit labor. A possible outcome is that the wage or other elements of the labor negotiations become more onerous for firms than other labor market factors. Some empirical evidence has shed light on this issue.

At first glance, there appears to be a large gap between the wage earned by union members and nonmembers (the “union wage gap”). The gap rose from 60 percent in 1995 to 140 percent in 2001 (see Figure A3.11 in the Appendix). This gap may, however, be due to certain characteristics of the employees other than their union membership, and several empirical studies have sought to identify the extent of the gap when controlling for those characteristics.<sup>4</sup> An extensive analysis by Angelucci (2003a) finds that after controlling for factors such as education, rural or urban residence, occupation and industry, and formal or informal sector employment the gap is much reduced and increased from only about 25 percent in 1995 to 45 per-

<sup>3</sup>An analysis of other development factors, such as the lack of infrastructure, the limited access to credit, and the pervasiveness of crime, is beyond the scope of this chapter.

<sup>4</sup>Moll (1993), Schultz and Mwabu (1998), Hofmeyr and Lucas (2001), and Butcher and Rouse (2001) provide various estimates for the gap, ranging from 16 percent to 100 percent.

cent in 2001. Further controlling for tenure and firm quality explains most of this gap.<sup>5</sup> What remains unexplained and, arguably therefore, can be attributed solely to the presence of unions is a gap of about only 10 percent in 2000–2001.<sup>6</sup>

Regarding the impact of unionization (union membership) on unemployment during 1995–2001, Angelucci (2003b) finds that, all else given, a 10 percentage point decrease in unionization would reduce the unemployment rate by about 2 percent.<sup>7</sup> Thus reducing unionization by 20 percentage points, and reaching levels prevailing in, say, the United States and United Kingdom in the 1990s, would bring unemployment down by only 4 percentage points, leaving it at still very high levels. When inspecting the impact for different skills levels, the study finds that for unskilled and high-skilled workers, the effect of unionization was insignificant. Most of the effect is due to the role of unions in the medium-skills occupation (such as clerks, machine operators, and sales, crafts, and trade workers), which account for 60 percent of employment and include most workers in mining, manufacturing, and electricity sectors (the most unionized sectors). As regards the time pattern, the study finds that the negative effect of unionization on employment has been declining over time and was insignificant in 2001.

Overall, recent empirical evidence suggests that the degree of unionization is likely to contribute only marginally, if at all, to the high unemployment rate in South Africa. Other factors, such as skill deficiencies and labor market regulations, may be more important in explaining unemployment.

## Unemployment: The Role of Labor Market Legislation

Because of South Africa's history under apartheid, under which the majority of the country's population was dispossessed of economic and other rights, labor market policy has had to achieve the difficult task of both returning rights to citizens and facilitating economic efficiency. Labor

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<sup>5</sup>Other factors such as personal, household, linguistic, and local labor market characteristics do not appear to play an additional role.

<sup>6</sup>The study by Angelucci (2003a) relies on October Household Survey data from 1995 to 1999 and Labour Force Survey data for 2000 and 2001 (a lack of data prevents similar estimations for earlier years).

<sup>7</sup>Angelucci (2003b) uses the same data set as Angelucci (2003a), but builds averages for each district so as to be able to employ dynamic panel estimation.

regulations can, however, eventually impose a cost on firms that in turn could depress labor demand.

The trade-off between workers' rights and job creation is particularly evident in the case of labor market legislation. South Africa's labor legislation comprises two main statutes: the Labour Relations Act (LRA) and the Basic Conditions of Employment Act (BCEA). The LRA was one of the first major statutes passed by the new government that assumed office in 1994. It maintained many of the provisions of the previous labor act, but introduced several new provisions to strengthen workers' rights. An important new provision was the establishment of compulsory arbitration in the event of alleged unfair dismissals, which are required to be referred to a statutory body called the Commission for Conciliation, Mediation, and Arbitration (CCMA). The LRA is essentially procedural in nature, in the sense that it describes the procedures that must be followed in effecting employment and dismissals. The BCEA, by contrast, is substantive. It provides a minimum protective floor for workers' rights by proscribing minimum standards and conditions of employment, including minimum wages in individual economic sectors, and by regulating matters such as hours of work, overtime payments, leave, and severance pay.

Several authors have argued that South Africa's labor laws impose rigidities in the labor market that contribute to unemployment (Barker, 1999; Black and Rankin, 1998). The argument is that the labor laws lead to higher wages than would otherwise prevail. They also involve statutes to regulate working conditions that, while protecting worker rights, create a disincentive for firms to hire and fire workers. In addition, the collective bargaining system in South Africa is characterized by an "extension principle," whereby agreements that are reached between unions and employer groups are legally binding on firms that do not participate in the negotiations. An implication is that the agreements that are struck on wages and conditions may be affordable by the larger firms, but not necessarily by the smaller firms. However, it is the smaller firms that are potentially the main source of employment creation because their operations tend to be more labor intensive than those of larger firms.

Gaps in the labor market data prevent an econometric examination of these questions. Evidence based on surveys and informal observation, however, suggests that the labor regulations impose both direct and indirect costs on employers and thereby hinder employment generation. As a result of these costs, complex mechanisms have been generated whereby employers seek to circumvent the regulations, imposing a deadweight loss in economic terms.

