

SOUTH AFRICA'S PRIVATE SECTOR INVESTMENT IN TRAINING AND ITS EROSION AS A RESULT OF HIV AND AIDS

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Abstract

South Africa's economic prospects depend on the productivity of its labour, and productivity can only be maximised when the labour force possess the appropriate skills. Business is playing its part by offering training opportunities to employees. Collectively, they are spending more than the government's mandated level on training. However, the HIV and AIDS epidemic is eroding this investment in southern Africa where the HIV epidemic is at its worst. While there has been empirical work that provides estimates on the cost of HIV and AIDS to business, there is very little data on the actual amounts large companies spend on training, and how much of this investment is eroded as a result of HIV and AIDS deaths. Using an estimate of the HIV and AIDS death rate in the private sector and survey data which identifies training expenditure by sector, the authors estimate the extent to which HIV and AIDS has potentially eroded this investment. The loss for all sectors was estimated at almost R10 million (R9,871,732) during the study year, which equates to USD1,183,661 per annum. This amount represented on average 0.73 per cent of the actual investment in training. The real costs of HIV and AIDS on business, which includes absenteeism, declining productivity and other costs are difficult to quantify, but they are likely to significantly exceed this lost training investment as a result of increasing morbidity and mortality rates due to HIV. It is therefore in a company's best interest to: (1) ensure that a sound HIV and AIDS policy is in place; (2) invest in effective prevention programmes; and (3) provide the appropriate ARV treatment to infected employees if this treatment is not easily accessible through the public health sector.

Key words: private sector, training, skills levy, costs, HIV and AIDS

JEL: I15, J24

1 Introduction

South Africa's economic prospects depend on the productivity of the country's labour force. Productivity accelerates economic development and this improves the standard of living and quality of life of people (World Bank, 2013). Productivity is increased by two key drivers, technological improvements and human capital. Productivity can be enhanced by improvements in one or both of these drivers. In this paper the focus is on human capital.

The more productive the national economy becomes, the higher the personal income of employees and the lower the rate of inflation in the long run. When the economy increases its productivity levels it becomes more competitive and this tends to decrease the unemployment rate. The more productive an enterprise or

organisation, the more income it generates. In this scenario, more jobs can be created. Since increased productivity results in the more efficient use of resources, it contributes positively to sustainable development. Productivity can only be maximised when the labour force possess the appropriate skills, hence the focus on addressing the level of skills within the country.

Recent concerns over the shortage of skills in the economy prompted discussions within the Joint Task Team (JTT) of the Joint Initiative for Priority Skills Acquisition (JIPSA) regarding the role that business plays with respect to education, training and skills development in South Africa. Businesses in South Africa are investing a large amount of resources into training their employees (Bhorat & Lundall, 2002). JIPSA grew out of the adoption of the Accelerated and Shared

Growth Initiative (ASGISA) whose objective was to reduce the unemployment rate from 30 per cent to 15 per cent by 2014. Its task was to elevate the short supply of skills as an issue on the national agenda. JIPSA formed social partnerships between the public and private sectors to provide a strong base and respond to the economy's needs.

From a business perspective, training is offered to meet company development requirements by improving the productivity of the workforce. This investment also brings with it the promise of economic growth in the wider economy. The South African government has attempted to incentivise training within companies by offering a rebate to companies who spend an amount equal to the current one per cent compulsory skills levy.

However, HIV and AIDS is negating the effect of this investment in training. Information on the potential costs of HIV and AIDS in the private sector is vital if companies are to be given a financial incentive to invest in prevention and treatment interventions which could maintain or improve productivity levels (Rosen et al., 2004). The costs related to employee turnover, training and recruitment have been more severe for the mining, manufacturing and transport sectors than for the other sectors (South African Business Coalition on HIV/AIDS, 2005). It was reported that 23 per cent to 26 per cent of the mines, transport, manufacturing, building and construction companies surveyed indicated that they would probably appoint more employees (work shadowing) to compensate for the negative impact of HIV and AIDS on labour productivity, absenteeism and mortality. It should be noted that business cannot simply replace all those employees affected by the epidemic. In the period of 1 April 2006 to 31 March 2007 the mining industry was unable to fill 12 422 vacant positions (Mining Qualifications Authority, 2007). Most of these vacancies were for skilled technicians and trades employees, professionals, machine operators and drivers. These are the very areas that require large scale investment in training.

