



FINDING WORK

**EMPLOYMENT EXPERIENCES
OF SOUTH AFRICAN GRADUATES**

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Human Sciences Research Council.

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INTRODUCTION

People with higher education enjoy a clear advantage in the labour market. Their likelihood of being unemployed is low; and when this does occur, the period of unemployment is relatively short. When they are employed, the employment is often in relatively better paid jobs. Such employees also quickly gain knowledge and work experience, which further benefits them in the job market. However, this advantage is not experienced by all higher education graduates – differentiations occur by race and gender.

If graduates are regularly surveyed, a picture can be built up of their entry into and progression through the labour market. A graduate tracking system can provide prospective and current students, as well as employers, with in-depth information on the way in which the graduate labour market works, thus helping them to make realistic plans. Such a tracking system can also help planners to develop longer-term strategies for the development and retention of people with the necessary levels of knowledge and skill. This focus on graduates is essential, given the considerable resources invested in their education by the government as well as by private individuals.

The first chapter of this study presents recent findings on the employment of graduates and includes the time it takes graduates to find employment, the factors that influence employability, the types of jobs they find, their perceptions of the relation of the level of jobs they found to their qualifications and to the sectors of employment. Chapter 2 looks at graduate unemployment, the period of unemployment and the reasons for unemployment. Chapter 3 reports on mobility in the South African labour market and what influences such mobility. Chapter 4 reviews the extent to which graduates move abroad and the reasons for deciding to move. Chapter 5 investigates why graduates choose to continue studying after obtaining their first degrees. Chapter 6 reports on graduates' perceptions of the skills they acquired through higher education.

The outlook for graduate employment is influenced by three important demand and supply factors. The first is the growth in the number of jobs requiring graduate-level education, the second is the number of new graduates coming into the market, and the third is the ability of new graduates to apply for, and be offered, jobs as vacancies arise. Increases in the number of jobs requiring graduate-level education arise largely from growth in industries with occupations requiring a degree, and the upgrading of jobs as the skills required for the jobs become more complex because of technological changes or new business practices. The structural changes in an economy (influenced by changing patterns of demand as some sectors expand while others contract) also impact on the demand for people with higher qualifications.

Structural changes in the economy, such as the decline in the contribution of the primary sector to GDP and the increasing contribution of the secondary and tertiary sectors, have significantly influenced changes in the structure of demand (Mazumbdar & van Seventer 2002). These changes, in turn, are key drivers of employment trends, thus affecting the demand for people with higher qualifications.

Professionals are among the fastest growing occupational category (Bhorat, Leibbrandt, Maziya, van der Berg & Woolard 2001). Between 1995 and 1999, professionals (72.6%), managers (37.8%) and crafters (25.2%) experienced the highest increases in employment, compared with an increase of only 7.6% in elementary work employment and a decline of 4.5% in the employment of clerks (Poswell 2002).

However, while the employment of professionals increased during this period, differences occurred within racial groups. African professionals experienced a decline in employment while members of all other race groups experienced an increase in employment between 1995 and 1999 (see Table 0.1). Although the increase in the employment of whites, Asians and coloureds was the result of technological and business changes, the decline for Africans was the result of structural changes. Poswell (2002) attributes the decline in employment of African professionals during this period to restructuring that led to a decline in total employment in the public sector, which is the largest employer of African professionals.

Differences were also evident in employment patterns by gender. Females increased their participation in the labour force by 29.8% compared to 18.5% for males. This increase, however, translated into poor labour absorption rates as 42.8% of females seeking work were unable to find it in 1999, compared to 29.7% of males (Poswell 2002).

Table 0.1: Tertiary employment growth, by race, 1995 to 1999

| Race | Change | Percentage change |
|----------|---------|-------------------|
| African | -77 121 | -11.84 |
| Asian | 9 193 | 15.16 |
| Coloured | 2 606 | 3.10 |
| White | 66 741 | 10.25 |
| Total | 6 380 | 0.45 |

Source: Bhorat (2001) cited in Poswell (2002)

The supply side of the economy also had a major impact on the outlook for graduates in the late 1990s. There was a large increase in the percentage of the economically active population between 1994 and 1998. Africans had the largest increase in both absolute and percentage terms (27.2%), compared to 22.1%, 18.3% and 10% for Asians, coloureds and whites respectively (Poswell 2002). The degrees and diplomas awarded by public institutions of higher learning also increased by 29% between 1992 and 1996 but declined by some 5% between 1996 and 1998. The number of degrees, diplomas and certificates awarded to Africans increased from 30% to 49% between 1994 and 1998 whereas those awarded to whites during the same period decreased from 56% to 40% (SAIRR 2002). Although the growing representation of African graduates is a positive sign, a disproportionately large number of these graduates have three-year humanities and arts degrees, consigning them to middle-level bureaucratic or technical positions in industry and the civil service (Cooper 2001).

All these factors influence the employment of people with degrees. This report presents the findings of a follow-up postal survey of 2 672 university graduates in South Africa. It covers their employment experiences in the labour market from 1990 to 1998. The key objectives of the survey were to gather qualitative and quantitative data on graduates' experiences in the labour market with respect to finding employment, unemployment, mobility and the relevance of their studies to the jobs they found. This study complements existing labour market research and contributes to the labour market information on graduates; it also improves our understanding of the labour market for the graduate segment of the population.

I. GRADUATE EMPLOYMENT

1.1 Introduction

Students begin their studies with the hope that a higher education qualification will help them find a job. This is a reasonable expectation, particularly in the South African context where labour demand is shifting to higher skill workers and professionals. Matriculants and those involved in career change will choose an area of study based on their perception of the labour market, their prior education and access to an institution or course of study. These factors significantly influence the employment experiences of graduates.

Graduates' experiences may be based on employers' perceptions of the value of their degrees. Some fields of study (such as engineering) impart certain job-specific skills that are clearly understood in the labour market and hence provide some indication that these graduates possess capabilities to be productive at work. In more general fields, graduates' qualifications indicate to employers that they are people who possess character traits that are necessary for success on the job. Thus, for example, graduates with commerce qualifications can be expected to do better in business than graduates with humanities and arts qualifications. Although the latter qualifications imply certain skills (albeit not job-specific) on the part of the graduates, employers may be less certain about their capabilities. Thus, employers identify qualifications and characteristics, perceived or actual, that they correlate with performance on the job. This is why humanities and arts graduates often have lower employment prospects and tend to take longer to settle in jobs.

The process of finding a 'suitable' job is therefore for some graduates not so easy. Nevertheless, it is generally accepted that graduates have an advantage in the labour market. Their unemployment rate is low, and where there is unemployment, it is of a short duration. However, this advantage is not equally enjoyed by all graduates, largely because of individual circumstances and mismatches between employers and job-seekers. There is some evidence that race and gender discrimination persists, particularly in the private sector. However, graduate unemployment also results from the fact that there are more people with degrees than there are degree-level job vacancies.

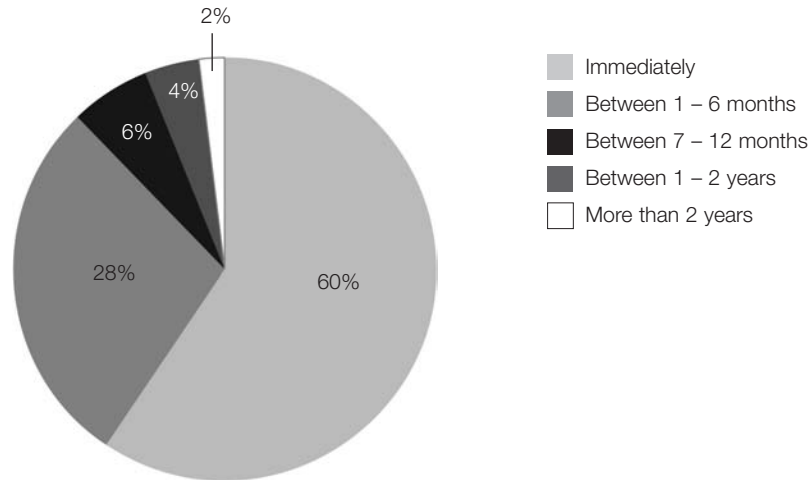
1.2 Employment

The employment experiences of graduates reflect not only the particular sector of the labour market in which graduates participate but also the wider economic reality.

Despite the high unemployment rate in the general population, the unemployment rate of people with higher education is relatively low. This fact emerges from the present study and other national studies. In this particular study, it emerged that 60% of the graduates found employment immediately,¹ a further 28% found employment between a month and six months after qualifying, 6% did so between 7 and 12 months, and 6% took more than a year after obtaining their qualifications (see Figure 1.1).

¹ 'Immediately' in this study is defined as finding a job/employment immediately after obtaining a degree. This implies that these graduates experienced no unemployment.

Figure 1.1 Period before finding employment



Although higher education gives graduates an advantage in the labour market, other factors also influence economic outcomes, for example occupation, industry/sector of employment, geographic area, choice of institution of learning, gender and race. Occupational differentials are the most important here because they reflect the influence of several of the principal determinants of economic outcomes. Chief among these are differences between workers in levels of education and training, and differences between jobs in terms of various non-economic attributes such as status, prestige, and quality of working conditions.

This is reflected in the results of the study. Graduates in fields with a more professional focus, such as medical sciences (79%) and engineering (77%), found employment much more rapidly than those who qualified in fields of a more general nature (see Table 1.1). However, not all professional fields were untouched by labour market forces of demand and supply. For example, law, which is profession-orientated and therefore could be expected to have better rewards in terms of employability, had a higher rate of graduates who took longer to find employment than other profession-orientated fields. The difference might be due to the nature of law as a profession compared to medicine, for example. In medicine-related fields, graduates can normally move into private practice immediately after completing their studies (including internship) if they choose to. In law, however, graduates have to go through articles/clerkship before they can qualify. They are thus subject to the functioning of the forces of the labour market, i.e. the demand for and supply of articulated clerks, before becoming fully professionally accredited as lawyers.

Looking at the more general fields, it appears that there are clear differences in the signals these degrees convey to employers. For example, fewer humanities and arts graduates compared to economic and management sciences and natural sciences graduates found employment immediately after obtaining their qualifications. This could be explained by the perception that economic and management sciences and natural sciences degrees reflect capabilities in respect of skills and performances that employers require. Some of the humanities and arts graduates took longer than a year to find employment, which is cause for concern.

Table 1.1 Period before finding employment, percentage by field of study

| Field of study | Immediately | Between 1 – 6 months | Between 7 – 12 months | Between 1 – 2 years | More than 2 years | Total |
|---------------------|-------------|----------------------|-----------------------|---------------------|-------------------|------------|
| Natural sciences | 55.0 | 38.8 | 3.8 | 2.1 | 0.4 | 100 |
| Engineering | 77.2 | 18.3 | 3.0 | 1.0 | 0.5 | 100 |
| Agriculture | 61.6 | 31.4 | 5.8 | 1.2 | 0.0 | 100 |
| Medical sciences | 79.3 | 18.5 | 2.2 | 0.0 | 0.0 | 100 |
| Humanities and arts | 46.8 | 33.1 | 8.5 | 7.3 | 4.2 | 100 |
| Education | 57.0 | 33.8 | 3.9 | 4.4 | 0.9 | 100 |
| Law | 49.6 | 30.2 | 8.6 | 7.2 | 4.1 | 100 |
| EMS* | 65.4 | 23.3 | 6.2 | 3.7 | 4.3 | 100 |
| Total | 59.5 | 28.4 | 5.9 | 4.2 | 2.0 | 100 |

*Note: * For all tables which refer to EMS in this monograph, EMS = Economic and management sciences*

The above analysis reflects the generally-accepted facts relating to differentials in economic outcomes in the labour market for graduates. However, other differentials affect the employment outcomes and prospects of graduates in the labour market besides field of study. In general, it was found that race, gender and institution attended (defined as historically black and/or historically white university) had a significant impact on graduates' employment prospects.

Although Africans were concentrated in fields of study with lower employment 'prospects', a comparison within the study fields indicated that their white counterparts had better prospects. For example, white graduates made up a higher proportion (70%) of those who found immediate employment compared with 57.8% of Africans, 57% of coloureds and 52% of Asians. In other words, within particular study fields the differences varied according to race. More than 50% of white graduates found immediate employment in all study fields, whereas the only fields where more than 50% of Africans found employment immediately were engineering (88%), medical sciences (66%) and agriculture (53%). It was only in engineering that African graduates experienced the highest proportion of those in immediate employment (88.9%) compared to 78.3%, 50% and 50% for whites, Asians and coloureds respectively. The disadvantage of Africans and coloureds in the labour market emerged clearly in this analysis. While in fields with a professional focus there were insignificant differences in terms of being absorbed into the labour market, significant differences were apparent in general fields such as humanities and arts, and economic and management sciences (see Table 1.2).