## Minimum Wages

South Africa has a system of sector-by-sector minimum wages for several sectors.<sup>8</sup> There are two main ways in which minimum wages are set by statute: collective bargaining and the application of employment standards.<sup>9</sup> Since the minimum wage legislation explicitly states that minimum wages in each sector should take into account the wage gap that results from the apartheid period,<sup>10</sup> it could result in minimum wages that are higher than the equilibrium market wage that would clear the labor market. In turn, the level of wages could have a substantial impact on employment, with some studies estimating that in the long run a 1 percent increase in wages is associated with a 0.7 percentage point increase in the unemployment rate.<sup>11</sup>

## Labor Standards

In addition to the wage premium that is imposed by the minimum wage legislation, the labor laws impose some additional direct costs on employment. These aspects of the labor law appear to be broadly in line with international standards and may not contribute to raising the unemployment rate in South Africa relative to other countries. These costs mainly relate to minimum standards that apply for workers' benefits, such as leave and overtime, and contributions that employers are required to make. Recurring direct costs, which apply to regular benefits, such as leave, and recurrent contributions, such as to the unemployment insurance and skills

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<sup>8</sup>Employment standards and minimum wages are applied in the sectors not covered by collective bargaining agreements, namely the agricultural, domestic services, private security, and retail sectors.

<sup>9</sup>Of those who are formally employed, around one quarter are directly covered by centralized collective bargaining and a substantial number are indirectly covered. Although no formal data for the latter are available, Levy (2003a and 2003b) estimates that at least one-half of workers in total formal employment are covered by employment standards. In practice, there is some anecdotal evidence of evasion of the extension principle as well as of actual wages falling short of minimum wages, particularly in the agricultural, retail trade, and domestic sectors (Levy, 2003a and 2003b). However, since the anecdotal evidence refers to overall monthly wages, and the number of hours worked is unclear, it is hard to infer from it that actual wage rates per hour indeed fall below mandated levels.

<sup>10</sup>The "apartheid wage gap" is the notion that the structure of wages in South Africa is skewed as a result of apartheid. Specifically, the ratio of the highest paid to the lowest paid is estimated at a multiple of over 40 (Levy, 2003b), which is very high in comparison with other countries.

<sup>11</sup>Two separate studies that arrived at the same quantitative conclusion were prepared by the World Bank and the Commission of Inquiry into Labour in South Africa; see Levy (2003b).

development funds, have been estimated at around 12 percent of the basic wage (Levy, 2003a). In addition, nonrecurring direct costs, such as those related to overtime, sick leave, and severance pay, are estimated to amount to an additional 8–9 percent of the basic wage. A further direct cost arises during the termination of an employment contract, during which the employer bears a cost equivalent to 2–8 percent of the basic wage (depending on years of service) and a further 2 percent per year of service if the termination is due to retrenchment.

### **Procedural Costs**

The procedures that need to be followed in order to hire labor also impose costs on firms. In particular, when firms dismiss workers, they need to follow a complex set of procedures that include hearings with the CCMA. Procedural costs associated with dismissals have been estimated at  $\frac{3}{4}$ –2 percent of GDP (Levy, 2003a).<sup>12</sup>

### **Avoidance**

In an indication of the burden imposed by the labor legislation, firms have developed complex mechanisms to avoid the costs, particularly those of a procedural nature. The mechanisms include outsourcing, independent contractors, short-term contracts, and the creation of “closed corporations.”

Firms often outsource jobs by hiring workers through a labor broker rather than doing it directly themselves. Employment contracts provided by labor brokers are different from those provided by firms. Notably, they do not include health and pension benefits. In some cases, firms and workers collude to declare workers as “independent contractors” rather than employees.<sup>13</sup> The workers in such cases receive a share of the profits instead of a wage, and they are not covered as employees under the labor legislation.<sup>14</sup> Some firms hire workers through short-term contracts, which involve less worker protection, and roll over the contracts to prolong employment.<sup>15</sup>

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<sup>12</sup>Surveys indicate that, in 2002, dismissal costs totaled 3 million man-hours, which were equivalent to three times the cost associated with labor strikes. At the median wage of just under R 4,900 a month, this would be equivalent to R 15 billion annually, or 1½ percent of GDP.

<sup>13</sup>It is estimated that over 2.4 million workers are employed as independent contractors.

<sup>14</sup>In August 2002, amendments were made to the LRA and BCEA that, among other things, explicitly define conditions under which a firm-worker relationship is characterized as employment, putting the burden of proof of nonemployment on the employer.

<sup>15</sup>However, the rolling over of short-term contracts is forbidden under the LRA.

Skills workers sometimes create “closed corporations,” which are legal entities but have fewer legal obligations than ordinary firms. Closed corporations supply labor services to firms. The practice is used to avoid taxation, since firms do not incur payroll tax on payments to the corporation since the contract between them does not represent an employment relationship.

In sum, while the labor laws have strengthened workers’ rights, job creation may be impeded by the extension of collective bargaining agreements to nonunion parties, labor laws and procedures that inhibit the flexible use of labor and impose nonwage costs, and policies and practices that impose minimum wages and other costs.

## Skills Mismatch

One of the main characteristics of the South African labor market is a chronic skills mismatch. At prevailing wage rates, there is excess demand for skilled labor and an oversupply of unskilled labor. Reducing this mismatch will be an important challenge in the coming years and instrumental in reducing unemployment.

The skills mismatch has its origins in the apartheid era. The education system for the nonwhite population, particularly blacks, constrained the acquisition of skills among the majority of the population.<sup>16</sup> Several factors related to apartheid, such as the strong unionization and the participation of labor groups in the struggle for freedom as well as the effect of trade sanctions on import substitution (as in the energy sector), pushed firms to invest in capital-intensive rather than labor-intensive activities.<sup>17</sup> The creation of townships and homelands also isolated blacks in geographic zones with little or no work, thus creating a large pool of unskilled and unemployed labor.

The skills mismatch did not ease after the end of the apartheid. The labor regulations discussed above did little to induce firms to switch away from capital-intensive technology. Despite improvements in the education system, higher education is still limited (around 70 percent of the population aged over 20 years has not completed secondary schooling), thus constraining the supply of skills. Some studies discuss the possibility that trade liberalization has led to a skill-biased technological change and increase in

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<sup>16</sup>Moll (1998, p. 263) finds evidence that up until the early 1990s the primary schooling system for blacks was a very poor generator of computational skills, such that a “secondary school-leaver, with 12 years’ schooling, only narrowly passes a primary-level literacy test, and primary school-leavers fail it by a wide margin.”