While there has been empirical work that provides estimates of the cost of HIV and AIDS to business in southern Africa (Rosen et

al., 2004; Rosen et al., 2007), there is very little data on the actual amounts large companies spend on training, and how much of this investment will be eroded as a result of the high AIDS death rates experienced in South Africa and in working age groups specifically. Rosen et al. (2004) first attempted to calculate the economic impact of HIV on the private sector as a result of AIDS related mortality using actual cost data. These costs included sick leave; productivity loss; supervisory time; retirement, death, disability, and medical benefits; and recruitment and training of replacement employees (Rosen et al., 2004). It didn't include, through lack of data, training costs already expended on those employees who contract HIV, fall ill and are no longer productive. In the study, the cost of AIDS was calculated by combining retrospective data on employee demographic characteristics, absenteeism, productivity and medical care costs with unit cost information obtained from employment contracts, benefits policies and financial stakeholders and from interviews with managers. The AIDS related mortality in the workforce was estimated and the nominal cost per death was then multiplied by the estimated number of deaths in the year of the study, to obtain the aggregate costs of all AIDS related losses per year. For most companies the cost studies were conducted before the widespread availability of antiretroviral therapy (ART). With regard to the estimated cost of losing an employee to AIDS, calculated as the percentage of annual labour costs or 'AIDS tax' (in the absence of effective treatment), the cost was estimated to be 1.1 per cent in a large South African manufacturing company. For most of the other companies AIDS seems to be increasing the cost of labour between one and two per cent and seemed to not exceed three per cent for any of the companies studied (Rosen et al., 2004).

The aim of this study is to estimate the financial losses associated with the investment in training as a result of HIV and AIDS deaths. The paper further demonstrates the importance of prevention and treatment of HIV and AIDS in the workforce and those receiving training, to reduce company costs and maintain or increase productivity levels.

2

Method

Using an estimate of the AIDS death rate in the private sector, and survey data which identifies training expenditure by sector, this article estimates the extent to which HIV and AIDS can potentially erode the investment in training.

2.1 Sample and data

The study was initiated by the National Business Institute, hence the majority of the companies surveyed were members of the Institute. All members were surveyed and it was decided to include members from other business working groups, which were the Big Business Working Group (BBWG) members and Business Leadership South Africa (BLSA) members. A total of 150 companies were surveyed, which included the top 100 listed companies on the JSE and the top 25 unlisted companies. Other than state owned entities (SOEs), the respondents were organised into sectors in terms of the standard industry classification codes (Central Statistical Service, 1993). This categorisation was as follows: manufacturing, community and personal social services, mining, financial, construction, wholesale and retail, and SOEs. The companies were then further analysed according to size: greater than 10,000 employees, between 2,000 and 10,000 employees, and less than 2,000 employees. Companies were approached and requested to complete a survey instrument, which elicited relevant information for the 2006/2007 calendar year period. A total of 106 companies responded.

Companies were requested to provide information on the education and training activities that they were involved in – their expenditure, the numbers trained, and the type of training received. Part of the expenditure on training included spending on individuals temporarily employed and not contractually employed by the company. These included individuals who were in an internship or on a training scheme with the company but were not considered as being permanently employed.

2.2 Survey instrument

The survey instrument was developed by the National Business Institute leaders, Robert Godsell (from Business Leadership South Africa) and

researchers from the research firm Singizi who were contracted to undertake the study. The survey was designed to outline the training taking place within the private sector. It included questions on: (1) the total number of employees, (2) the number of employees that received in-service training and (3) the amount of money the company spent on training. The survey instrument is included as Appendix A.

2.3 Data analysis

Descriptive statistics used in the analysis incorporate cross tabulations which display differences in: employee complements, company spending on training and number of employees trained. A key component of the analysis was the calculation of the HIV and AIDS death rate in companies, which is demonstrated in the next section.