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Table 1.2 Percentage of graduates employed immediately, by race

| Field of study | Asian | African | Coloured | White |
|---------------------|-------------|-------------|-------------|-------------|
| Natural sciences | 30.0 | 45.9 | 52.2 | 59.9 |
| Engineering | 50.0 | 88.9 | 50.0 | 78.3 |
| Agriculture | | 53.3 | 83.3 | 64.3 |
| Medical sciences | 46.0 | 65.7 | 32.5 | 91.2 |
| Humanities and arts | 53.6 | 38.7 | 33.3 | 56.4 |
| Education | 71.4 | 49.3 | 28.6 | 75.0 |
| Law | 36.4 | 26.8 | 51.6 | 69.6 |
| EMS | 53.5 | 37.5 | 42.2 | 74.8 |
| Total | 47.6 | 43.0 | 42.2 | 70.4 |

Small differences existed between gender groups. While more than half of the male and female graduates gained immediate employment in almost all study fields except for law and the humanities and arts, the proportions were slightly higher for males than females. The total for males who gained immediate employment was 62.3% compared to 57% for females. The only study fields where the proportion of females (58.7%) in immediate employment was higher than that of males (54.9%) was education. The rate at which each gender was absorbed into the labour market also did not differ markedly (see Table 1.3).

Table 1.3 Period before finding employment, percentage by gender

| Field of study | Immediately | | Between 1 – 6 months | | Between 7 – 12 months | | Between 1 – 2 years | | More than 2 years | |
|---------------------|-------------|-------------|----------------------|-------------|-----------------------|------------|---------------------|------------|-------------------|------------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Natural sciences | 58.7 | 50.9 | 35.7 | 42.1 | 3.2 | 4.4 | 1.6 | 2.6 | 0.8 | |
| Engineering | 78.5 | 70.0 | 16.9 | 26.7 | 3.5 | | 0.6 | 3.3 | 0.6 | |
| Agriculture | 67.3 | 54.1 | 28.6 | 35.1 | 2.0 | 10.8 | 2.0 | | | |
| Medical sciences | 81.3 | 78.5 | 16.0 | 19.5 | 2.7 | 2.1 | | | | |
| Humanities and arts | 48.0 | 46.1 | 30.2 | 34.9 | 8.2 | 8.8 | 7.5 | 7.2 | 6.0 | 3.1 |
| Education | 54.9 | 58.7 | 32.4 | 34.9 | 6.9 | 1.6 | 3.9 | 4.8 | 2.0 | |
| Law | 50.0 | 49.2 | 25.0 | 37.3 | 8.8 | 8.5 | 8.8 | 5.1 | 7.5 | |
| EMS* | 67.9 | 62.6 | 18.4 | 29.0 | 8.2 | 3.8 | 3.6 | 3.8 | 2.0 | 0.8 |
| Total | 62.3 | 57.0 | 24.7 | 31.9 | 6.3 | 5.5 | 3.9 | 4.4 | 2.8 | 1.3 |

Differences by institution attended indicate that graduates from historically white universities (HWUs) had better prospects than those from historically black universities (HBUs). This was partly due to employer perception. But the differences are also explained by HBUs having disproportionate numbers of students graduating in fields with lower employment prospects, i.e. humanities and arts, and education. Overall, of those who found employment immediately, only about 40% were from HBUs compared to 69% from HWUs. While field of study partly explains these differences, there are indications of disadvantage for those graduating from HBUs. For example, law graduates from HBUs and HWUs had different labour market experiences – 27% of HBU graduates found employment immediately compared to 67.5% of their HWU counterparts. In economic and management sciences, the figures were 38.5% for HBUs and 73.5% for HWUs.

In any labour market, it could be expected that graduates in general fields will take longer to find employment. In these cases the period immediately after obtaining a qualification cannot necessarily be used as a correct measure of unemployment. The interesting difference is therefore the rate at which these graduates are absorbed into the labour market. As can be seen from Table 1.4, the disadvantage experienced by graduates from HBUs is evident. Higher proportions of those from HWUs are absorbed in the labour market fairly quickly (within the first six months of graduating) whereas those from HBUs take longer to find employment. It is likely that institutions serve as a signal in the labour market whereby graduates from HWUs are assumed to have characteristics that are better correlated with higher performance in the labour market, compared to those from HBUs. In the context of a skills shortage, this translates into substantial wastage in the higher education system, insofar as part of the system does not seem to serve the labour market needs of job seekers or employers.

Table 1.4 Period before finding employment, percentage by field of study and institution attended

| Field of study | Immediately | | Between 1 – 6 months | | Between 7 – 12 months | | Between 1 – 2 years | | More than 2 years | |
|---------------------|-------------|-------------|-------------------------|-------------|--------------------------|------------|------------------------|------------|----------------------|------------|
| | HBU | HWU | HBU | HWU | HBU | HWU | HBU | HWU | HBU | HWU |
| Natural sciences | 40.0 | 59.5 | 47.3 | 36.2 | 10.9 | 1.6 | 1.8 | 2.2 | 0.0 | 0.5 |
| Engineering | 60.0 | 77.7 | 20.0 | 18.3 | 0.0 | 3.0 | 20.0 | 0.5 | 0.0 | 0.5 |
| Agriculture | 53.3 | 63.4 | 33.3 | 31.0 | 13.3 | 4.2 | 0.0 | 1.4 | 0.0 | 0.0 |
| Medical sciences | 57.3 | 88.8 | 37.8 | 10.1 | 4.9 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Humanities and arts | 34.0 | 55.8 | 36.3 | 30.9 | 10.9 | 6.9 | 11.2 | 4.6 | 7.6 | 1.8 |
| Education | 49.7 | 72.6 | 38.1 | 24.7 | 5.8 | 0.0 | 5.2 | 2.7 | 1.3 | 0.0 |
| Law | 27.4 | 67.5 | 37.1 | 24.7 | 14.5 | 3.9 | 12.9 | 2.6 | 8.1 | 1.3 |
| EMS | 38.5 | 73.5 | 26.9 | 22.2 | 16.9 | 3.0 | 13.1 | 0.9 | 4.6 | 0.5 |
| Total | 40.5 | 68.8 | 35.9 | 24.8 | 10.5 | 3.6 | 8.6 | 2.0 | 4.5 | 0.8 |

1.3 Types of jobs graduates find

While being employed is an important indicator of economic outcome, the type of job one holds is just as important. It can be assumed that the type of jobs that graduates hold reflects not only the utilisation of their education, but also contributes towards paying off their investment in their education. The types of job described here are based on the graduates' own perceptions and are not measured in terms of purely objective variables. Although subjective variables should be treated with caution, they cannot be entirely ignored as they provide useful information about how people feel about their jobs. Responses of this kind provide meaningful and useful information about economic life that should not be ignored.

The first job for 66% of the graduates in the survey was permanent, while 19% found temporary and 15% contract employment. Only in the field of law did less than half (47%) of graduates find permanent immediate employment after qualifying (see Table 1.5).

Table 1.5 Status of first job, percentage by field of study

| Field of study | Status of first job | | |
|---------------------|---------------------|-------------|-------------|
| | Permanent | Temporary | Contract |
| Natural sciences | 62.0 | 19.0 | 19.0 |
| Engineering | 88.1 | 7.5 | 4.5 |
| Agriculture | 77.0 | 17.2 | 5.7 |
| Medical sciences | 70.6 | 16.2 | 13.2 |
| Humanities and arts | 59.0 | 26.1 | 14.8 |
| Education | 60.6 | 29.6 | 9.7 |
| Law | 46.7 | 20.4 | 32.8 |
| EMS | 72.3 | 11.3 | 16.4 |
| Total | 66.1 | 19.1 | 14.8 |

The permanent jobs the graduates found were also related to their field of study. Humanities and Arts graduates had the lowest figures (73.9%) for finding jobs related to their studies. The temporary jobs found were also related to field of study, with economic and management sciences scoring the lowest with only 58% of the graduates in jobs related to their study field (Table 1.6). This perhaps suggests that humanities and arts, and economic and management sciences disciplines are not preparing graduates adequately for the job market. It also reflects the willingness of these graduates to accept any employment, even outside their fields of study.

Table 1.6 Status of first job, percentage by field of study

| Field of study | Percentage in jobs related to field of study | | |
|---------------------|--|-----------|----------|
| | Permanent | Temporary | Contract |
| Natural sciences | 83.7 | 75.6 | 86.7 |
| Engineering | 96.6 | 66.7 | 100.0 |
| Agriculture | 95.5 | 86.7 | 100.0 |
| Medical sciences | 99.5 | 97.7 | 100.0 |
| Humanities and arts | 73.9 | 62.3 | 72.2 |
| Education | 94.9 | 86.6 | 72.7 |
| Law | 84.4 | 78.6 | 84.4 |
| EMS | 82.8 | 58.7 | 91.2 |

Graduates whose jobs were not related to their field of study indicated the extent to which they used the skills acquired in their studies in the jobs they held. Only 10% indicated that they used their acquired skills to a great extent while 21.6% said they did not use their skills at all; a further 68.3% indicated that they use their acquired skills to some or a small extent.

Assessing the requirement level of the jobs they held, over half (59.7%) of the graduates felt that they were in jobs that required graduate level ability while 33.3% said they were in jobs that required a lower-level ability; 7% said they were in jobs that required higher-level ability (postgraduate or specialist). Humanities and arts (42.7%), economic and management sciences (39.4%), and natural sciences (36.5%) were the fields with the highest numbers of graduates indicating that they were in jobs that required a lower level of ability (Table 1.7).

Table 1.7 Requirement level of first job, percentage by field of study

| Field of study | Requirement level | | | Total |
|---------------------|-------------------|--------------|-------------|------------|
| | Entry level | Higher level | Lower level | |
| Natural sciences | 56.7 | 6.9 | 36.5 | 100 |
| Engineering | 63.8 | 7.1 | 29.1 | 100 |
| Agriculture | 66.3 | 10.8 | 22.9 | 100 |
| Medical sciences | 84.7 | 8.4 | 6.9 | 100 |
| Humanities and arts | 50.8 | 6.6 | 42.7 | 100 |
| Education | 68.5 | 2.7 | 28.8 | 100 |
| Law | 64.6 | 4.7 | 30.7 | 100 |
| EMS | 51.8 | 8.8 | 39.4 | 100 |
| Total | 59.7 | 7.0 | 33.3 | 100 |

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The phenomenon of graduates taking jobs that require lower levels of ability is related to the level of qualification with which graduates enter the labour market. Due to the general nature of the degrees in humanities and arts, economic and management sciences, and natural sciences study fields, graduates in these fields are likely to be in positions in which they feel underemployed. Their fields of study do not necessarily prepare them for a profession or specific career. Graduates who entered the labour market with postgraduate qualifications were more likely to find themselves in jobs requiring graduate-level ability (Table 1.8). A postgraduate qualification does to a large extent supplement the first degree and it is at this level that some form of specialisation occurs. Hence the better labour market prospects and the optimal utilisation of these graduates' education and skills.

Table 1.8 Qualification of graduates in jobs that require degree-level capability (percentage)

| Field of study | Bachelors | Honours | Masters |
|---------------------|-----------|---------|---------|
| Natural sciences | 55.7 | 30.0 | 14.3 |
| Engineering | 78.7 | 10.6 | 10.6 |
| Agriculture | 82.4 | 11.8 | 5.9 |
| Medical sciences | 86.7 | 6.7 | 6.7 |
| Humanities and arts | 66.2 | 32.4 | 1.4 |
| Education | 76.3 | 22.0 | 1.7 |
| Law | 61.9 | 38.1 | 0.0 |
| EMS | 74.6 | 25.4 | 0.0 |
| Total | 69.7 | 26.5 | 3.7 |

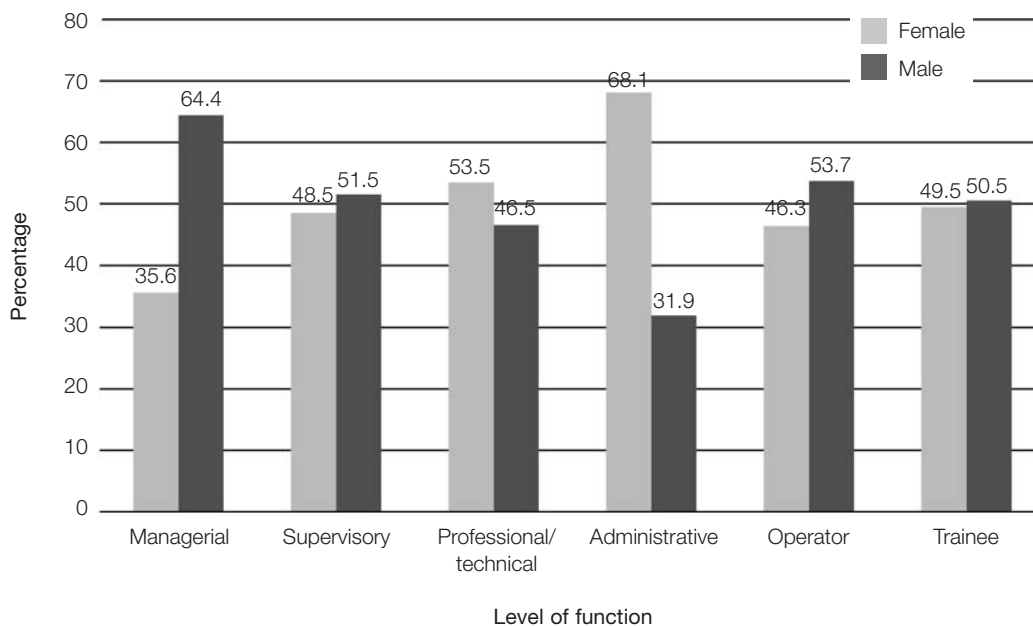
The majority (58%) of the graduates were in professional jobs, with 19% in managerial positions. However, 11% were in administrative jobs. Engineering had the largest proportion (35%) of those in management, while economic and management sciences, and humanities and arts had the highest proportion of those in administrative jobs (17% and 15% respectively) (Table 1.9).