<sup>17</sup>See Kaplinsky (1995) for a detailed analysis of these issues.

skill-intensive exports, thus exacerbating the skills mismatch (Poswell, 2002; Bhorat, 2001; and Natrass, 2000).

The role of education is also supported by empirical evidence. Background work for Angelucci (2003b) shows that, if the percentage of the labor force with no schooling (which on average was 10 percent in 1995–2001) declined by 1 percentage point, unemployment would also decline by 1 percentage point, most likely because at least a minimal education is now essential for almost any job. Giuliano and Tsibouris (2001) find that the high degree of persistence in unemployment decreases with the level of education.

There is also anecdotal evidence of synergies among the two types of skills mismatch. In the financial sector, for every skilled position filled, seven unskilled positions tend to be also created. Hence, it appears that, within given activities with capital-intensive technologies, unskilled and skilled labor are complements rather than substitutes.

## Unemployment and Growth<sup>18</sup>

Much of the public discussion on unemployment in South Africa emphasizes the role of economic growth in reducing unemployment. A common view is that, in order for unemployment to be substantively reduced, investment needs to be increased significantly and the economic growth raised to around 6–7 percent. However, employment and growth need to be viewed as complementary. Higher employment is necessary in order for growth rates to increase, and in turn the higher production and demand associated with stronger growth rates would help to generate employment.

The roles of capital and labor in the South African economy have been distorted by the practices under apartheid. Specifically, a large section of the population was excluded from economic activity and production was relatively capital intensive. Indeed, the pattern of South Africa's trade would suggest that it is a capital- rather than a labor-abundant economy, notwithstanding an unemployment rate around 30 percent.<sup>19</sup> Moreover, the shortage of skills and aspects of the labor legislation have acted to further raise the cost of labor relative to capital. The implication of these dis-

<sup>18</sup>In this section, unemployment rates relate to the official definition.

<sup>19</sup>Jonsson and Subramanian (2001) provide empirical evidence to suggest that the capital intensity of South Africa's exports has been broadly similar to that of several industrial, capital-abundant countries.

tortions for growth is that a sustainable strengthening of South Africa's growth and employment prospects relies on investment that absorbs rather than displaces labor. Investment that simply increases the capital-labor ratio from already high levels would result in only temporarily higher GDP growth as it would encounter diminishing returns to capital.

The long-run outlook for unemployment and growth depends in part on policy measures that strengthen the incentives for employment and for maintaining the efficiency gains embodied in the strong total factor productivity (TFP) growth observed in recent years.<sup>20</sup> Chapter 2 provides a framework for assessing the growth-employment link. With policies that induce labor-absorbing investment and continued strong TFP growth, several scenarios are possible (see Figure 3.2):

- If employment growth exceeds labor force growth by 2 percentage points, then a reduction in the unemployment rate by 10 percentage points relative to its 2002 level—to 20 percent by the end of the decade (2009)—could be associated with a GDP growth rate of around 5½ percent.<sup>21</sup>
- However, if employment growth is equivalent only to its average level during 1994–2002 (around 1½ percent), the unemployment rate would rise slightly to 32 percent and the GDP growth rate fall to around 2½ percent.

A key risk in both of these scenarios is that labor force growth may turn out to be slower than projected because of the impact of HIV/AIDS. If, say, labor force growth is only half as rapid as currently projected because of HIV/AIDS, as some argue, then:

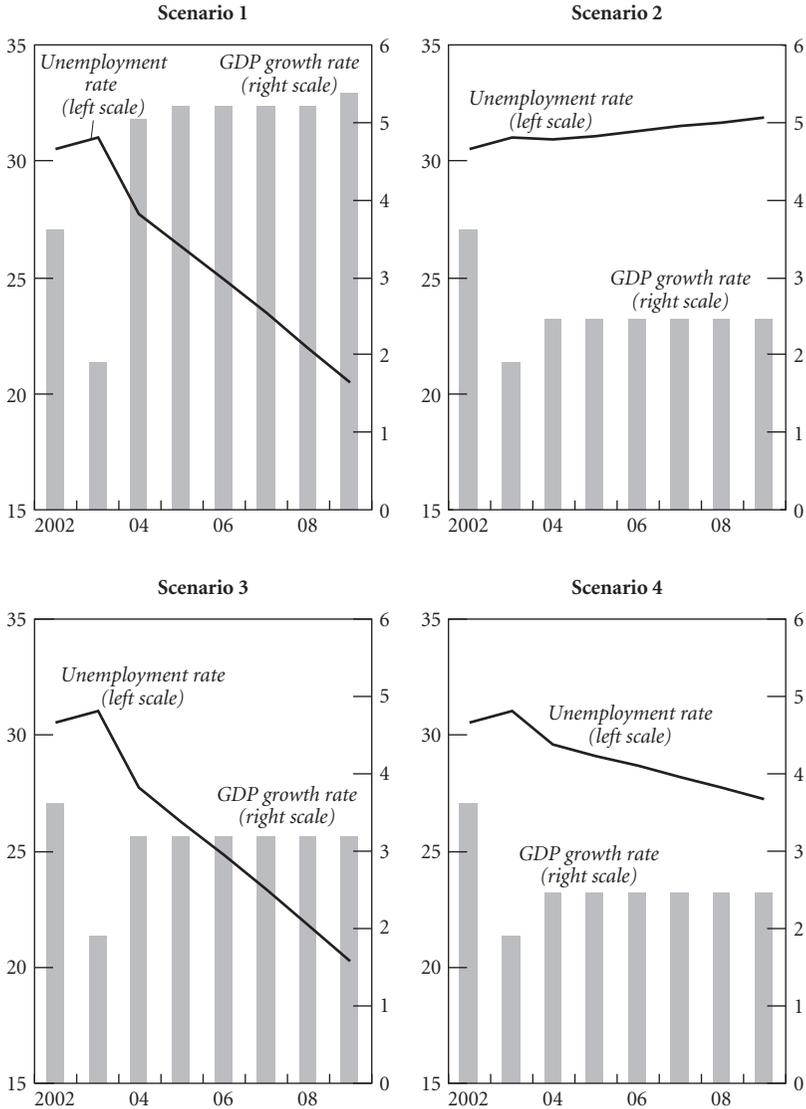
- Even with employment growth in excess of labor force growth by 2 percentage points, which is consistent with a 10 percentage point reduction in the unemployment rate, the smaller labor force would imply a GDP growth rate of only 3 percent.
- If employment growth remains at its 1994–2002 level, while the labor force growth rate is halved, the unemployment rate would exhibit a modest reduction—to 27 percent—and GDP growth rate would decline to 2½ percent.