2.4 Calculation of prevalence in companies

Evian et al. (2004) suggest that the average HIV prevalence for the entire sample of 26 South African companies was 14.5 per cent (14.1-14.9 per cent) while Colvin, Connolly and Madurai (2007) report the crude HIV prevalence among the 32,015 participants, from 22 public and private organisations, in this study to be 10.9 per cent. The mean of these estimates is 12.7 per cent. Evian et al. (2004) found that among industrial sectors, mining (18.0 per cent) and metal processing (17.3 per cent) had the highest infection rates. Males, who comprised 85 per cent of participants, were more likely (16.3 per cent infection rate) to be infected than were females (10.7 per cent). Evian et al. (2004) go further and suggest that HIV prevalence of employees varies across job level or category, with contract employees having the highest HIV prevalence rate (23 per cent) followed by the un- and semi-skilled employees (18.3 per cent and 18.7 per cent respectively) with managers having the lowest infection rate (4.5 per cent). Colvin et al. (2007) confirm this view as HIV prevalence was significantly lower among managers compared with skilled and unskilled labour. Further surveys by Colvin and reported in Thurlow et al. (2009) and Matthews et al (2011) in the agricultural, manufacturing, tourism and transport sectors, show similar results to the above, with the exception of the agricultural sector. HIV

pre-valence in the manufacturing sector was highest in the 35-49 age cohort with a reported prevalence rate of 24.7 per cent for managers, 27.2 per cent for skilled employees and 33.9 per cent for labourers (i.e. unskilled employees). The HIV prevalence rate for the age cohort 35-49 years was found to be significantly higher than other age cohorts, congruent with national HIV prevalence rates for males. In accordance with the region's generalised epidemic, HIV affects all groups in sub-Saharan Africa irrespective of their social and economic status. Level of education also plays a role in the likelihood of being HIV infected as the HSRC 2008 survey shows that Blacks with a matric level education were more likely to be infected (21.1 per cent) than those with no schooling (8.7 per cent) (Human Sciences Research Council, 2008).

2.5 Calculation of death rate in companies

The 15-49 year national age cohort was used in the calculation of the private sector HIV death rate. This is a commonly used cohort in most national HIV and AIDS studies (see HSRC, 2008; UNAIDS, 2008) because this cohort makes up the bulk of the working age population. Access to publicly available HIV prevalence data (Statistics South Africa, 2006), population data (Statistics South Africa, 2006), along with private sector prevalence data (Evian et al, 2004; Colvin et al., 2007) and an estimate of the number of persons that died as a result of HIV and AIDS in 2006 were used (Dorrington et al., 2006; Statistics South Africa, 2008). An assumption is made that a relationship exists between the upper- and lower-

bound death rate. By using the above data, both rates are calculated. The mean of both these rates serves as the estimate of the HIV-related death rate in companies.

Prevalence is taken as being proportional to AIDS deaths. National death rates are given and are seen as having a relation to one another that can be used as the upper-bound rate.

The upper-bound death rate was determined by the number of deaths as a result of AIDS in 2006 (Dorrington et al., 2006; Statistics South Africa, 2008), against the 15-49 national population in the same year (Statistics South Africa, 2006) and multiplying it by 100 to give a ratio. The lower-bound rate was calculated by dividing the private sector prevalence (Evian et al, 2004; Colvin et al., 2007) by the national prevalence (Statistics South Africa, 2006) and multiplying it against the calculated upper-bound death rate. Prevalence studies were conducted between 2000 and 2006 (Evian et al, 2004; Colvin et al., 2007) so it was felt that prevalence was an underestimate of what prevalence would have been across companies in 2006 (hence its selection as the lower-bound rate). Using this, the following equation can be solved to determine the lower-bound death rate in companies:

$$\frac{0.81}{18.2} = \frac{x}{12.7}$$

with x = lower-bound rate = 0.57

Estimated private sector HIV death rate = mean of 0.57 & 0.81

Table 1 shows that based on this approach the estimated mean HIV and AIDS death rate in the private sector in South Africa in 2006 was 0.69 per 100 employees per annum.

Table 1
Calculation of the HIV related death rate in companies (2006 figures)

Item	Figure	Source
Upper-bound figures		
Population of persons aged 15-49 during 2006	25,189,700	Statistics South Africa (2006)
Number of HIV deaths during 2006 for persons aged 15-49	203,273	Statistics South Africa (2008), Dorrington et al., (2006)
Upper-bound death rate	0.81	
Lower-bound figures		
National HIV prevalence for persons aged 15-49 years	18.2	Statistics South Africa (2006)
Private sector HIV prevalence	12.7	Average of Evian, et al. (2004) and Colvin et al. (2007)
Lower-bound death rate	0.57	
Private sector HIV death rate		
Estimated private sector HIV death rate	0.69	Mean of upper- and lower-bound estimates

2.6 Calculation of sector costs

Sector costs are calculated by determining the number of employees who would be lost due to AIDS using the mean death rate (0.69) and multiplying it by the unit cost of the training. Considering that the loss of a trained employee will result in a replacement employee requiring training, a 2007 training cost estimate has been calculated by taking current costs (2006) and adding inflation at 6 per cent (National

Treasury, 2007).