Table 1.9 Level of function, percentage by field of study

| Field of study | Level of function | | | | | |
|---------------------|-------------------|-------------|------------------------|----------------|----------|---------|
| | Managerial | Supervisory | Professional/technical | Administrative | Operator | Trainee |
| Natural sciences | 14.2 | 4.7 | 72.0 | 4.7 | 0.9 | 3.4 |
| Engineering | 34.7 | 2 | 58.3 | 4.0 | 0.0 | 1.0 |
| Agriculture | 31.8 | 3.5 | 57.6 | 3.5 | 1.2 | 2.4 |
| Medical sciences | 14.3 | 3.1 | 77.2 | 1.5 | 2.7 | 1.2 |
| Humanities and arts | 12.9 | 6 | 59.6 | 15.2 | 2.4 | 3.9 |
| Education | 10.1 | 6.7 | 69.7 | 8.2 | 1.9 | 3.4 |
| Law | 12.8 | 4.5 | 64.7 | 12.8 | 0.8 | 4.5 |
| EMS | 28.8 | 8.2 | 36.8 | 17.1 | 1.8 | 7.3 |
| Total | 19.3 | 5.6 | 58.3 | 11 | 1.7 | 4.1 |

Gender appears to have an important influence on the employment of graduates. A larger proportion of the males were in managerial functions while a larger proportion of the females were in professional/technical and administrative functions. A slightly higher proportion of females were in professional jobs compared to males (Figure 1.2).

Figure 1.2 Level of function, by gender



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Within race groups, differences were evident as well. While in all race groups there were more graduates in professional jobs, whites made up the highest proportion (23.6%) of those in managerial positions, followed by Asians (19.6%), Africans (10.8%) and coloureds (10.6%) (Table 1.10).

Table 1.10 Level of function, percentage by race

| Level of function | Asian | African | Coloured | White | Other |
|------------------------|-------|---------|----------|-------|-------|
| Managerial | 19.6 | 10.8 | 10.6 | 23.6 | 21.4 |
| Supervisory | 6.3 | 7.7 | 8.1 | 4.4 | 7.1 |
| Professional/technical | 63.9 | 59.9 | 55.0 | 57.2 | 67.9 |
| Administrative | 5.1 | 13.1 | 16.3 | 10.4 | |
| Operator | 0.6 | 3.8 | 3.1 | 0.8 | 3.6 |
| Trainee | 4.4 | 4.6 | 6.9 | 3.5 | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

It could be expected that the period spent in the labour market would significantly influence the level at which graduates function. This would be especially so for higher levels such as management. An investigation of the graduates who indicated that they were functioning at management level and gave the number of years they had worked did not reveal any differences that might account for more white and Asian graduates being in management compared to their African and coloured counterparts. The proportion of white and Asian graduates within each category of number of years worked was not as high as that of other race groups (Table 1.11).

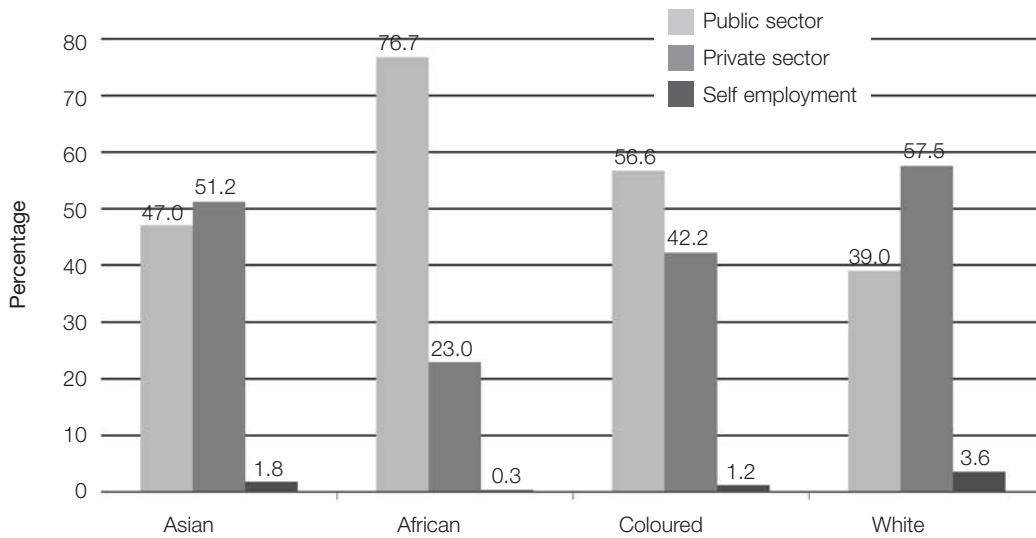
Table 1.11 Number of years worked by those in management, percentage by race

| Number of years worked | Race | | | |
|------------------------|-------|---------|----------|-------|
| | Asian | African | Coloured | White |
| 0–5 years | 46.7 | 34.4 | 58.8 | 38.6 |
| 6–10 years | 36.7 | 50.8 | 35.3 | 51.8 |
| 11–15 years | 16.7 | 14.8 | 5.9 | 7.5 |

1.4 Sector of employment

Half (50.9%) of all the graduates had their first job in the public sector, with 46.8% in the private sector and only 2.4% in self-employment. Most (76.6%) of the African graduates and coloured graduates (56.6%) found their first job in the public sector; conversely, 57.5% of the white graduates and 51.2% of the Asian graduates found their first job in the private sector (Figure 1.3).

Figure 1.3 Sector of first job, by race



While the public sector was the major provider of first jobs for most graduates, especially Africans, differences were evident within sectors in the current occupations given. The proportion of African graduates increased in the public sector while that of other race groups decreased (this is discussed in more detail in Chapter 3). Although the public sector can be expected to employ more African graduates, given that a larger proportion of these graduates are 'crowded' into fields like education, the trend can be seen in other fields as well. Thus, in almost all fields of study, more African graduates were employed in the public sector whereas in almost all fields of study except education more white graduates were employed in the private sector (see Table 1.12).

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Table 1.12 Current job, percentage by sector, race and field of study

| Field of study | Asian | | | Black | | | Coloured | | | White | | |
|---------------------|---------------|----------------|-------------|---------------|----------------|-------------|---------------|----------------|-------------|---------------|----------------|-------------|
| | Public sector | Private sector | Self-employ | Public sector | Private sector | Self-employ | Public sector | Private sector | Self-employ | Public sector | Private sector | Self-employ |
| Natural sciences | 50.0 | 44.4 | 5.6 | 70.6 | 29.4 | | 54.5 | 40.9 | 4.5 | 35.9 | 56.9 | 7.2 |
| Engineering | 28.6 | 71.4 | | 62.5 | 37.5 | | | 100.0 | | 19.6 | 69.8 | 10.6 |
| Agriculture | | 100.0 | | 100.0 | | | | | | 26.8 | 47.9 | 25.4 |
| Medical sciences | 40.0 | 40.0 | 20.0 | 68.6 | 14.3 | 17.1 | 50.0 | 41.7 | 8.3 | 35.2 | 46.9 | 17.9 |
| Humanities and arts | 70.4 | 22.2 | 7.4 | 86.5 | 11.9 | 1.6 | 62.9 | 35.7 | 1.4 | 38.2 | 50.8 | 11.0 |
| Education | 80.0 | | 20.0 | 96.1 | 3.9 | | 100.0 | | | 61.9 | 22.2 | 15.9 |
| Law | 18.2 | 45.5 | 36.4 | 64.9 | 27.0 | 8.1 | 41.7 | 33.3 | 25.0 | 24.6 | 59.4 | 15.9 |
| EMS | 34.9 | 60.5 | 4.7 | 64.0 | 34.9 | 1.2 | 46.7 | 53.3 | | 16.4 | 74.5 | 9.1 |
| Total | 43.9 | 43.9 | 12.1 | 82.0 | 15.7 | 2.4 | 57.1 | 39.1 | 3.7 | 29.0 | 59.0 | 12.0 |

An examination of the levels at which graduates were functioning in the various sectors reveals an interesting picture: while the proportions of whites and Asians in professional capacities were higher in the public sector (71.5% and 79.4% respectively), almost equal proportions of those functioning at managerial levels were from all race groups. However, when one looks at the private sector, not only were the proportions of those functioning on professional levels higher for whites and Asians (51.1% and 47.8% respectively), but their proportions in management were higher as well (roughly 27% for both race groups), compared to Africans and coloureds (11.3% and 9.8% respectively) (Table 1.13).

Table 1.13 Level of function within sector of employment (percentage)

| Level of function | Public sector | | | | Private sector | | | | Self-employed | | | |
|------------------------|---------------|---------|----------|-------|----------------|---------|----------|-------|---------------|---------|----------|-------|
| | Asian | African | Coloured | White | Asian | African | Coloured | White | Asian | African | Coloured | White |
| Managerial | 8.8 | 10.3 | 11.0 | 10.2 | 27.5 | 9.8 | 11.3 | 27.2 | 26.3 | 38.5 | | 39.1 |
| Supervisory | 5.9 | 8.2 | 9.9 | 5.1 | 7.2 | 6.5 | 6.5 | 4.4 | 5.3 | | | 1.8 |
| Professional/technical | 79.4 | 63.8 | 58.2 | 71.5 | 47.8 | 42.4 | 46.8 | 51.1 | 68.4 | 46.2 | 100 | 52.7 |
| Administrative | 2.9 | 11.6 | 9.9 | 9.5 | 8.7 | 21.7 | 25.8 | 12.1 | | 7.7 | | 4.1 |
| Operator | 1.5 | 2.9 | 3.3 | | | 7.6 | 3.2 | 1.2 | | 7.7 | | 1.2 |
| Trainee | 1.5 | 3.2 | 7.7 | 3.6 | 8.7 | 12.0 | 6.5 | 4.0 | | | | 1.2 |

1.5 Conclusion

Employment in the traditional professional occupations has grown faster than overall employment, and people with higher education qualifications enjoy considerable advantages in the labour market. Graduates are therefore quickly absorbed into the labour market, with most (93.8%) finding employment within the first year after graduating. Differences within fields of study, race and gender, however, reveal a complex and worrying picture. While it could be expected that people with different types of qualifications in terms of field of study will have different prospects in the labour market affected by demand and supply, it is of concern that race, gender and institution play a role in employment prospects. Even taking into consideration the differences in fields studied, African and coloured graduates seem to have lower prospects when compared to their white and Asian counterparts even where they have similar qualifications (obtained in the same fields of study). Similarly, those who graduated from historically black universities are absorbed into the labour market more slowly after they have obtained their degrees than those from historically white universities, whose absorption rate peaks earlier within the first few months after graduation. It appears that males are also absorbed more rapidly into the labour market than females.

The implication is that graduates with the same educational qualifications have different prospects. This could be an indication of discrimination and should be investigated further, particularly in the light of private and public sector commitment to furthering the professional advancement of historically disadvantaged groups. It could also reflect the need for labour market information for school-leavers, job-seekers and higher education institutions.

The role of the public sector as an employer is of particular interest. It is the first sector of employment for a large proportion of graduates irrespective of field of study, race and gender. This is especially true for African graduates who make up higher proportions of those employed in the public sector. As the graduates changed jobs and sectors of employment, African and coloured representation in this sector increased while that of

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Asians and whites decreased. In terms of levels at which the graduates functioned, they were almost equally distributed in managerial positions and on professional levels in the public sector.

However, in the private sector there were stark differences. More whites and Asians were in managerial functions, while Africans and coloureds made up higher proportions of those functioning at administrative level. This, given the restructuring taking place in the public sector, is of concern as it translates into fewer employment prospects for African graduates. This has serious implications for equity and the improvement of the economic and social well-being of Africans, who constitute the majority of those affected by poverty.