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<sup>20</sup>It also depends on exogenous factors such as global and regional economic shocks. The analysis assumes a simple Cobb-Douglas production function, as described in Chapter 2.

<sup>21</sup>The estimate is similar to that of Teixeira and Masih (2003), who argue that in order for South Africa to halve its unemployment rate over the next 10 years, to 15 percent, economic growth will need to be around 5 percent a year.

**Figure 3.2. Growth and Unemployment**  
(In percent)



Source: IMF staff projections.

Growth could be much lower than this, and unemployment higher, if policy reversals were to weaken the institutional framework that has supported the strong rates of TFP growth in recent years.

## Conclusions

Notwithstanding the significant pickup in economic growth since 1994, South Africa's unemployment rate has remained high and has risen in recent years. The evidence cited in this chapter suggests that the slow pace of employment generation may be due in significant part to labor market regulations, particularly regulations that disadvantage small enterprises, such as the extension principle in collective bargaining, and those that create implicit costs for firms, such as cumbersome dismissal procedures. In addition, employment creation is hindered by chronic skill deficiencies and the mismatch of skills between those that the labor force has available to it and those that are required by economically productive firms.

Prospects for a stronger employment performance in the future will depend on prospective changes in labor regulations, efforts to address the mismatch of skills, and other government policies. The labor laws need to strike an appropriate balance between ensuring workers' rights, which under apartheid were denied to the majority of South Africa's work force, and economic efficiency, which requires flexibility and decentralization. Prospective improvements in the education system to match training with firms' needs, more effective learnership programs, and favoring immigration of foreign skilled workers may help to address the skills mismatch. In addition, ongoing social initiatives such as the Black Economic Empowerment program, land reform programs, and second-tier banking development could play an important role in reducing unemployment, particularly by fostering small and medium-sized enterprises, which tend to be labor intensive.

## Appendix. Unemployment and Unionization Among Blacks in 1995–2001

This appendix provides unemployment and unionization statistics for the black segment of the population (defined as indigenous Africans), which accounts for roughly 80 percent of total population and almost 90 percent of total unemployment.<sup>22</sup> It makes use of background material prepared by Angelucci (2003a and 2003b), which relies on survey data.<sup>23</sup> Overall, it shows that black unemployment is higher among the younger,

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<sup>22</sup>Statistics South Africa, October Household Survey, 1995–99 and Labour Force Survey, 2000–01.

<sup>23</sup>The aggregations performed by Angelucci may differ slightly from those of the official statistics.

less educated, female, and rural population. Also, the unemployment rate has increased among the young highly educated segment of the black population. Unionization is particularly high in the mining and manufacturing sectors and in the high-skilled occupations.

## Black Unemployment

**Figure A3.1. Black Employment: Employed, Unemployed, and Discouraged Workers**  
(In millions)

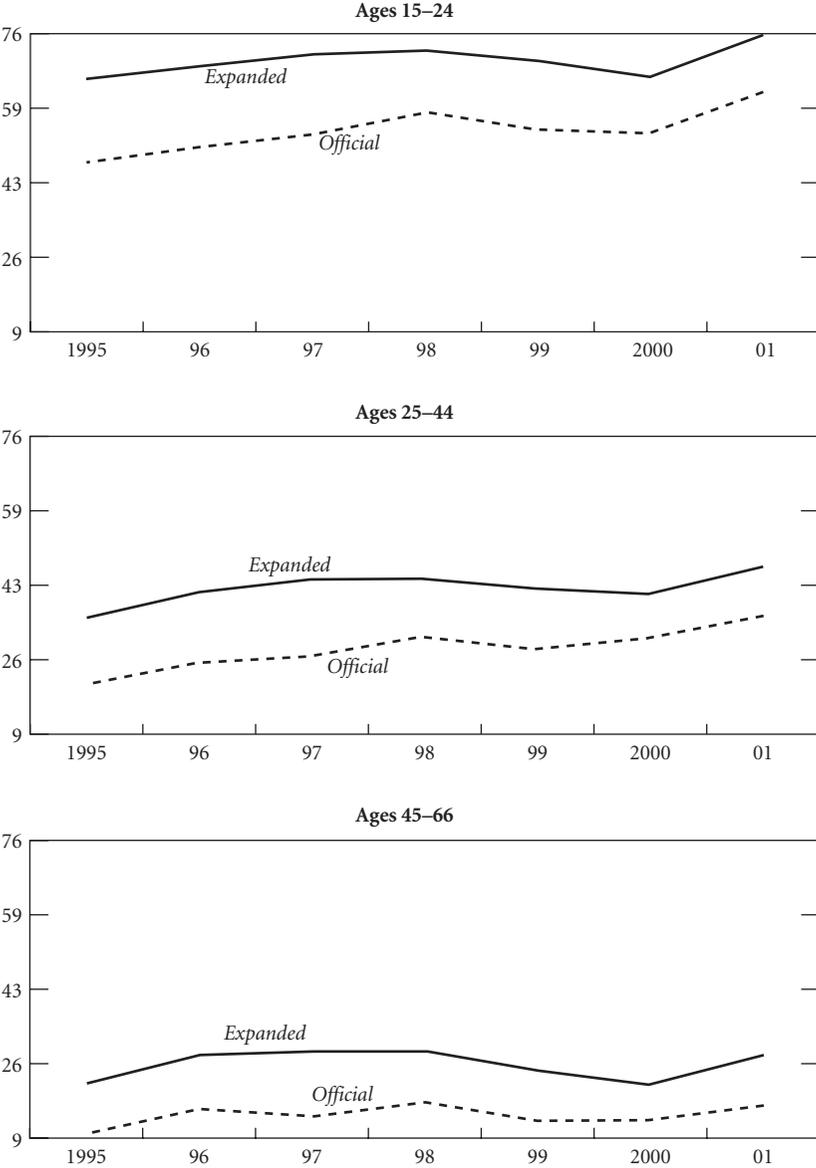
While black employment has increased since the end of the apartheid, the number of officially unemployed and discouraged workers has increased more, thus resulting in an increase in unemployment.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.2. Black Unemployment Rate by Age Groups**  
(In percent)