3 Results

3.1 Data from companies

A total of 106 companies responded with completed survey questionnaires. Table 2 provides an illustration of the companies by sector and size.

Table 2
Companies by sector and size

Sector/ Size	Manufac- turing	Community & personal social services	Mining	Financial	Construction	Wholesale and retail	State-owned enterprises	Overall
>10,000 employees	2	0	5	5	1	6	2	21
10,000 < 2,000 employees	18	2	7	8	2	0	0	37
>2,000 employees	19	4	8	4	11	2	0	48
Total	39	6	20	17	14	8	2	106

One fifth (n = 21) of the companies had more than 10,000 employees, 35 per cent (n = 37) of the companies had between 2,000 and 10,000 employees, while 45 per cent (n = 48) of the companies had less than 2,000 employees. The largest proportion (37 per cent, n = 39) came

from the manufacturing industry, followed by mining (19 per cent, n=20). Only two state-owned enterprises participated (two per cent of the respondents). Table 3 shows the number of employees by sector that participated in the study.

Table 3
Employee numbers by sector

	Manufac- turing	Community & personal social services	Mining	Financial	Construction	Wholesale and retail	State-owned enterprises	Overall
Total no. of companies	39	6	20	17	14	8	2	106
Total no. of employees	139,729	14,073	262,148	181,338	29,252	192,832	86,948	906,320

The mining sector (n = 262,148) represented the highest number of employees, followed by wholesale and retail (n = 192,832) and financial (n = 181,338) sectors. The construction (n = 29,252) and community and personal social services (n = 14,073) sectors represented the least number of employees.

3.2 Cost of training in the sectors

The results reveal that companies are spending on average four per cent of payroll on

employee training.¹ The largest amount spent on training was in the mining sector, which spent over R385 million (USD 46 million) with an average spend of R15,693 (USD1,882) per employee. The mining sector was followed closely by the financial sector, which spent more than R357 million with an average of R16,795 (USD2,014) per employee. The sector with the highest unit spend was manufacturing, which spent on average R21,593 (USD2,589) per employee. The lowest unit spend on

training by sector was the community and personal social services sector, which spent R1,809 (USD216) on average. The average spend per employee across all sectors was R12,839 (USD 1,539) per annum. Differences

in expenditure on training could be attributed to the types of training given, and any extra costs that may be included such as the cost of facilitation, equipment or venue hire etc.

Table 4
Cost of training by sector in 2006²

	Total cost (USD '000)	Total cost (ZAR '000)	No. of employees trained ('000)	Training cost per employee (ZAR '000)	Training expenditure as a % of payroll
Manufacturing	31,392	261,813	12	22	4.13%
Community & personal social services	1,327	11,064	6	2	3.56%
Mining	46,202	385,322	25	16	5.09%
Financial	42,905	357,827	21	17	4.34%
Construction	2,680	22,352	1	18	1.80%
Wholesale and retail	17,305	144,326	27	5	4.23%
SOEs	20,024	167,000	13	13	4.95%
Mean	23,119	192,815	15	13	4.01%

3.3 Estimated loss of training investment as a result of AIDS deaths

The loss of investment based on the mean death rate of 0.69 is shown in Table 5.

Based on the below-mentioned estimation, in 2007 (a year later) the mining sector was expected to suffer the biggest loss as a result of the estimated HIV and AIDS death rate (R2,818,247), followed by the financial (R2,617,144) and manufacturing (R1,914,900)

sectors. The total loss for all sectors was estimated to be almost R10 million (R9,871,732) during the study year, which equates to USD1,183,661. Using the upper-bound estimate (see Table 1), which is likely to be the case in higher prevalence sectors (see Evian et al., 2004; Colvin et al., 2007; Thurlow, Gow & George, 2009; Matthews, Gow & George, 2011) the total annual loss is estimated at R11,588,556 (USD1,389,515).