2. UNEMPLOYMENT

2.1 Introduction

The search for a better job by people with higher education usually involves spells of unemployment for fairly short periods. This is evident in the relatively low unemployment rates graduates experience, and the relatively short periods of unemployment for those who do not find jobs immediately (see Chapter 1). Graduates may thus be displacing medium-skill workers, at least for a period of time. As they search for better jobs, graduates, who have an advantage in the labour market conferred by their education, take up a broad range of jobs, some of which do not match their education. Because the nature of jobs they find does not change, i.e. the jobs are not upgraded, these graduates search for better jobs that are more closely related to their studies.

2.2 Unemployment among graduates

Like the employment rate, the unemployment rate and the incidence of unemployment differ for graduates and are influenced by factors such as study field, race and gender. As can be seen in Table 2.1, humanities and arts had the highest proportion (53.3%) of those unemployed. Interestingly, two of the other general fields, economic and management sciences, and natural sciences, had lower rates of unemployed graduates. Thus, while they also do not necessarily prepare graduates for a specific occupation, they have a relative advantage over humanities and arts as fields of study. This makes sense as these fields provide a relatively sound basis for building a career. For example, economic and management science graduates generally hold BComm degrees. These could be springboards for accounting, business management and economics careers, which have relatively better prospects in the labour market.

Table 2.1 Percentage of those who experienced unemployment, by field of study

| Field of study | Percentage |
|---------------------|------------|
| Natural sciences | 5.1 |
| Engineering | 1.0 |
| Agriculture | 1.0 |
| Medical sciences | 1.5 |
| Humanities and arts | 53.3 |
| Education | 17.9 |
| Law | 9.7 |
| EMS | 10.3 |
| Total | 100.0 |

Africans had the highest percentage (79%) of graduates who experienced periods of unemployment compared to 3.1% for Asian graduates, 6.2% for coloured graduates and 11.8% for white graduates. The majority of African graduates who experienced unemployment were in the humanities and arts fields (Table 2.2). This is partly because many of the African graduates were ‘crowded’ into these fields. In contrast, Africans

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in professionally-oriented study fields were doing well, with the percentage of those experiencing periods of unemployment lower than for other population groups within each study field (Table 2.2).

Males and females had the same proportions of those who experienced periods of unemployment. However, differences within fields of study were evident. In only two fields did males fare worse than females – law and natural sciences (Table 2.3).

Table 2.2 Percentage of those who experienced unemployment, by field of study and race

| Field of study | Unemployment by race and field of study | | | |
|---------------------|---|------------|------------|-------------|
| | African | Asian | Coloured | White |
| Natural sciences | 4.5 | 16.7 | | 8.7 |
| Engineering | | 16.7 | | 4.3 |
| Agriculture | 0.6 | | | 4.3 |
| Medical sciences | | 16.7 | | 8.7 |
| Humanities and arts | 55.8 | 16.7 | 58.3 | 43.5 |
| Education | 18.8 | 33.3 | 16.7 | 8.7 |
| Law | 9.7 | | 16.7 | 8.7 |
| EMS | 8.3 | | 8.3 | 13.0 |
| Total | 79.0 | 3.1 | 6.2 | 11.8 |

Table 2.3 Percentage unemployed, by gender and field of study

| Field of study | Female | Male |
|---------------------|-------------|-------------|
| Natural sciences | 30.0 | 70.0 |
| Engineering | 50.0 | 50.0 |
| Agriculture | 50.0 | 50.0 |
| Medical sciences | 100 | |
| Humanities and arts | 51.9 | 48.1 |
| Education | 57.1 | 42.9 |
| Law | 21.1 | 78.9 |
| EMS | 55.0 | 45.0 |
| Total | 49.7 | 50.3 |

As could be expected, the unemployment experiences of graduates differed according to the institution they attended. A larger proportion (82.1%) of graduates from historically black institutions experienced unemployment compared to those from historically white universities (17.9%). Differences within fields of study were also evident. At the historically black universities, study fields with higher proportions of graduates experiencing periods of unemployment were humanities and arts, law, economic and management sciences, and education. The other study fields had higher proportions of graduates experiencing periods of unemployment than was the case at historically white universities (Table 2.4).

Table 2.4 Percentage unemployment, by institution attended

| Field of study | Institution attended | |
|---------------------|----------------------|------|
| | HBU | HWU |
| Natural sciences | 80.0 | 20.0 |
| Engineering | | 100 |
| Agriculture | 50.0 | 50.0 |
| Medical sciences | 66.7 | 33.3 |
| Humanities and arts | 81.7 | 18.3 |
| Education | 88.6 | 11.4 |
| Law | 84.2 | 15.8 |
| EMS | 85.0 | 15.0 |
| Total | 82.1 | 17.9 |

2.3 Reasons for being unemployed

Although some graduates (the majority of whom were white) were voluntarily unemployed, most graduates were involuntarily unemployed.

The majority of graduates who experienced periods of unemployment stated that they were unemployed because they could not find any kind of job. A large proportion (60%) of these graduates were in the natural sciences, humanities and arts (59.6%), and education (62.9%) (Table 2.5).

Table 2.5 Unemployment reasons, percentage by field of study

| Reasons | Natural Science | Engineering | Agriculture | Medical science | Humanities and arts | Education | Law | EMS |
|-----------------------------------|-----------------|-------------|-------------|-----------------|---------------------|-----------|------|------|
| Retrenched | | 50.0 | | | 6.7 | 17.1 | 5.3 | 5.0 |
| Cannot find a job you really want | 30.0 | | 50.0 | 33.3 | 18.3 | 8.6 | 21.1 | 20.0 |
| Cannot find any kind of job | 60.0 | | | 33.3 | 59.6 | 62.9 | 57.9 | 60.0 |
| Cannot find work where you live | | | | | 8.7 | 2.9 | | 10.0 |
| Other reasons | 10.0 | 50.0 | 50.0 | 33.3 | 15.5 | 9.0 | 16.0 | 5.0 |

2.4 Search methods

Information plays an important role in the various methods of searching for a job. Graduates who experienced some periods of unemployment used multiple methods in their search for employment, the most common being a response to advertised vacancies. Some also took the initiative by approaching firms where they thought they could work. This was the case for all race groups. However, some race groups, i.e. Africans, had a lower proportion of those who investigated work opportunities outside South Africa, while many Asians considered that option. Asians and whites also had higher proportions than Africans and coloureds of those who considered self-employment (Table 2.6).

Table 2.6 Methods of search, percentage by race

| Steps taken to find employment | Asian | African | Coloured | White |
|---|-------|---------|----------|-------|
| Applied for advertised jobs | 55.6 | 95.7 | 85.7 | 64.5 |
| Gave details to employment agencies | 33.3 | 53.1 | 28.6 | 48.4 |
| Sent CVs to preferred places | 77.8 | 79.0 | 71.4 | 58.1 |
| Joined organisation that can help find work | 22.2 | 16.0 | 21.4 | 12.9 |
| Investigated work opportunities outside SA | 44.4 | 8.6 | 28.6 | 32.3 |
| Considered becoming self-employed | 44.4 | 22.2 | 14.3 | 48.4 |
| Other reasons | 0.0 | 3.1 | 0.0 | 0.0 |

2.5 Conclusion

The unemployment of graduates has both structural and frictional features. Structural unemployment tends to be concentrated among certain groups that may have been affected by a decline in demand for their skills. It also tends to be long lasting and therefore affects mainly graduates from fields that did not prepare them for a specific career, i.e. humanities and arts, economic and management sciences, and natural sciences. Frictional unemployment, on the other hand, affects all groups, although the incidence is not the same for everyone. It also lasts only for a relatively short period. A large proportion of the graduates in the study experienced no unemployment at all and, for those who did, it was for a relatively short period in most fields of study. Structural unemployment was experienced mainly by Africans, especially those who had studied humanities and arts.

As with employment, factors such as field of study, race, gender and institution attended play a role in unemployment. Africans, females, those who studied humanities and arts, and those who studied at historically black universities had the highest proportions of those unemployed. This partly reflects the skills mismatch problem that South Africa faces. A mismatch exists between the type of skills/qualifications held by many graduates and the demand for certain skills/qualifications that are in short supply. Africans make up a larger proportion of those who hold less desirable qualifications. They are therefore likely to experience higher rates of unemployment.

3. MOBILITY IN THE LABOUR MARKET

3.1 Introduction

Several categories of labour market mobility exist: occupational mobility; sector mobility; spatial mobility; and shifts between employment status (mobility between status as students, unemployed and employed).

In theory, most labour mobility is associated with differences in the demand and supply of labour at regional and local levels – differences that create various forms of unemployment and vacancy chains. Through rational decision-making, individuals are supposed to move from low-paid to well-paid jobs, from unemployment to employment, from declining industries to expanding ones. Younger people with higher education tend to be more mobile. According to human capital theory, these persons would benefit more from changing their labour-market situation as their investment in education has to be recouped. A decision on whether to move or not is usually based on the difference between the total expected income and the present income. Income differences are, however, not the only factors that determine decisions influencing labour mobility. The possibility of obtaining better employment is also of central importance. In particular, the possibility of entering full-time and higher-level jobs are some of the pull factors in labour mobility.

3.2 Changing jobs

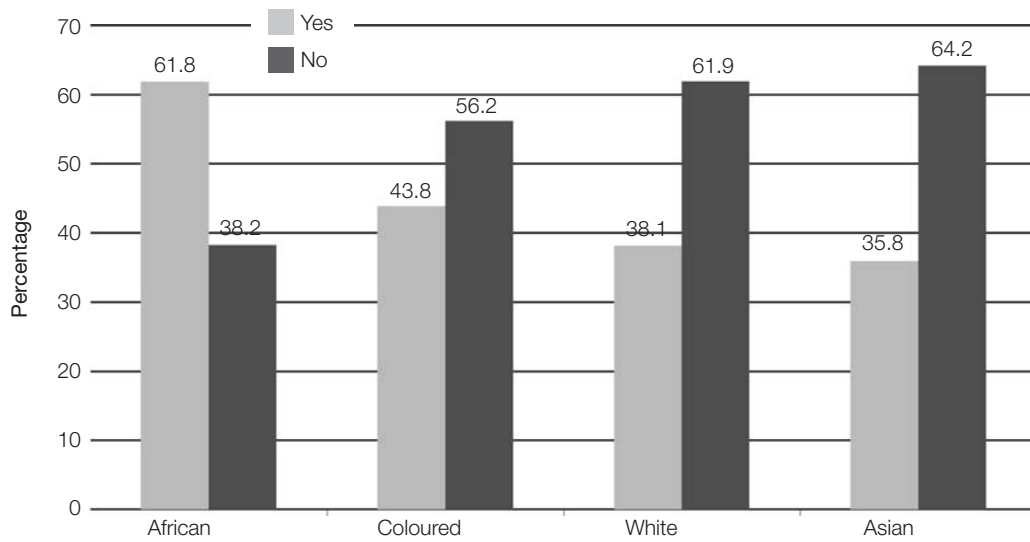
Some 56% of the graduates surveyed changed jobs after entering the labour market. A majority (52.6%) changed jobs once. This was the case across all fields of study. The vast majority of graduates changed jobs three or fewer times; less than 5% changed jobs more frequently (Table 3.1). This indicates that job-hopping may take place less frequently than generally thought and could imply that obtaining employment presented difficulties for some graduates so that those who found jobs stayed in them. For others, job-hopping might be because they found satisfactory jobs fairly quickly and easily.

Table 3.1 Number of times graduates changed jobs after graduation, percentage by field of study

| Field of study | Number of times changed jobs | | | | | | Total |
|---------------------|------------------------------|------|------|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| Natural sciences | 53.1 | 26.9 | 10.0 | 6.9 | 1.5 | 1.5 | 100.0 |
| Engineering | 51.4 | 32.4 | 9.9 | 2.7 | 1.8 | 1.8 | 100.0 |
| Agriculture | 56.3 | 27.1 | 10.4 | 4.2 | 2.1 | | 100.0 |
| Medical sciences | 42.2 | 28.6 | 14.3 | 7.5 | 4.3 | 3.1 | 100.0 |
| Humanities and arts | 51.1 | 27.1 | 15.7 | 3.1 | 1.5 | 1.5 | 100.0 |
| Education | 60.3 | 27.9 | 5.9 | 2.9 | | 2.9 | 100.0 |
| Law | 67.9 | 19.2 | 10.3 | 1.3 | 1.3 | | 100.0 |
| EMS | 53.6 | 29.7 | 11.1 | 3.3 | 1.4 | 0.8 | 100.0 |
| Total | 52.6 | 28.0 | 12.1 | 4.0 | 1.8 | 1.5 | 100.0 |

Racial differences in terms of mobility indicate that despite popular perceptions that recent African graduates are participating eagerly in job-hopping to obtain better salaries, 61% were still in their first job since graduation. Conversely, this figure was much lower for white (38.1%) and Asian graduates (35.8%). This partly reflects the disciplines studied by the different race groups – Africans, for example, are more likely to have graduated in the education field where job turnover is lower – however, job mobility/immobility also reflects the difficulties African graduates experience in obtaining employment in the first place (Figure 3.1).