Two-thirds of unemployed people are between 25 and 45 years old, an age group that accounts for the bulk of the labor force, but that received education during the apartheid regime. However, unemployment rates are highest among youth (15–25 years old).

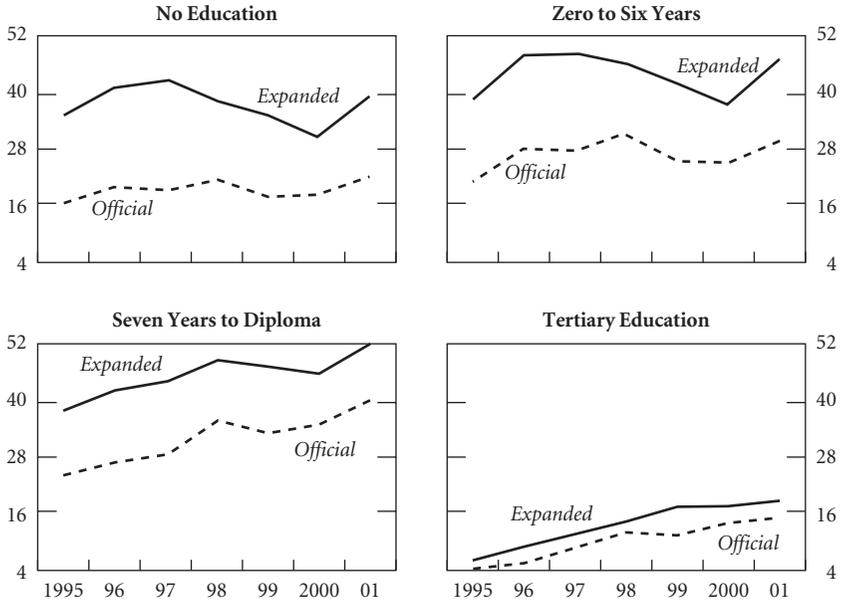


Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.3. Black Unemployment Rate by Education**

(In percent)

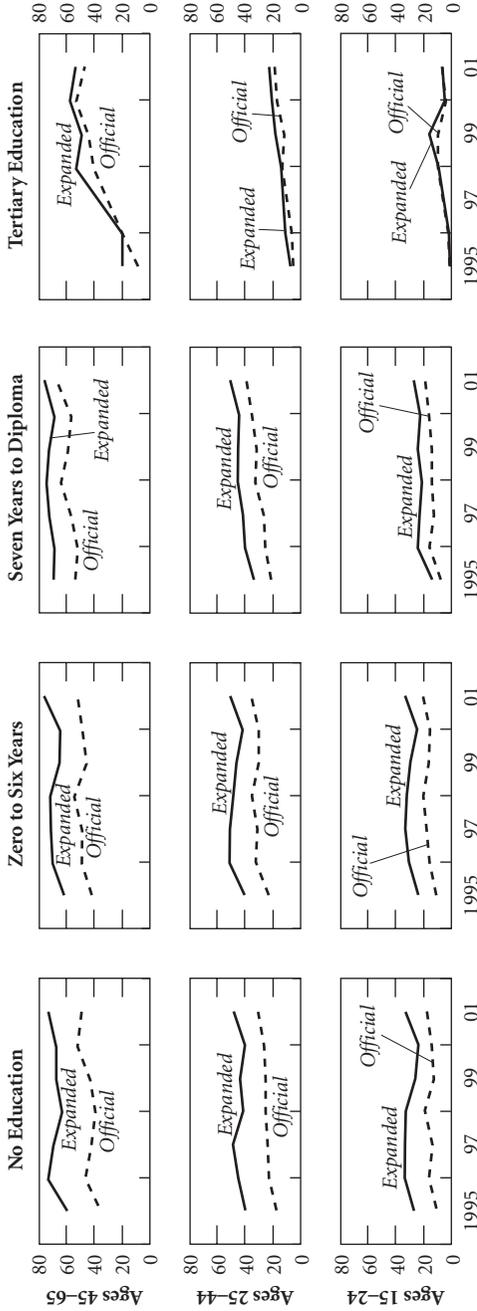
Unemployment is high across all levels of education, apart from tertiary education, which is associated with much lower rates. However, unemployment for the highly educated has risen fast. In this figure, the official definition shows an increase from 4 percent in 1994 to almost 14 percent in 2001. The March 2003 Labour Force Survey, however, indicates that the unemployment rate fell to around 10 percent.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.4. Black Unemployment Rate by Age and Education<sup>1</sup>**  
(In percent)