Table 5
Financial cost of HIV and AIDS by sector

	Estimated no. of employees lost due to AIDS (using mean death rate of 0.69 per annum)	Annual cost due to AIDS deaths (ZAR)	Total cost after new employees are trained in 2007 (6% inflation) (ZAR)	Total cost after new employees are trained in 2007 (USD)
Manufacturing	84	R 1,806,509.22	R 1,914,899.77	229,604.20
Community & personal social services	42	R 76,340.05	R 80,920.46	9,702.64
Mining	169	R 2,658,723.36	R 2,818,246.76	337,919.18
Financial	147	R 2,469,004.22	R 2,617,144.47	313,806.24
Construction	8	R 154,228.48	R 163,482.18	19,602.16
Wholesale and retail	187	R 995,850.20	R 1,055,601.21	126,570.86
SOE	88	R 1,152,300.00	R 1,221,438.00	146,455.40
Total	725	R 9,312,955.52	R 9,871,732.85	USD 1,183,660.91

These estimates suggest that companies will lose on average 0.73 per cent (0.59 per cent and 0.86 per cent) per annum of the amount

they invest in training employees purely as a result of HIV and AIDS-related deaths. While these figures may not seem very high in

relation to the amount invested, it should be noted that the actual year-on-year loss due to HIV and AIDS will be significantly greater when absenteeism, productivity losses and benefit pay-outs are accounted for (George, Gow & Whiteside, 2009).

4

Discussion

The reduction in overall skills and experience of the labour force, often referred to as a "generation gap" occurs when adults are forced to leave at a time when their productive capacity is highest and the entry of young, inexperienced and a less qualified labour force subsequently increases. Such employees are more difficult candidates for workplace-based training (Vass, 2003). Furthermore, reductions in highly skilled labour might not be replaceable in the short run. Quinlan and Willan (2004) caution against accepting the notion that the high unemployment rate in South Africa may suggest an untapped workforce for companies who experience high HIV prevalence rates. A less experienced and particularly young work-force might result in a decline in labour productivity. Continuous training is therefore crucial to maintaining the productivity in the private sector.

The results suggest that companies recognised the value in investing in their employees as companies were spending on average four per cent of their payroll on training. This indicates they were committed to spending over and above the legislated one per cent (Skills Development Levies Act of 1999). In comparison, companies in developed countries spent between three to five per cent of their payroll on training (Johnston, 2007). Private sector enterprises in Britain allocated on average two to three per cent of their payroll to training (Organisation for Economic Cooperation and Development, 1997). Employee training expenditure was therefore not only above the government levy in South Africa, it also appeared to be on par with expenditure in developed countries. Discussions with the surveyed companies revealed that their spending was unrelated to government's mandatory level and the amount that they are entitled to claim a rebate for, but rather based on the needs of the business. Additionally, they viewed this expenditure as

an investment in employees which they hoped would result in increased productivity. Three things are clear in relation to this investment: (1) large companies were spending a sizeable amount of money on employee training; (2) this type of expenditure promises to bring benefits to both the company and the economy at large; and (3) a proportion of the investment in human capital from training would be lost as a result of HIV and AIDS.

The results suggest that while the annual loss of training-related investment due to the HIV and AIDS death rate within companies did not seem very high in relation to the amount the company was spending on training, the ripple effect of the loss of a trained employee was likely to be significant although difficult to quantify. These effects include the reduction in productivity from new employees that need to be trained, time spent on advertising, hiring and induction of new employees and the loss of institutional memory when experienced employees leave. The results suggest that companies should invest in HIV prevention activities to reduce future costs, although there is no means by which to predict the effectiveness of such an investment. Nonetheless, the results show that there is a need for intervention as the majority of the workforce is particularly vulnerable as they are in the age group most susceptible to HIV infection.

It is therefore in a company's best interest to: (1) ensure that a sound HIV and AIDS policy is in place; (2) invest in effective prevention programmes; and (3) where possible provide the appropriate treatment to infected employee if this treatment is not easily accessible through the public health sector. Rosen et al. (2007) indicate that without treatment it is only after about seven years that an HIV infected employee demonstrates declining productivity, absenteeism and other cost-increasing behaviours. After about 10 years the infected, untreated employee may retire due to ill health or die (ibid). Hence the effects of prevention and treatment efforts are not likely to be experienced immediately. However, the costs will be borne immediately. Further research indicates that through the provision of ARV treatment, infected employees remain productive (Larson et al., 2008, Thirumurthy et al., 2012) although it's critical that employees know their

status (George, 2006) and that they are placed on treatment (Bhagwanjee et al., 2008) to optimise its effect.