Figure 3.1 Percentage of graduates in first job since graduation, by race



3.3 Reasons for changing jobs

What influences mobility? Most (30%) respondents indicated that an opportunity to occupy a higher-level position was the main influence in their decision to change jobs. While a higher-level job could be expected to yield higher earnings, it is interesting that only 20% of the graduates indicated that their reason for changing jobs was to earn more (Figure 3.2).

The majority of graduates who changed jobs to move to a higher level were from those study fields with higher proportions of underemployment in the first job, that is, economic and management sciences (35%), and humanities and arts (23%) (see Figure 3.3).

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Figure 3.2 Main influence in decision to change job

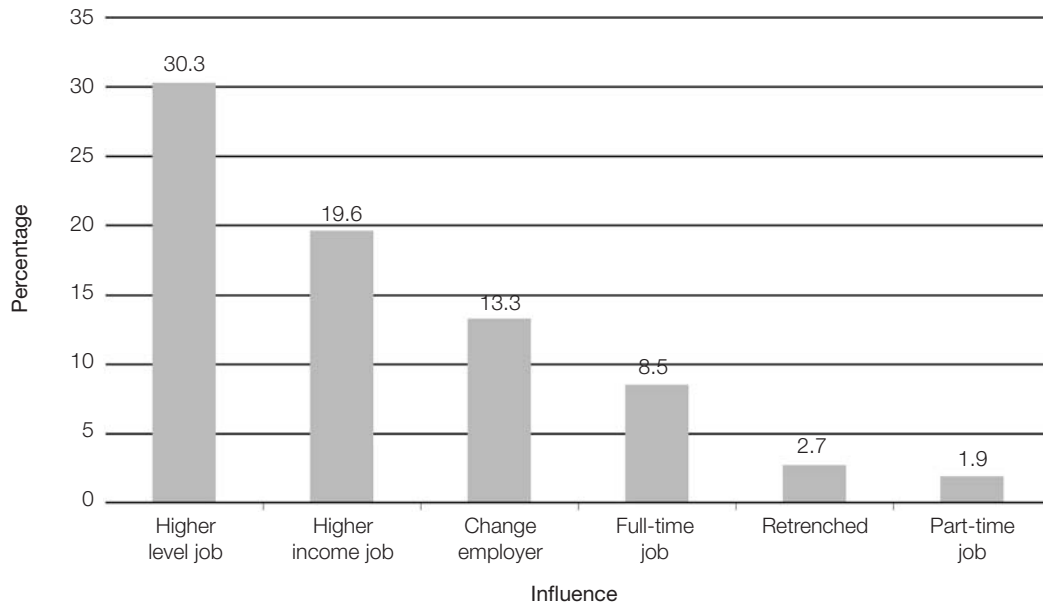
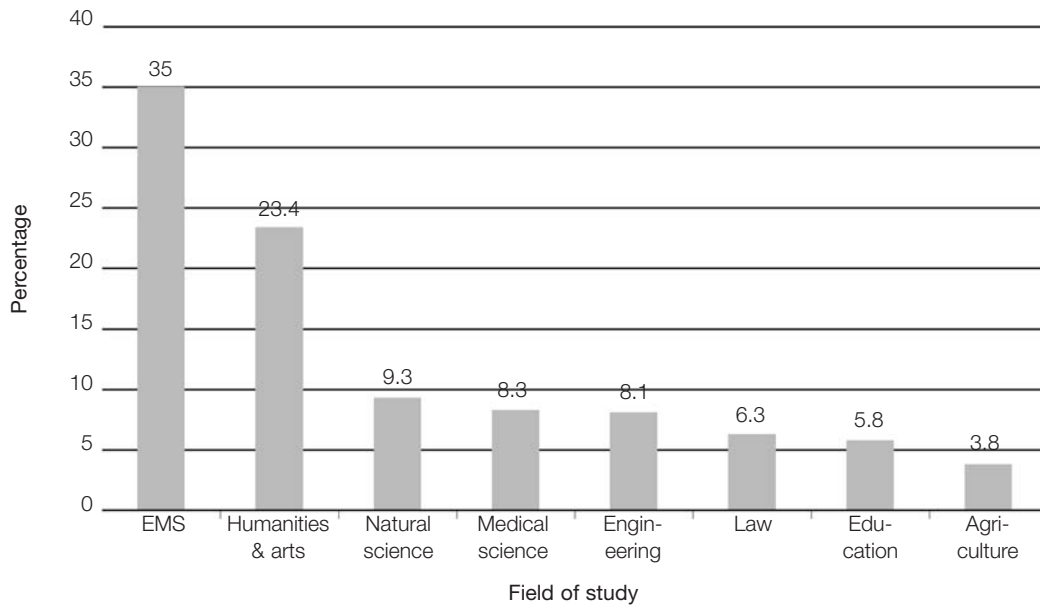


Figure 3.3 Percentage of graduates who changed jobs to move to a higher-level job, by field of study



As mentioned in the previous chapter, graduates prefer to be underemployed rather than unemployed when searching for a suitable job. Being in a less preferred job means that they can switch to a preferred job without experiencing any periods of unemployment. This implies that graduates have a low reservation/acceptance wage (i.e. the lowest wage that an unemployed person will consider accepting). It also indicates the broadness of the scope of their search. The data suggest that graduates make job contacts in a sequential order and accept the first offer that exceeds their minimum aspiration level. Because they have a low acceptance wage, they find job offers quickly and the period of unemployment is shortened. A low acceptance wage is used as a benchmark by which to accept or reject offers, with the anticipation that after a certain period a satisfactory job will be found. Hence, the main influence in the decision to change jobs for most of the graduates was an opportunity to occupy a job on a higher level.

This is also apparent when comparing current jobs with previous jobs. Overall, in all fields, most graduates were in jobs that were on a higher level than the previous jobs. Within fields, education had the highest proportion of graduates (11%) in jobs at a level lower than their previous jobs (Table 3.2).

Table 3.2 Level of current job compared to previous job (percentage)

| Field of study | Same level | Higher level | Lower level |
|---------------------|------------|--------------|-------------|
| Natural sciences | 23.5 | 74.2 | 2.3 |
| Engineering | 15.9 | 78.8 | 5.3 |
| Agriculture | 31.9 | 63.8 | 4.3 |
| Medical sciences | 31.7 | 61.6 | 6.7 |
| Humanities and arts | 19.6 | 71.0 | 9.4 |
| Education | 25.4 | 63.4 | 11.3 |
| Law | 20.0 | 71.3 | 8.8 |
| EMS | 12.6 | 81.9 | 5.5 |

3.4 Matching jobs with education

As graduates changed jobs, the matching of jobs and their field of education improved. Most (85.9%) graduates moved to jobs that were related to their field of study, which was the case in all study fields. Only humanities and arts had a high proportion (23%) of those whose current jobs were not related to their study field (Table 3.3), which reflects the general nature of this field.

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Table 3.3 Relation of current job to field of study (percentage)

| Field of study | Yes | No | Total |
|---------------------|-------------|-------------|------------|
| Natural sciences | 86.5 | 13.5 | 100 |
| Engineering | 88.9 | 11.1 | 100 |
| Agriculture | 89.4 | 10.6 | 100 |
| Medical sciences | 97.7 | 2.3 | 100 |
| Humanities and arts | 76.9 | 23.1 | 100 |
| Education | 90.3 | 9.7 | 100 |
| Law | 87.9 | 12.1 | 100 |
| EMS | 87.4 | 12.6 | 100 |
| Total | 85.9 | 14.1 | 100 |

The number of graduates who felt underemployed decreased, and this feeling diminished as they searched for better jobs over time. Sixty-seven per cent of the graduates surveyed said they were currently in jobs requiring graduate-level ability, compared to 59.7% in the first job. Approximately a quarter of the graduates said their job required lower-level ability, compared to 33% in the first job. The improvement was evident across all fields of study, especially in fields that experienced higher levels of underemployment. The proportion of graduates who were in jobs that required lower-level ability decreased from 39.4% to 22.4% in economic and management sciences, from 42.7% to 31.3% in humanities and arts, and from 30.7 to 15.9% in law (compare Table 1.7 in Chapter 1 with Table 3.4).

Table 3.4 Requirement level of current job, percentage by field of study

| Field of study | Entry level | Lower level | Higher level | Total |
|---------------------|-------------|-------------|--------------|------------|
| Natural sciences | 59.1 | 30.4 | 10.4 | 100 |
| Engineering | 69.8 | 23.6 | 6.5 | 100 |
| Agriculture | 69.4 | 20.0 | 10.6 | 100 |
| Medical sciences | 85.8 | 5.8 | 8.5 | 100 |
| Humanities and arts | 60.1 | 31.3 | 8.5 | 100 |
| Education | 65.7 | 28.5 | 5.8 | 100 |
| Law | 75.8 | 15.9 | 8.3 | 100 |
| EMS | 67.5 | 22.4 | 10.1 | 100 |
| Total | 67.2 | 24.1 | 8.7 | 100 |

The improvement in prospects was evident in all study fields, especially in economic and management sciences, humanities and arts, and law, where most graduates seemed to experience longer periods of unemployment and underemployment. For graduates who changed jobs, the numbers of those entering graduate-level jobs improved for all racial groups, while the number of those in jobs that required lower-level ability decreased (compare Table 3.5 with Table 3.6).

Table 3.5 Requirement level of first job (percentage)

| Requirement level of first job | Race | | | |
|--------------------------------|-------|---------|----------|-------|
| | Asian | African | Coloured | White |
| Graduate level | 61.8 | 57.7 | 51.1 | 56.3 |
| Lower level | 30.4 | 34.2 | 47.7 | 37.5 |
| Higher level | 7.8 | 8.1 | 1.1 | 6.1 |

Table 3.6 Requirement level of current job (percentage)

| Requirement level of current job | Race | | | |
|----------------------------------|-------|---------|----------|-------|
| | Asian | African | Coloured | White |
| Graduate level | 66.7 | 60.6 | 66.7 | 69.7 |
| Lower level | 18.6 | 24.8 | 24.4 | 22.0 |
| Higher level | 14.7 | 14.6 | 8.9 | 8.3 |

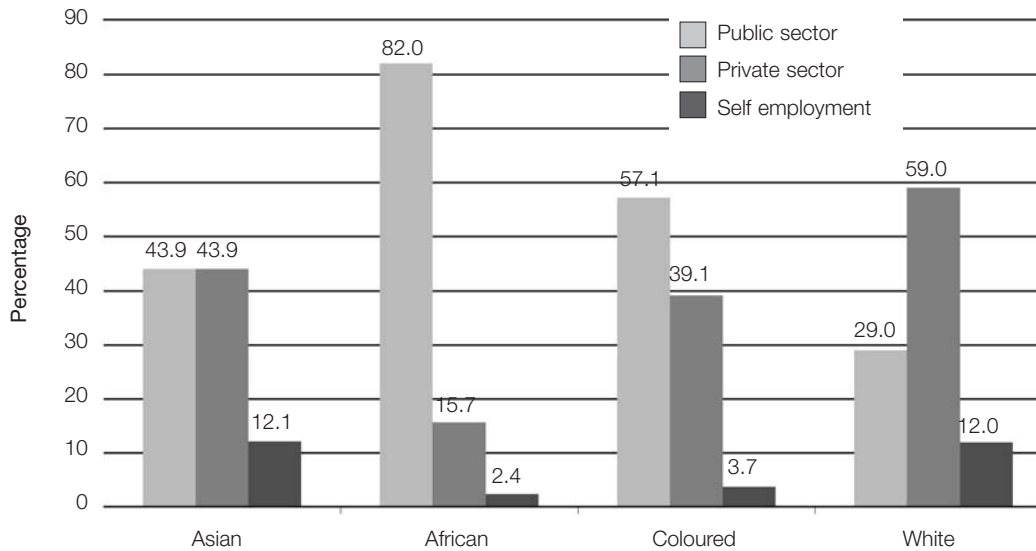
3.5 Mobility between sectors of employment

When comparing the current sector of employment with the first sector of employment,² a decline was evident in the proportions of graduates in employment in the private as well as the public sector, and an increase in self-employment – with 45% of the graduates employed in the private and public sector and 8% self-employed.

However, clear differences were apparent within fields of study and racial groups. White graduates showed a movement from the public to the private sector (57.5% to 59%) and a significant increase in self-employment (3.6% to 12%). On the other hand, the proportion of African graduates in public sector employment increased from 76.7% to 82%. The percentage of African graduates in self-employment also increased from 0.3% to 2.4%. The proportion of Asians in the public sector decreased from 47% to 43.9% and in the private sector from 51.2% to 43.9%, with an increase from 1.8% to 12.1% in self-employment. The proportion of coloureds increased moderately from 56.6% to 57% in the public sector, declined from 42.2% to 39.1% in the private sector, and increased from 1.2% to 3.7% in self-employment (compare Figure 3.4 with Figure 1.4 in Chapter 1).