An age and education breakdown reveals that the strong increase on unemployment in the highly educated segment of the population can be ascribed mainly to the young population (see the top right panel). This could be due to two main factors.<sup>2</sup> First, firms may need different skills than those learned at school, which could be due to the poor overall quality of the education system under the apartheid regime and to the difficulties of rapidly raising job skills and education standards, while at the same time meeting the challenge of offering education to an increasing number of students. Second, the labor market regulations discussed in the text may limit the incentive to hire, irrespective of the skills of the job applicant. One can, however, expect the problem to have lessened in recent years. As discussed above, the overall unemployment rate for high-skill blacks has declined since 2001 (Labour Force Survey, 2003). A breakdown by age group is not yet available, but it is likely that such a decline is associated with a reduction in unemployment of the young highly educated segment of the population.



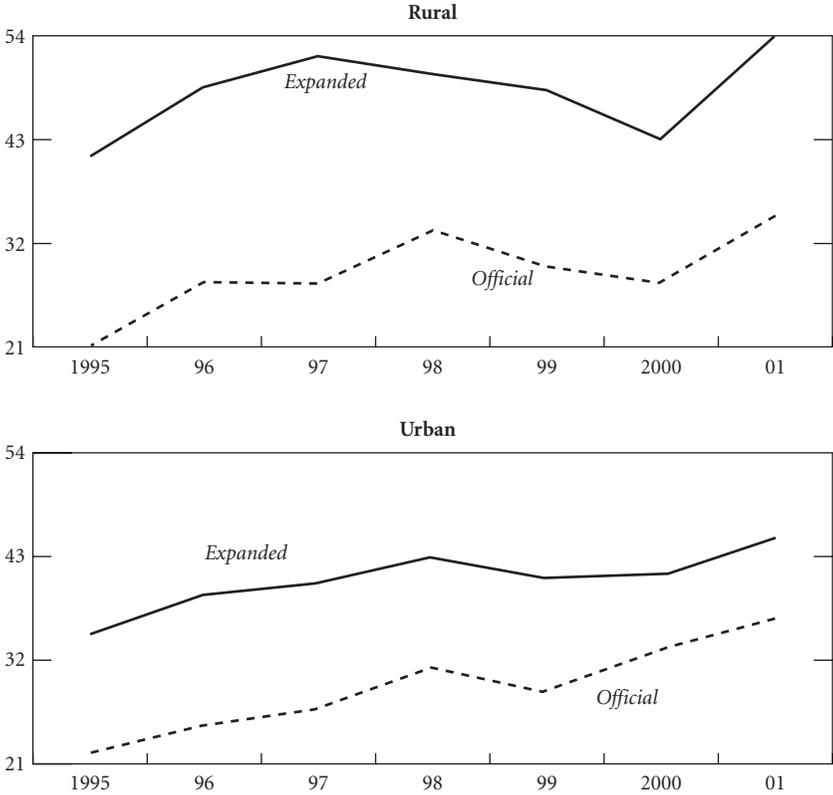
Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

<sup>1</sup>Rows reflect age group (higher from top to bottom). Columns reflect education group (higher from left to right).

<sup>2</sup>A third factor could relate to data issues. It is not clear that part-time students are excluded from the labor force (contrary to full-time students). Hence, youngsters at school part time could be wrongly classified as unemployed, so that an increase in part-time school enrollment would be reflected in a fictitious increase in unemployment.

**Figure A3.5. Black Unemployment Rate by Location**  
*(In percent)*

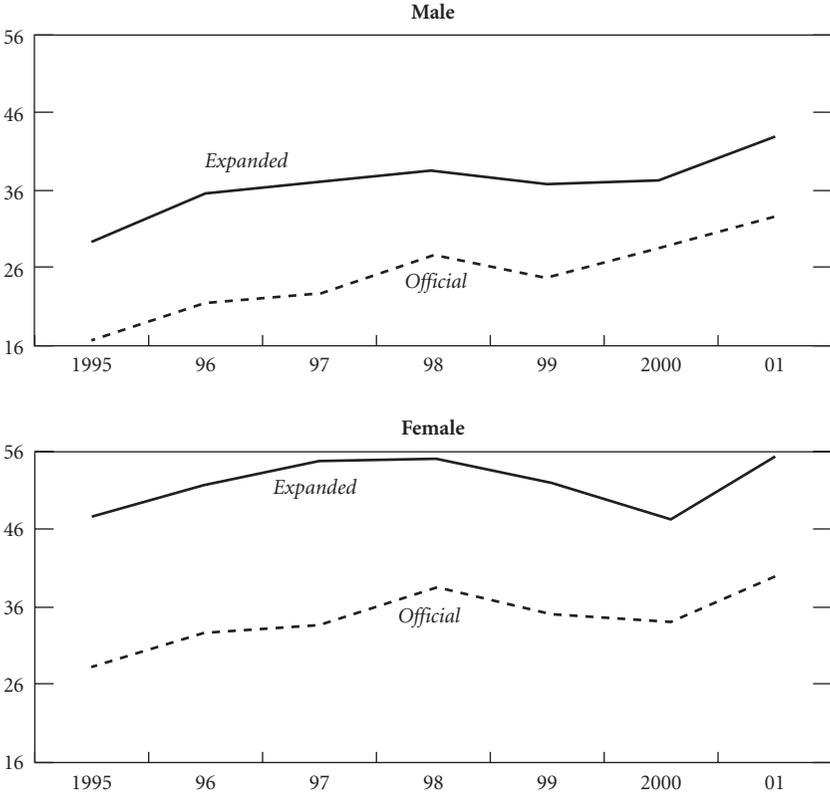
While official unemployment is similar across rural and urban areas, in the expanded definition unemployment is much higher in rural areas. This may be because discouraged workers can rely more on family network support in rural areas.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.6. Black Unemployment Rate by Gender**  
(In percent)