From a purely economic perspective, the financial burden of absenteeism and employee attrition may transfer foreign investment to countries where labour is less affected by HIV and AIDS. This is likely to affect South Africa's economic growth and development. HIV and AIDS is also increasing the dependency ratio by decreasing the number of working-age adults (Vass, 2003).

Private companies should be recognised for the training they do and proper engagement with government, JIPSA and other such bodies needs to take place. If further support is given to companies by government then South Africa could train and produce a greater number of skilled employees whilst mitigating the impact of HIV and AIDS.

Along with providing opportunities for employee training there needs to be effective HIV and AIDS prevention and treatment initiatives which are constantly monitored and evaluated to establish the best practice for workplace HIV and AIDS interventions. In the absence of a clear understanding of HIV prevalence in sectors, on-going risk assessments are necessary to assess the extent of the threat posed by HIV and AIDS to the specific sectors and the companies comprising them.

Efforts need to be made to create awareness in companies of the potential impact of HIV

and AIDS on their organisations and to create an understanding of why a proactive response is not only a responsible response, but also a response that makes good business sense. Support to companies to either offer HIV and AIDS services within or to partner with institutions or link to government treatment programmes that are able to assist them in this regard is vital.

5 Conclusion

Investments in employee training, especially by large companies, will assist in South Africa's economic growth. However, the returns of such investments are being eroded by the HIV and AIDS epidemic, especially in hard-hit countries like South Africa. It is therefore important for companies to put in place effective HIV prevention strategies and AIDS treatment initiatives to minimise the loss of this investment. These results are based on comparing investment in training in 2006 and the HIV context in the same year. It is recognised that whilst prevalence has increased since 2006 (HSRC, 2008), the AIDS death rate has fallen due to an expanded treatment programme (Actuarial Society of South Africa, 2008). Should training investment trends continue as witnessed in 2006, we would expect the financial loss, due to AIDS, to fall as a result of declining death rates.

Endnotes

1 This amount includes the 1 per cent mandatory skills development levy

2 Using a 2006 South African Rand to US dollar exchange rate of 1: 8.34 (South African Reserve Bank, 2012).

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References

- ACTUARIAL SOCIETY OF SOUTH AFRICA. 2008. ASSA 2008 model. Available at: <http://aids.actuarialsociety.org.za> [accessed 2012-05-27].
- BHAGWANJEE, A., PETERSEN, I., AKINTOLA, O. & GEORGE, G. 2008. Bridging the gap: can provider initiated opt-out VCT close the gap between VCT and HIV treatment uptake? Perspectives of VCT/HIV treatment service users in a mining sector workplace setting in South Africa. *African Journal of AIDS Research*, 7(3):271-279.
- BHORAT, H. & LUNDALL, P. 2002. Employment, wages and skills development: firm specific effects – evidence from two firm surveys in South Africa. Cape Town: Development Policy Research Unit, University of Cape Town.