² First sector of employment refers here to the sector where the first job was held, and current sector of employment refers to the sector of employment for the job held at the time of responding to the survey.

Figure 3.4 Sector of current job, by race



The survey also looked at the movement of graduates between public and private employment and self-employment. Generally, it was mainly Asian and white graduates who moved into self-employment, particularly those in the medical and legal fields. Overall, only a small proportion of graduates in the survey were in self-employment.

The movement between the public sector and the private sector was far more significant. The public sector is an important first employer, particularly for African graduates. Other race groups tend to find subsequent jobs in the private sector, while African graduates tend to remain in public sector employment. The public sector is crucially important for African graduates – 76.7% of African graduates surveyed found their first job in the public sector. This proportion rose to 82% of those reporting on their current job (compare Table 3.7 and Table 3.8).

MOBILITY IN THE LABOUR MARKET

Table 3.7 First job sector, percentage by race and field of study

| Field of study | Asian | | | African | | | Coloured | | | White | | |
|---------------------|--------|---------|-------------|---------|---------|-------------|----------|---------|-------------|--------|---------|-------------|
| | Public | Private | Self-employ | Public | Private | Self-employ | Public | Private | Self-employ | Public | Private | Self-employ |
| Natural science | 60.0 | 40.0 | | 79.5 | 20.5 | | 47.8 | 47.8 | 4.3 | 47.1 | 52.3 | 0.6 |
| Engineering | 37.5 | 62.5 | | 33.3 | 66.7 | | | 100.0 | | 31.3 | 63.7 | 5.0 |
| Agriculture | 100.0 | | | 86.7 | 13.3 | | 81.8 | 18.2 | | 36.6 | 49.3 | 14.1 |
| Medical science | 55.1 | 42.9 | 2.0 | 65.7 | 31.4 | 2.9 | 64.9 | 33.8 | 1.4 | 62.7 | 34.9 | 2.4 |
| Humanities and arts | 62.1 | 34.5 | 3.4 | 82.6 | 17.4 | | 81.8 | 18.2 | | 44.0 | 52.5 | 3.5 |
| Education | 100.0 | | | 89.4 | 10.6 | | 42.9 | 57.1 | | 72.7 | 22.7 | 4.5 |
| Law | 9.1 | 90.9 | | 51.2 | 48.8 | | 37.9 | 62.1 | | 43.3 | 55.2 | 1.5 |
| EMS | 23.3 | 74.4 | 2.3 | 54.1 | 44.7 | 1.2 | 56.6 | 42.2 | 1.2 | 18.5 | 78.7 | 2.8 |
| Total | 47.0 | 51.2 | 1.8 | 76.7 | 23.0 | 0.3 | 56.6 | 42.2 | 1.2 | 39.0 | 57.5 | 3.6 |

Table 3.8 Current job sector, percentage by race and field of study

| Field of study | Asian | | | African | | | Coloured | | | White | | |
|---------------------|--------|---------|-------------|---------|---------|-------------|----------|---------|-------------|--------|---------|-------------|
| | Public | Private | Self-employ | Public | Private | Self-employ | Public | Private | Self-employ | Public | Private | Self-employ |
| Natural sciences | 50.0 | 44.4 | 5.6 | 70.6 | 29.4 | | 54.5 | 40.9 | 4.5 | 35.9 | 56.9 | 7.2 |
| Engineering | 28.6 | 71.4 | | 62.5 | 37.5 | | | 100.0 | | 19.6 | 69.8 | 10.6 |
| Agriculture | | 100.0 | | 100.0 | | | | | | 26.8 | 47.9 | 25.4 |
| Medical sciences | 40.0 | 40.0 | 20.0 | 68.6 | 14.3 | 17.1 | 50.0 | 41.7 | 8.3 | 35.2 | 46.9 | 17.9 |
| Humanities and arts | 70.4 | 22.2 | 7.4 | 86.5 | 11.9 | 1.6 | 62.9 | 35.7 | 1.4 | 38.2 | 50.8 | 11.0 |
| Education | 80.0 | | 20.0 | 96.1 | 3.9 | | 100.0 | | | 61.9 | 22.2 | 15.9 |
| Law | 18.2 | 45.5 | 36.4 | 64.9 | 27.0 | 8.1 | 41.7 | 33.3 | 25.0 | 24.6 | 59.4 | 15.9 |
| EMS | 34.9 | 60.5 | 4.7 | 64.0 | 34.9 | 1.2 | 46.7 | 53.3 | | 16.4 | 74.5 | 9.1 |
| Total | 43.9 | 43.9 | 12.1 | 82.0 | 15.7 | 2.4 | 57.1 | 39.1 | 3.7 | 29.0 | 59.0 | 12.0 |

3.6 Conclusion

Graduates have an advantage in the labour market and can afford to be mobile. This mobility is due to a number of factors, notably a search for better prospects, be they better jobs or higher incomes. Lower levels of mobility reported by the graduates in this study can be attributed partly to the fact that they achieved better outcomes in terms of their occupational attainment, matching studies and expectations. Lower levels of mobility also partly reflect the difficulties experienced by other segments of graduates in the labour market, with some still experiencing underemployment.

We found that the graduates tended to choose underemployment rather than unemployment. In their search for employment, they were therefore likely to accept a lower-level job and then continue with their search for a suitable job. We also found that the graduates changed jobs to improve their prospects from a career perspective, with income being a secondary consideration. The perspective of graduate job-hoppers was not necessarily confirmed in this study, as the majority of those surveyed had held at most three positions.

Limited mobility was evident between sectors for different race groups. The Africans and coloureds appeared to be concentrated in the public sector (and doing well in this sector) rather than in the private sector, whereas the whites and Asians appeared to have better prospects in the private sector. The Asians and whites were also more likely to move to self-employment, compared to the Africans and coloureds.

4. PLANS TO MOVE ABROAD

4.1 Introduction

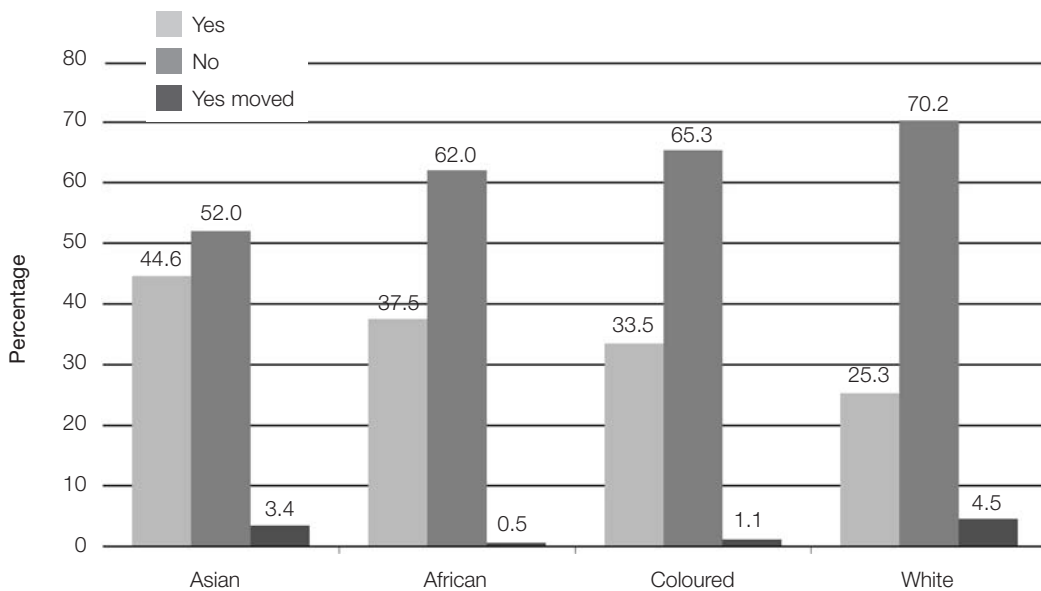
People with higher education are mobile compared to those with less education. This mobility is not limited to the labour market in South Africa. While the conditions of the local labour market could be expected to have a major influence on the decision to move abroad, some of the graduates decided to move irrespective of these conditions. Labour flows across international labour markets are central to an understanding of the demand for and supply of labour.

In South Africa, the loss of skilled people to more developed countries is a major concern. Without a study of the differences in labour market conditions abroad compared to those in South Africa, it is difficult to draw any conclusion on whether this mobility is, in fact, due to better labour conditions abroad.

4.2 Moving abroad

According to this survey, 30.6% of the graduates indicated that they planned to move abroad, while 3% indicated that they had already done so. Asians (44.6%) and Africans (37.5%) had the higher proportions of those intending to move abroad, while higher proportions (4.5%) of the white graduates surveyed had already moved abroad (Figure 4.1).

Figure 4.1 Graduates who planned to move abroad



It was largely in the fields of education (38.1%) and humanities and arts (33.1%) that higher proportions of the graduates indicated that they intended moving abroad. Graduates from these fields had limited labour market prospects in South Africa due (in the case of humanities and arts) to the general nature of their study field and, in the case

of teachers, a previous oversupply in certain subjects. They could therefore be expected to want to move to other labour markets in search of better prospects. Given the drive by countries like the United States of America and the United Kingdom to recruit teachers and nurses from South Africa, the perception could be created that the labour market is better in these countries than in South Africa. This could partly explain why a larger proportion of education graduates said they intended moving abroad and why a relatively large proportion (8%) of medical sciences and agriculture (5.5%) graduates had already moved abroad (Table 4.1).

Table 4.1 Graduates planning to move or already moved abroad (percentage)

| Field of study | Plan to move abroad | | Have moved |
|---------------------|---------------------|------|------------|
| | Yes | No | |
| Natural sciences | 28.4 | 67.9 | 3.7 |
| Engineering | 31.7 | 66.8 | 1.5 |
| Agriculture | 22.0 | 72.5 | 5.5 |
| Medical sciences | 31.6 | 60.0 | 8.4 |
| Humanities and arts | 33.1 | 64.6 | 2.3 |
| Education | 38.1 | 60.7 | 1.2 |
| Law | 27.1 | 71.6 | 1.3 |
| EMS | 26.5 | 70.8 | 2.7 |
| Total | 30.6 | 66.3 | 3.0 |

4.3 Reasons for moving abroad

More than half of the graduates who intended moving abroad planned to do so for a short period of time and then return to South Africa. Those who intended to return, planned to go abroad to work temporarily (35.7%), to study (16.4%) and to study and work (15.6%). Within the various fields of study, most of the graduates intended returning after temporarily working abroad. A disturbing finding is the higher proportion (30%) of those in engineering and medical sciences (28.6%) who intended working abroad permanently. This is especially so in the light of the brain drain already experienced in these occupations and indications of shortages of these professionals in the country. The mobility of these graduates is thus apparently influenced by factors other than lack of employment prospects in the local labour market (Table 4.2).

Most (43.2%) of the graduates who intended moving abroad and returning anticipated that they would not stay abroad for more than five years. Only 8% planned to stay abroad for more than five years.

Table 4.2 Reasons for moving (percentage)

| Field of study | Working abroad permanently | Stay abroad permanently for reasons other than work | Work abroad temporarily then return to SA | Study abroad then return to SA | Study and work abroad then return to SA | Other | Total |
|---------------------|----------------------------|---|---|--------------------------------|---|-------|-------|
| Natural sciences | 20.7 | 8.0 | 46.0 | 12.6 | 8.0 | 4.6 | 100 |
| Engineering | 30.0 | 12.9 | 42.9 | 4.3 | 5.7 | 4.3 | 100 |
| Agriculture | 11.1 | 3.7 | 44.4 | 11.1 | 25.9 | 3.7 | 100 |
| Medical sciences | 28.2 | 9.1 | 40.9 | 2.7 | 13.6 | 5.5 | 100 |
| Humanities and arts | 15.3 | 6.4 | 30.8 | 21.0 | 22.4 | 4.1 | 100 |
| Education | 11.5 | 2.1 | 17.7 | 45.8 | 20.8 | 2.1 | 100 |
| Law | 28.6 | | 31.0 | 21.4 | 11.9 | 7.1 | 100 |
| EMS | 24.3 | 10.7 | 42.4 | 7.3 | 9.6 | 5.6 | 100 |
| Total | 20.4 | 7.4 | 35.7 | 16.4 | 15.6 | 4.5 | 100 |

Table 4.3 Period before returning (percentage)

| Field of study | One year or less | Between one and five years | More than five years | Do not know |
|---------------------|------------------|----------------------------|----------------------|-------------|
| Natural sciences | 11.0 | 46.3 | 3.7 | 39.0 |
| Engineering | 6.7 | 48.3 | 10.0 | 35.0 |
| Agriculture | 15.4 | 46.2 | 7.7 | 30.8 |
| Medical sciences | 8.2 | 46.4 | 13.4 | 32.0 |
| Humanities and arts | 19.9 | 39.9 | 8.0 | 32.2 |
| Education | 22.0 | 42.9 | 8.8 | 26.4 |
| Law | 13.9 | 44.4 | – | 41.7 |
| EMS | 13.5 | 42.9 | 12.2 | 31.4 |
| Total | 15.3 | 43.2 | 8.9 | 32.6 |

4.4 Conclusion

A small proportion (3%) of the graduates indicated that they had already moved abroad and a further 30.6% indicated that they planned to move abroad. The good news is that most of the latter group intended returning to South Africa. Most of the graduates intended moving abroad to work or to study and then coming back after gaining some experience and knowledge. While this is a temporary loss for the country, especially in the light of deep concerns about skills shortages, it will be beneficial later when they return. The proportion (27.8%) who indicated that they intended going abroad permanently is, however, a cause for concern. A greater proportion (42.9%) of engineering and medical sciences (37.3%) graduates intended working or staying abroad permanently. It cannot be argued that the graduates from these fields had few labour market prospects in South Africa. Therefore, it can be assumed that they intended moving for reasons other than labour market prospects. Media reports have indicated that people in medical professions are moving abroad because of dissatisfaction with working conditions in local hospitals.