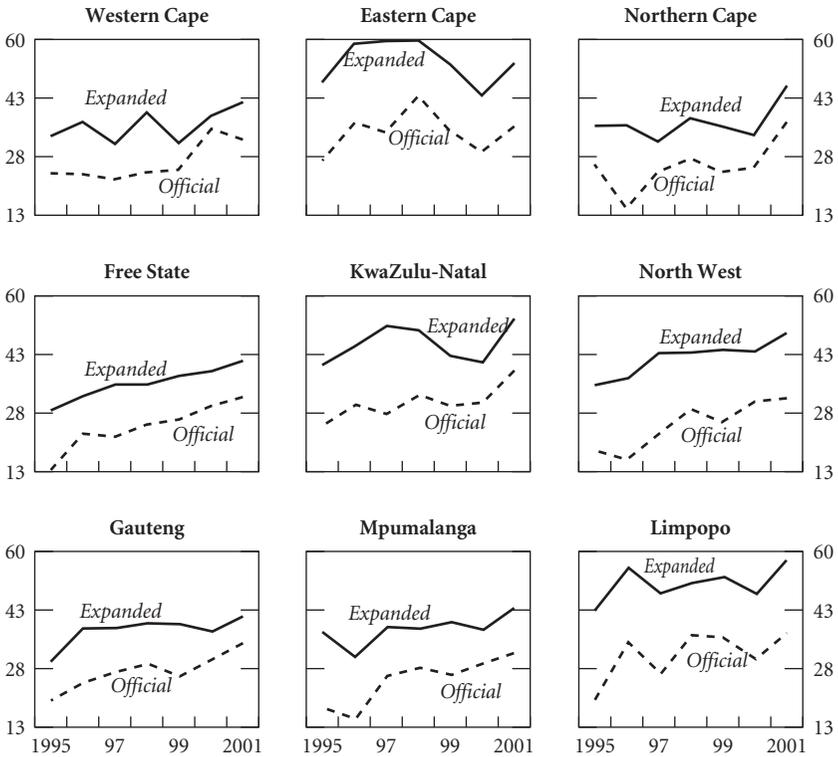
Females tend to have much higher unemployment rates.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.7. Black Unemployment Rate by Province**  
(In percent)

There is substantial heterogeneity across regions, with highest unemployment rates in Eastern Cape and KwaZulu-Natal, and lowest rates in Free State, Western Cape, and Gauteng. However, there has been noticeable convergence in regional unemployment rates since the end of the apartheid.

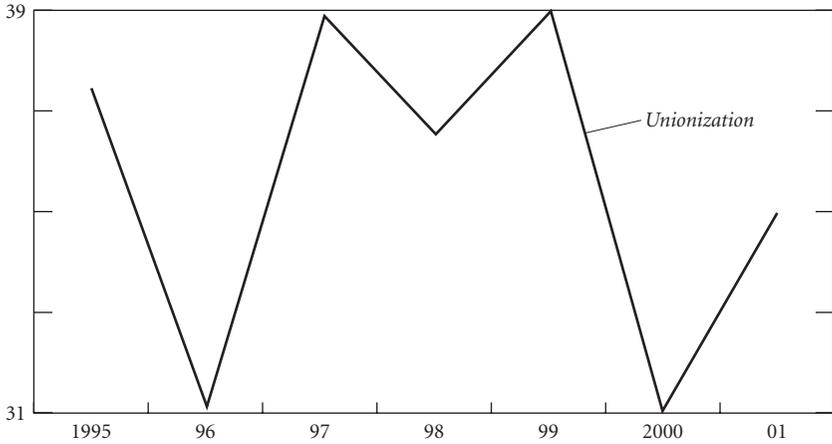


Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

### Unionization and the Wage Gap

**Figure A3.8. Union Membership Among Black Employees**  
(In percent)

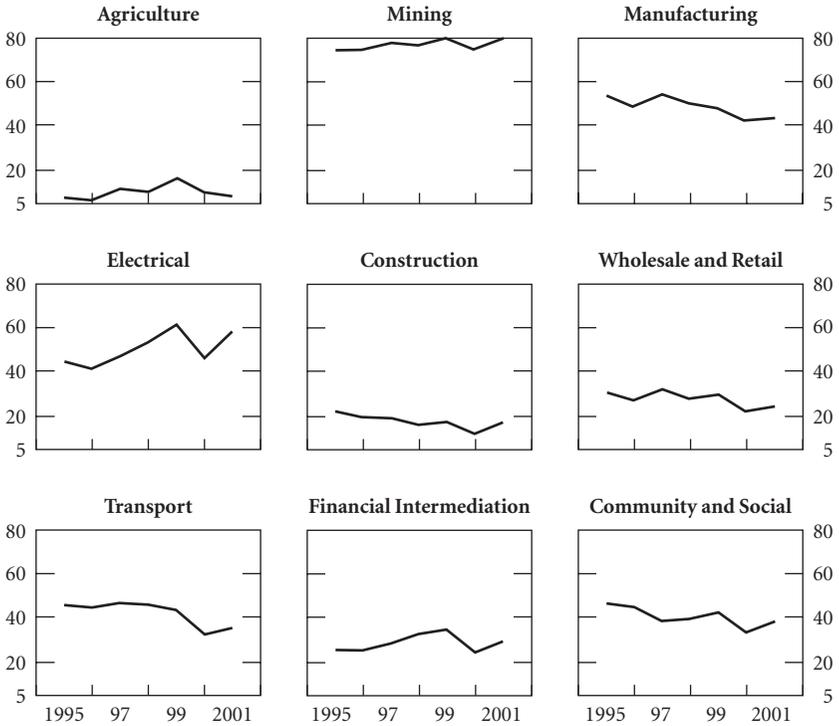
Union membership among black Africans fluctuated between 30 percent and 40 percent.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.9. Union Membership Among Black Employees by Sector**  
*(In percent)*