- CENTRAL STATISTICAL SERVICE. 1993. *Standard industrial classification of all economic activities (SIC)*. Pretoria: Central Statistical Service.
- COLVIN, M., CONNOLLY, C. & MADURAI, L. 2007. The epidemiology of HIV in South African workplaces. *AIDS*, 21(Suppl 1):S1-S7.
- DORRINGTON, R., JOHNSON, L., BRADSHAW, D. & DANIEL, T. 2006. *The demographic impact of HIV/AIDS in South Africa: national and provincial indicators for 2006*. Cape Town: Centre for Actuarial Research, South African Medical Research Council and Actuarial Society of South Africa.
- EVIAN, C., FOX, M., MACLEOD, W., SLOTOW, S. & ROSEN, S. 2004. Prevalence of HIV in workforces in southern Africa, 2000-2001. *South African Medical Journal*, 94(2):125-30.
- GEORGE, G. 2006. Workplace ART programmes: why do companies invest in them and are they working? *African Journal of AIDS Research*, 5(2):179-188.
- GEORGE, G., GOW, J. & WHITESIDE, A. 2009. HIV/AIDS in private sector companies: cost impacts and responses in southern Africa. *Future HIV Therapy*, 3(3):293-300.
- JOHNSTON, S. 2007. *The skills revolution: are we making progress?* Johannesburg: Centre for Development and Enterprise.
- HUMAN SCIENCES RESEARCH COUNCIL (HSRC). 2008. *South African national HIV prevalence, incidence, behaviour and communication survey, 2008*. Cape Town: HSRC Press.
- LARSON, B., FOX M., ROSEN, S., BIL, M., SIGEL, C., SHAFFER, D., SAWE, F., WASUNNA, M. & SIMON J. 2008. Early effects of antiretroviral therapy on work performance: preliminary results from a cohort study of Kenyan agricultural workers. *AIDS*, 22(3):421-5.
- MATTHEWS, A., GOW, J. & GEORGE, G. 2011. HIV/AIDS prevalence and incidence: evidence from four sectors of the KwaZulu-Natal economy. *Southern African Journal of Demography*, 12(1):63-108.
- MINING QUALIFICATIONS AUTHORITY (MQA). 2007. *Study of scarce skills and critical skills needs in the mining and mineral sector*. Johannesburg: Department of Mineral Resources.
- NATIONAL TREASURY. 2007. *Medium term budget policy statement*. Available at: <http://www.treasury.gov.za/documents/mtbps/2007/mtbps/Chapter%202.pdf> [accessed 2012-06-25].
- ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD). 1997. *Public service training in OECD countries*. Available at: <http://www.oecd.org/> [accessed 2012-06-25].
- QUINLAN, T. & WILLAN, S. 2004. Finding ways to contain the HIV/AIDS epidemic. Chapter 9 in Daniels, J. and Southall, R. (eds.) *State of the Nation South Africa 2004/05*. Pretoria: Human Sciences Research Council.
- ROSEN, S., VINCENT, J., MACLEOD, W., FOX, M., THEA, D. & SIMON, J. 2004. The cost of HIV/AIDS to businesses in southern Africa. *AIDS*, 18:317-324.
- ROSEN, S., FEELEY, F., CONNELLY, P. & SIMON, J. 2007. The private sector and HIV/AIDS in Africa: taking stock of 6 years of applied research. *AIDS*, 21(Suppl. 1): S41-S51.
- SOUTH AFRICAN BUSINESS COALITION ON HIV/AIDS (SABCOHA), 2005. *The economic impact of HIV/AIDS on business in South Africa*. Johannesburg: SABCOHA.
- SKILLS DEVELOPMENT LEVIES ACT OF 1999 (Republic of South Africa). Pretoria: South Africa.
- SOUTH AFRICAN RESERVE BANK. 2012. *Exchange rate as at 2 October 2012*. Available at: <http://www.resbank.co.za/Pages/default.aspx> [accessed 2012-10-02].
- STATISTICS SOUTH AFRICA. 2006. *Mid-year population estimates, South Africa*. Pretoria: Statistics South Africa.
- STATISTICS SOUTH AFRICA. 2008. *Mortality and causes of death in South Africa, 2006: findings from death notifications*. Pretoria: Statistics South Africa.
- THIRUMURTHY, H., GALARRAGA, O., LARSON, B. & ROSEN, S. 2012. HIV treatment produces economic returns through increased work and education, and warrants continued US support. *Health Affairs*, 31(7):1470-7.
- THURLOW, J., GOW, J. & GEORGE, G. 2009. HIV/AIDS, growth and poverty in KwaZulu-Natal and South Africa: an integrated survey, demographic and economy wide analysis. *Journal of the International AIDS Society*, 12:18.
- UNAIDS. 2008. *Report on the global AIDS epidemic*. Geneva: UNAIDS.
- VASS, J. 2003. The impact of HIV/AIDS. Chapter 8 in *Human resources development review 2003: education, employment and skills in South Africa* (pp. 186-207). Cape Town: HSRC Press.
- WORLD BANK. 2013. *World development report: jobs*. New York: World Bank.

Appendix A

Biographical Data

1	Name of company				
2	Date of completion				
3	Name of individual completing questionnaire				
4	Role/position in company				
5	Which SETA does the company pay levies to?				
6	Is the company an accredited education & training provider?	Yes	No		
7	What is the name of the structure (unit/department) coordinates training in your company?				
8	How many employees did you have at the end of 2006? (Including both full time and part time)	Total full time		Total part time	
9	Please indicate the percentage of employees as per the following categories:	% White	% Black	% Women	% People with disabilities