5. FURTHER STUDIES

5.1 Introduction

Individuals invest in education for a number of reasons, among which are a desire to increase labour market skills, productivity, and earnings. The reason for investing in additional years of education varies for different individuals and is influenced by a number of factors. The most common reason is based on the monetary benefits expected versus the cost of education. For some graduates, studying further is a way of delaying unemployment, thus providing a link between the academic and professional worlds. For others, further study supplements their first degree, which may not have prepared them adequately for a profession. Some graduates may also remain in full-time study because they believe they may have made a wrong choice with their first degree. The relation between the first degree of study and the field of further study may therefore be tenuous.

5.2 Studying further

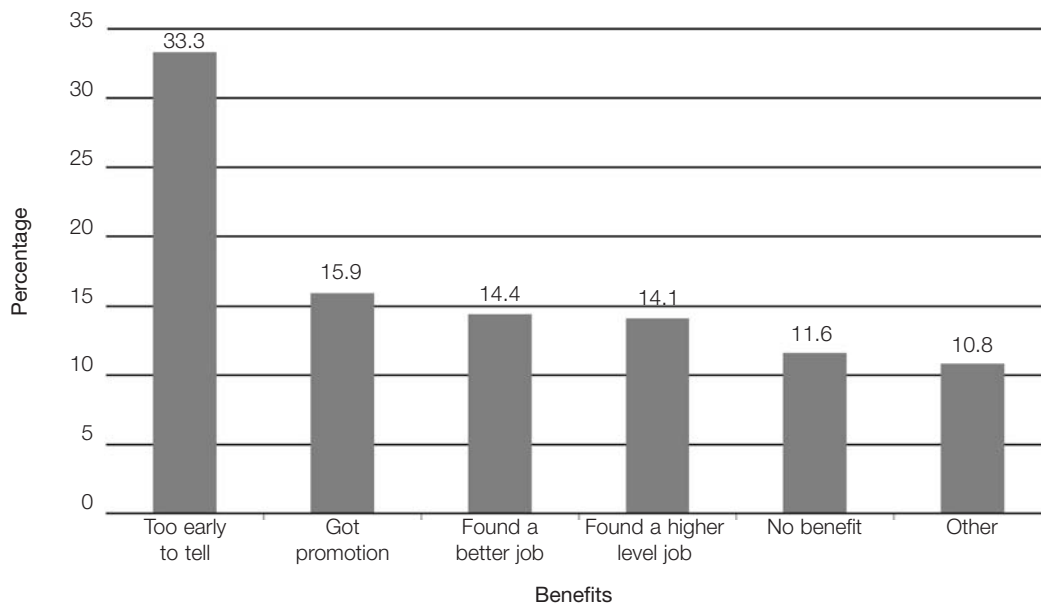
Many (71%) of the graduates studied further after obtaining their first degree. The main reason given by the graduates in all fields for continuing their studies was to improve their career prospects (40.4%) and to enhance their careers (27.4%) (see Table 5.1).

Table 5.1 Reasons for studying further; percentage by field of study

| Reasons for studying further | Field of study | | | | | | | |
|---|------------------|-------------|-------------|------------------|-------------------|-----------|------|------|
| | Natural sciences | Engineering | Agriculture | Medical sciences | Humanities & arts | Education | Law | EMS |
| To enhance career | 22.8 | 31.0 | 18.8 | 44.6 | 23.4 | 26.4 | 25.4 | 30.1 |
| To improve career prospects | 39.3 | 48.4 | 47.9 | 33.8 | 35.3 | 48.5 | 47.4 | 42.5 |
| Necessity for profession | 9.1 | 0.8 | 10.4 | 3.4 | 17.1 | 3.7 | 7.9 | 15.0 |
| For personal interest | 10.5 | 14.3 | 14.6 | 16.9 | 9.8 | 8.0 | 7.0 | 7.0 |
| Studied something else because no suitable jobs | 6.4 | 4.0 | 4.2 | 0.7 | 6.7 | 8.6 | 1.8 | 2.2 |
| Studied further because no suitable jobs | 11.9 | 1.6 | 4.2 | 0.7 | 7.7 | 4.9 | 10.5 | 3.3 |

Most of the respondents indicated that further studies were beneficial – only 11% of the graduates said that studying further had not benefited them at all. For most graduates, continuing their studies improved their job and career prospects (Figure 5.1).

Figure 5.1 Benefits of continuing with studies



5.3 Relation between previous and further studies

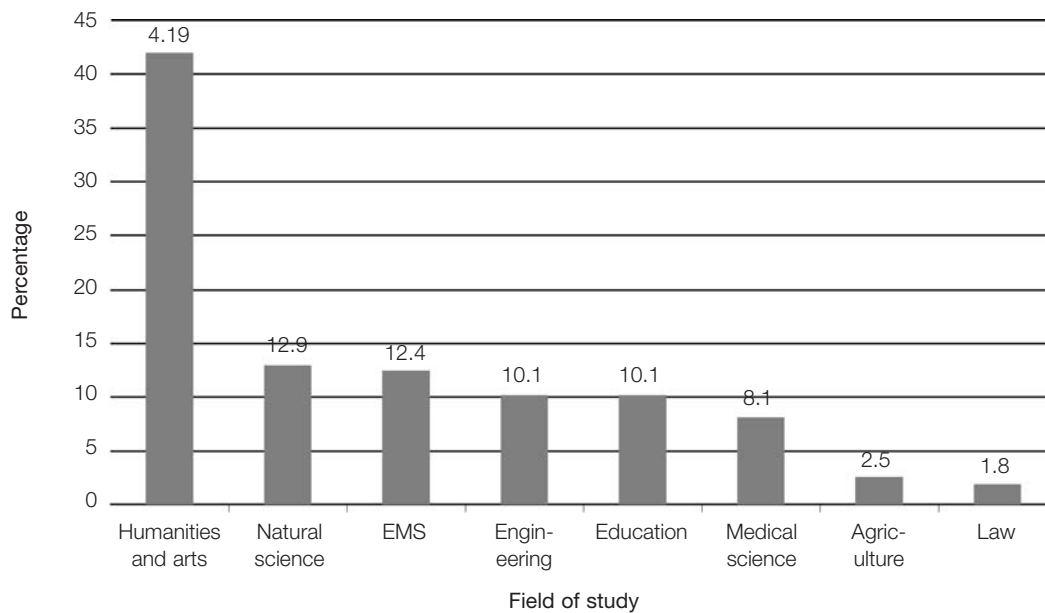
The graduates were asked if they would choose the same or a different course of study if they could start again. Interestingly, 48.6% said they would choose a different course of study while 49% indicated that they would do the same course again. Only 1.6% responded that they would not enter higher education at all. Thus, while most of the graduates realised the value and importance of higher education, they appeared to make less informed decisions on their choice of study. This varied for different study fields. Although all fields had graduates who indicated that they would choose a different course of study, most (63%) of these graduates were in humanities and arts, and education (69.7%) (see Table 5.2).

A survey of the actual situation revealed that 22.3% of the graduates who studied further after obtaining a first degree changed their study field. Humanities and Arts had the highest proportion (41.9%) of graduates who changed fields when they studied further (see Figure 5.2).

Table 5.2 Hypothetical re-enrolment, by field of study

| Field of study | Same course | Different course | Not enter higher education | Total |
|---------------------|-------------|------------------|----------------------------|-------|
| Natural sciences | 54.5 | 43.2 | 2.3 | 100.0 |
| Engineering | 63.4 | 36.1 | 0.5 | 100.0 |
| Agriculture | 55.1 | 42.7 | 2.2 | 100.0 |
| Medical sciences | 57.4 | 42.6 | | 100.0 |
| Humanities and arts | 35.0 | 63.0 | 2.0 | 100.0 |
| Education | 27.5 | 69.7 | 2.8 | 100.0 |
| Law | 55.6 | 42.4 | 2.0 | 100.0 |
| EMS | 66.8 | 32.1 | 1.0 | 100.0 |
| Total | 49.8 | 48.6 | 1.6 | 100.0 |

Figure 5.2 Further study field not related to first study field



FINDING WORK

Most (39.4%) of the graduates who changed their study field did so because they wanted to improve their chances in the labour market. A further 14.6% did so because their interest had changed, and 13.4% because change was necessary for the job they wanted to do (Table 5.3). One could assume that if they had known their interest beforehand, and had more information about the jobs they wanted to do, they would have started their higher education in the relevant fields. To some extent, this reflects the lack of preparedness of many students before they enter higher education.

Table 5.3 Reasons for changing field of study (percentage)

| Reason | Number | Percentage |
|--|--------|------------|
| Dissatisfied with career progress | 35 | 8.8 |
| To improve employment chances in the labour market | 156 | 39.4 |
| To obtain degree related to work | 44 | 11.1 |
| To improve promotion prospects | 25 | 6.3 |
| Interests have changed | 58 | 14.6 |
| Field was no longer in demand | 25 | 6.3 |
| It was necessary for the job I wanted to do | 53 | 13.4 |
| Total | 396 | 100 |

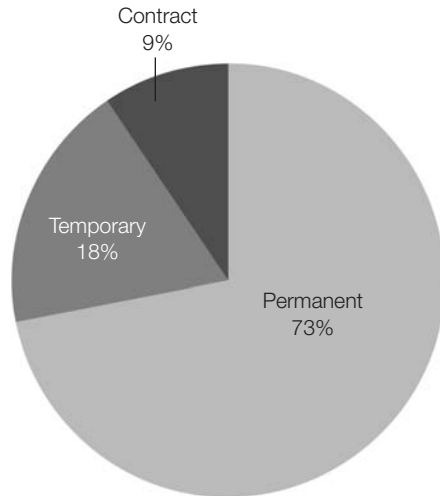
Differences within fields of study confirm the lack of preparedness for entry into higher education. Of those who were dissatisfied with their career progress, most (34.3%) were graduates in humanities and arts study fields. This indicates that before entering higher education, many had insufficient knowledge and information about their own interests, what course of study to pursue, and what the benefits and prospects of that field of study might be.

Table 5.4 Reasons for changing field of study, percentage by field of study

| Reason for changing field of study | Natural sciences | Engineering | Agriculture | Medical sciences | Humanities and arts | Education | Law | EMS |
|---|------------------|-------------|-------------|------------------|---------------------|-----------|-----|------|
| Dissatisfied with career progress | 11.4 | 11.4 | | 5.7 | 34.3 | 20.0 | 2.9 | 14.3 |
| To improve chances in the labour market | 8.4 | 13.0 | 5.2 | 9.1 | 44.2 | 13.0 | 1.3 | 5.8 |
| To obtain degree related to work | 15.9 | 6.8 | 2.3 | 11.4 | 38.6 | 4.5 | 2.3 | 18.2 |
| To improve promotion prospects | 16.7 | 25.0 | 4.2 | 12.5 | 20.8 | 8.3 | | 12.5 |
| Interests have changed | 15.5 | 10.3 | | 10.3 | 39.7 | 6.9 | 3.4 | 13.8 |
| Field was no longer in demand | 20.0 | 4.0 | | | 48.0 | 24.0 | | 4.0 |
| Necessary for the desired job | 20.8 | 5.7 | 1.9 | 3.8 | 47.2 | | | 20.8 |

Interestingly, most of the graduates continued studying while they were in full-time employment. This suggests that they realised the value and importance of continuous involvement and investment in education even when employed. The majority (73%) of those studying further in fact had permanent jobs (Figure 5.3).

Figure 5.3 Type of employment while continuing with studies



5.4 Benefits of higher education

Most of the people who had been through higher education seem not to regret having done so. The value of higher education was widely recognised as only 1% of the graduates indicated that given a second chance they would not enter higher education at all. On evaluating the benefits of entering higher education, most of the graduates indicated that higher education had benefited them to a large extent in their career progression and employment prospects.