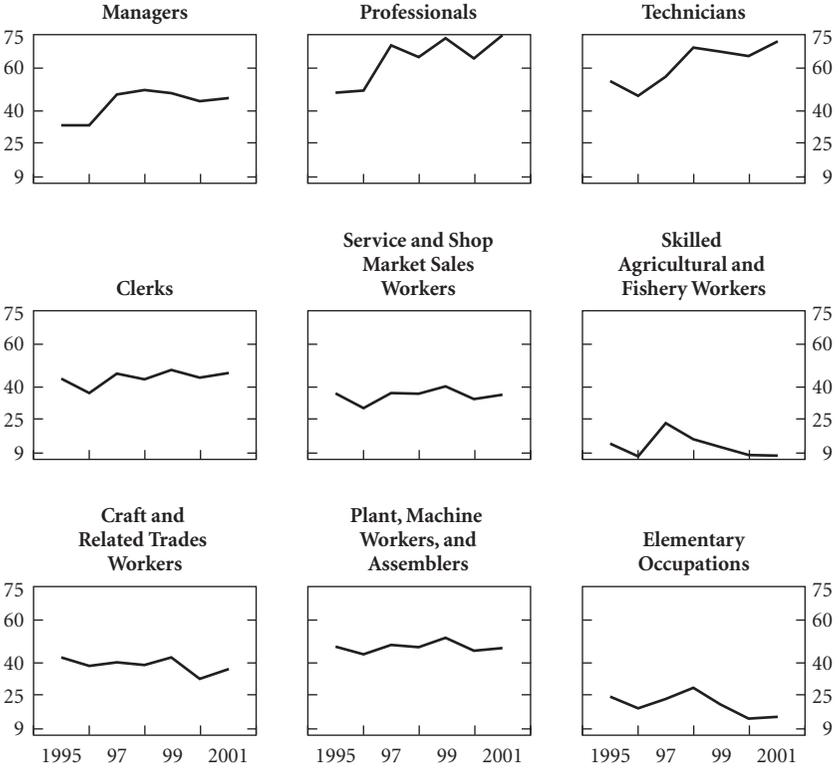
Unionization is particularly high for the mining, manufacturing, and electrical sectors.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.10. Union Membership Among Black Employees by Occupation**  
(In percent)

Unionization is high for professionals and technicians as opposed to workers in services and agriculture.

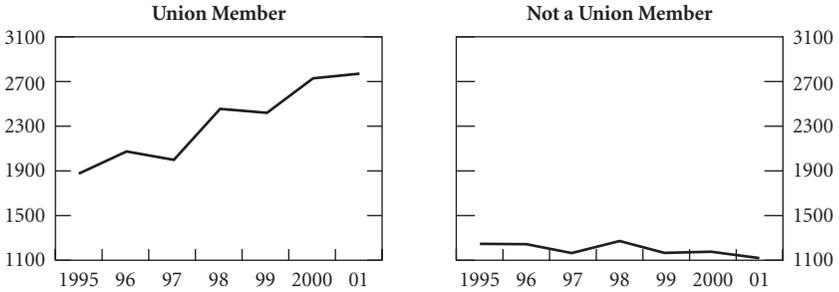


Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.11. Nominal Income by Union Membership—Employed and Self-Employed Blacks**

*(In rand a month)*

There is a large and growing gap between the wages earned by black union members and nonmembers. The text discusses how most of this gap can be explained by socioeconomic factors.

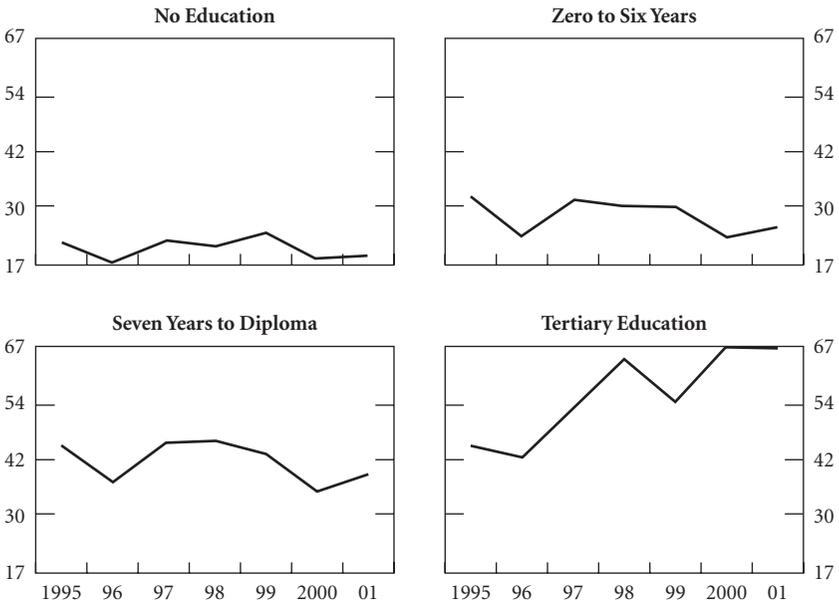


Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

**Figure A3.12. Union Membership Among Black Employees by Education**

*(In percent)*

There is a positive association between education and unionization. Also, highly educated individuals have increased their membership in unions.



Sources: October Household Surveys; Labour Force Surveys; and IMF staff calculations.

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