Table 5.5 Benefits of entering higher education (percentage)

| Benefits | Greatly | Some | To a small extent | Not at all |
|------------------------------------|---------|------|-------------------|------------|
| Enhanced long-term prospects | 66.2 | 20.4 | 7.8 | 5.6 |
| Improved work quality | 65.4 | 24.2 | 6.0 | 4.5 |
| Easier to find a job | 64.4 | 19.3 | 7.6 | 8.7 |
| Improve long-term career prospects | 62.1 | 21.8 | 9.6 | 6.6 |

5.5 Conclusion

For many graduates, postgraduate studies provide a link between their first degree and employment. This is especially so for graduates in fields such as humanities and arts, that do not prepare them specifically for an occupation. These graduates thus complement their first degree and to some extent specialise at postgraduate level. However, even for those whose degrees are occupation-orientated, further studies seem to be necessary and

are pursued for career enhancement. Further studies also provide fresh opportunities for those who may have made wrong decisions when they entered higher education for the first time. This is exemplified by those who decide to study further in a field not related to their first degree either because their interest has changed or because they realise there are fewer labour market opportunities in their first field of study. While this may be a reflection of individual circumstances, it also points to lack of preparedness on the part of most people before they enter higher education. This results in misallocation and waste of resources as students often spend three to four years in higher education studying something for which they will have little use in their career life.

6. CONCLUSIONS

6.1 Labour market

The outlook for people with higher education qualifications is generally positive. Their rate of unemployment is low compared to the overall national unemployment rate, and when they are unemployed it is usually only for a short time. Nevertheless, not all graduates are equally prosperous. In particular, race and gender biases are still evident. Some of these differences may be the result of structural differences – poor information for school-leavers (especially Africans), study choice and institutional choice. However, one still finds variations in the employment experiences of graduates with the same degrees, which may reflect continued labour market discrimination – this will require further investigation.

Field of study is an important determinant of employability. Graduates from the humanities and arts study field clearly have lower employment prospects. This field is fairly general and does not directly prepare graduates for a profession. The survey graduates in this field tended to take longer to find work and were more likely to have episodes of unemployment. Graduates from this field were more likely to be in jobs where they felt underemployed, which were unrelated to their studies and which were temporary.

The impact of field of study is evident in the prospects of different segments of the population of graduates. This is particularly true for African graduates, many of whom hold degrees in study fields with lower employment prospects. However, there are other signs that African graduates are disadvantaged in the labour market. In study fields with lower employment prospects, the African graduates in the survey had higher rates of unemployment and took longer to find employment than their counterparts in other race groups within the same fields of study. When they did find employment, they were more likely to be underemployed.

A disturbing feature of the graduate labour market in South Africa is the obvious divide that exists between the public and the private sector. This is reflected in employment by race within these sectors. African graduates are mainly employed in the public sector, while white graduates tend to find work in the private sector. The seemingly limited mobility between the two sectors is a cause for concern. White graduates move from public sector employment to private sector employment and self-employment, while African and coloured graduates generally move from private sector employment to public sector employment. This segmentation results in different race groups experiencing different economic outcomes in the labour market. Hence the unemployment rate of African graduates is higher compared to that of whites, coloured and Asians, and their absorption into the labour market is slower.

This reveals the importance of the public sector in the employment of African professionals. Not only is the public sector the largest employer of African and coloured graduates, but graduates from these race groups earn higher wages than those in the private sector of the same race groups (Woolard 2002). This poses a major challenge to the public sector in view of the restructuring and rationalisation taking place within this sector. The public sector has the potential to play a significant role in redressing the inequalities of the past and achieving rapid and sustained income redistribution.

6.2 Higher education

Higher education output is clearly still driven by social demands for education. As a result, little attention is paid to the needs of the labour market. Minimal guidance is given to students as they enter higher education. It is not clear how students decide which fields to study in. In the absence of labour market information on the likely employment prospects of different fields of study, these decisions may be purely arbitrary. The study fields with the least stringent requirements fall within the humanities and arts and are therefore more easily accessible – hence the crowding in these fields. This is especially so for those who are entering higher education for the first time, do not have traditional entry qualifications and have a history of previous underachievement. Members of this group find themselves later having to change fields of study as the realities of the opportunities and constraints in the labour market become clear. Many graduates change their field of study only after spending three to four years completing their first degree. Those who cannot afford to continue with their studies are faced with the harsh realities of unemployment and underemployment.

One of the goals of higher education is to promote equity, access and fairness of opportunity. This expectation of higher education is largely driven by the positive correlation between education and economic outcome. Education can afford individuals an equal opportunity to participate in the economy and in society. It therefore has a crucial role to play in redressing inequalities of the past and in fighting poverty. Increased access to higher education has consequently been the focus of much attention. However, while participation has increased for Africans, as Cooper (2000) stated, it has been largely skewed. Most Africans are still graduating in non-professional fields.

APPENDIX A

The survey

The survey was conducted with the help of graduates from South African universities who obtained their qualifications between 1990 and 1998. The sample was drawn from what was then called the Register of Graduates, a database maintained by the HSRC. The register is a database of all people who graduate at South African universities. It is maintained and updated annually, and graduates are as far as possible followed up to ensure that their particulars are up to date.

Profile of respondents

Overall, there were 2 672 respondents in this survey, and their profiles are presented in the following tables. The respondents are shown in terms of race, gender, field of study and institution attended (categorised as historically black universities [HBUs] and historically white universities [HWUs]).

Table A1 Racial distribution within field of study

| Field of study | African | | Asian | | Coloured | | White | | Other | | Total |
|---------------------|------------|------|------------|------|------------|-----|--------------|------|-----------|-----|--------------|
| | N | % | N | % | N | % | N | % | N | % | N |
| Natural sciences | 44 | 16.4 | 24 | 9 | 23 | 8.6 | 173 | 64.6 | 4 | 1.5 | 268 |
| Engineering | 9 | 4.3 | 8 | 3.8 | 4 | 1.9 | 187 | 89.5 | 1 | 0.5 | 209 |
| Agriculture | 16 | 17.4 | 1 | 1.1 | | | 75 | 81.5 | | | 92 |
| Medical sciences | 37 | 13.5 | 51 | 18.5 | 12 | 4.4 | 172 | 62.5 | 3 | 1.1 | 275 |
| Humanities and arts | 344 | 41.9 | 29 | 3.5 | 81 | 9.9 | 363 | 44.2 | 4 | 0.5 | 821 |
| Education | 163 | 64.4 | 7 | 2.8 | 13 | 5.1 | 69 | 27.3 | 1 | 0.4 | 253 |
| Law | 56 | 35.7 | 11 | 7 | 15 | 9.6 | 71 | 45.2 | 4 | 2.5 | 157 |
| EMS | 106 | 17.8 | 44 | 7.4 | 31 | 5.2 | 404 | 67.7 | 12 | 2 | 597 |
| Total | 775 | | 175 | | 179 | | 1 514 | | 29 | | 2 672 |

Table A2 Gender distribution within field of study

| Field of study | Female | | Male | |
|---------------------|--------------|-------------|--------------|-------------|
| | N | % | N | % |
| Natural sciences | 130 | 48.5 | 138 | 51.5 |
| Engineering | 30 | 14.4 | 179 | 85.6 |
| Agriculture | 39 | 42.4 | 53 | 57.6 |
| Medical sciences | 200 | 72.7 | 75 | 27.3 |
| Humanities and arts | 503 | 61.3 | 318 | 38.7 |
| Education | 141 | 55.7 | 112 | 44.3 |
| Law | 61 | 38.9 | 96 | 61.1 |
| EMS | 274 | 45.9 | 323 | 54.1 |
| Total | 1 378 | 51.6 | 1 294 | 48.4 |

Table A3 Field of study and institution

| Field of study | Universities | | | | | |
|---------------------|--------------|------------|--------------|------------|--------------|------------|
| | HBUs | | HWUs | | Total | |
| | N | % | N | % | N | % |
| Natural sciences | 61 | 6.6 | 207 | 11.9 | 268 | 10.0 |
| Engineering | 5 | 0.5 | 204 | 11.7 | 209 | 7.8 |
| Agriculture | 16 | 1.7 | 76 | 4.4 | 92 | 3.4 |
| Medical sciences | 84 | 9.1 | 191 | 10.9 | 275 | 10.3 |
| Humanities and arts | 357 | 38.6 | 464 | 26.6 | 821 | 30.7 |
| Education | 178 | 19.2 | 75 | 4.3 | 253 | 9.5 |
| Law | 77 | 8.3 | 80 | 4.6 | 157 | 5.9 |
| EMS | 148 | 16.0 | 449 | 25.7 | 597 | 22.3 |
| Total | 926 | 100 | 1 746 | 100 | 2 672 | 100 |

FINDING WORK

Table A4 Racial distribution in institutions

| Institution | Asian | | African | | Coloured | | White | | Other | | Total |
|--------------|------------|------------|------------|-----------|------------|------------|--------------|-------------|-----------|------------|--------------|
| | N | % | N | % | N | % | N | % | N | % | N |
| HBU | 105 | 11.3 | 679 | 73.3 | 127 | 13.7 | 11 | 1.2 | 4 | 0.4 | 926 |
| HWU | 70 | 4.0 | 96 | 5.5 | 52 | 3.0 | 1 503 | 86.1 | 25 | 1.4 | 1 746 |
| Total | 175 | 6.5 | 775 | 29 | 179 | 6.7 | 1 514 | 56.7 | 29 | 1.1 | 2 672 |

Table A5 Racial distribution across fields of study at institutions

| | Asian | | African | | Coloured | | White | | | | | | | | | |
|---------------------|------------|------------|-----------|------------|------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|--------------|------------|
| | HBU | | HWU | | HBU | | HWU | | HBU | | HWU | | HBU | | HWU | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Natural sciences | 14 | 13.3 | 10 | 14.3 | 35 | 5.2 | 9 | 9.4 | 11 | 8.7 | 12 | 23.1 | | | 173 | 11.5 |
| Engineering | 4 | 3.8 | 4 | 5.7 | 1 | 0.1 | 8 | 8.3 | | | 4 | 7.7 | | | 187 | 12.4 |
| Agriculture | | | 1 | 1.4 | 16 | 2.4 | | | | | | | | | 75 | 5.0 |
| Medical sciences | 33 | 31.4 | 18 | 25.7 | 35 | 5.2 | 2 | 2.1 | 9 | 7.1 | 3 | 5.8 | 6 | 54.5 | 166 | 11.0 |
| Humanities and arts | 12 | 11.4 | 17 | 24.3 | 283 | 41.7 | 61 | 63.5 | 57 | 44.9 | 24 | 46.2 | 5 | 45.5 | 358 | 23.8 |
| Education | 7 | 6.7 | | | 158 | 23.3 | 5 | 5.2 | 12 | 9.4 | 1 | 1.9 | | | 69 | 4.6 |
| Law | 10 | 9.5 | 1 | 1.4 | 53 | 7.8 | 3 | 3.1 | 13 | 10.2 | 2 | 3.8 | | | 71 | 4.7 |
| EMS | 25 | 9.5 | 19 | 27.1 | 98 | 14.4 | 8 | 8.3 | 25 | 19.7 | 6 | 11.5 | | | 404 | 26.9 |
| Total | 105 | 100 | 70 | 100 | 679 | 100 | 96 | 100 | 127 | 100 | 52 | 100 | 11 | 100 | 1 503 | 100 |

APPENDIX B

Classification of universities

| Historically white universities | Historically black universities |
|-------------------------------------|--|
| Potchefstroom University for CHE | Medical University of South Africa (MEDUNSA) |
| Rand Afrikaans University | University of Durban-Westville |
| Rhodes University | University of Fort Hare |
| University of Cape Town | University of the North |
| University of Natal | University of the North West |
| University of the Orange Free State | University of Transkei (no data available for 1992–1995) |
| University of Port Elizabeth | University of Venda |
| University of Pretoria | University of the Western Cape |
| University of South Africa | University of Zululand |
| University of Stellenbosch | Vista University |
| University of the Witwatersrand | |

APPENDIX C

Fields of study

Natural sciences

BSc
Physics
Mathematics
Computer science
Chemistry
Biology
Natural science technology
Geology
Astronomy

Engineering

Engineering – general
Engineering – agriculture
Quantity surveying
Architecture
Town and regional planning
Land surveying
Draughtsmanship
Technical inspection
Chemical technology

Agriculture

Agriculture – general
Forestry
Soil conservation
Food technology
Home economics
Veterinary science

Medical sciences

Medicine and surgery
Dentistry
Dietetics
Hygiene
Speech therapy
Nursing
Physiotherapy
Pharmacy
Optometry
Medical technology
Medical research

Humanities and arts

Literature and philosophy
Fine art
Library and information science
Social work
Theology
Human sciences (not elsewhere classified)
Military science

Education

Education
Physical education

Economic and management sciences

Administration, public administration
Economics
Management, business administration
Human resource management
Economics and management (not elsewhere classified)

Law

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