Further Education and Training Support

10	The numbers of students that your company is supporting in programmes in the FET Band (NQF 2-4)?					
	Total number of people in learnerships		Total number of people in National Senior Certificate (NSC) Vocational		Total number of people in N programmes (Nated) (excluding those in an apprenticeship)	
	Total number of Employed		Total number of Employed		Total number of Employed	
	Total number of Unemployed		Total number of Unemployed		Total number of Unemployed	
	Total number of FET Internships		Total number of people in apprenticeships		Total number of people in skills programmes	
	Total number of Employed		Total number of Employed		Total number of Employed	
	Total number of Unemployed		Total number of Unemployed		Total number of Unemployed	
	Other (formally certificated)		Other (not formally certificated)			
	Total number of Employed		Total number of Employed			
	Total number of unemployed		Total number of unemployed			
11	What kinds of support are given to students within the FET band?					
	Total Number of FET bursaries for students for the institutional learning component		Total number of people receiving coaching (active support to develop new knowledge and skills related to individuals occupation while in the workplace)		Total number of people receiving mentoring (individuals assigned who assist learners to plan their learning and workplace activities)	
	Total number of Employed		Total number of Employed		Total number of Employed	
	Total number of unemployed		Total number of unemployed		Total number of unemployed	
	Total number of employed people receiving financial study aid		Total number of unemployed people receiving stipends (learner allowances)		Number of students being supported in high school	
	Total number of Employed		Total number of unemployed		Total number of Employed	
	Is your company providing other kinds of support to FET institutions (either public or private)? (please tick the relevant box)					
	Allowing providers access to equipment	Yes	No	Seconding staff to lecture	Yes	No

13	Do you provide structured training towards FET qualifications? (this includes any qualification that falls on NQF level 2, 3 or 4 - please tick the relevant boxes)						
	Theory	Yes	No	Practical Training (in the workplace)	Yes	No	
	Practical Training (not in the workplace)	Yes	No				
14	Do you have training facilities? If yes, please indicate the following below				Yes	No	
	Training Fields (title)		Accredited (state yes or no)		Accrediting ETQA		
15	Do you have lecturing staff? If yes, please indicate which fields by number of lecturing staff				Yes	No	
	Lecturing Staff Number			Fields			
16	Do you have any additional training capacity (over and above the capacity you have to train for your own needs)? Please explain.				Yes	No	
17	Do you assist with assessments towards nationally recognised qualifications? (please tick the relevant box)						
	Trade Test	Yes	No	Against Unit Standards	Yes	No	
18	Is the training/assessment and/or support in any of the trades mentioned below? Please note that these trades are specifically highlighted, as they are the trades that have been identified as key skills for growth. Please complete where relevant by ticking those boxes that apply to your company:						
		Bursaries for the institutional learning component	Work place supervision	Training	Assessment	Stipends	Workplace mentor
	Automotive Electrician						
	Boilermaker						
	Carpenter and Joiner						
	Diesel mechanic						
	Earth moving equipment mechanic						
	Electrician (light)						
	Electrician (heavy)						
	Fitter						
	Fitter and Turner						
	Instrument Mechanician						
	Millwright						
	Motor mechanic						
	Sheetmetal trades workers						
	Shutterhands and Steel fixers						
	Toolmakers and Patternmakers						
	Welder						
	Other Trades (Please specify)						

Higher Education

19	Is your company supporting students in higher education through any of the following?					
	Total number of bursaries for students in higher education		Total number of interns for students currently undertaking a higher education programme		Total number of interns for graduates from higher education	
	Number of Employed		Number of Employed		Number of Employed	
	Number of Unemployed		Number of Unemployed		Number of Unemployed	
	Bursary Fields?		Fields that interns are in?		Fields that interns are in?	
20	Is your company providing other kinds of support to higher education institutions? (please tick the relevant box)?					
	Secondment of staff to lecture	Support with equipment	Financial support (please define)	Other (please specify)		

Funding Arrangements

New	What percentage of payroll do you spend on training over and above the 1% levy as part of the levy grant system?			
21	Does your company claim back levies from your SETA for training?	Yes	No	
22	What percentage of your levy do you get back through the mandatory grant?			
23	If you do not receive the full amount for the mandatory grant please explain why not?			
24	Do you receive any Discretionary Grants from the SETA? (Please tick the relevant box)	Yes	No	
25	Please indicate the monetary value of this support			
26	Which programmes does this money support? Please specify below			
27	Please indicate the financial costs that the company itself incurred for training, over and above the 1% levy that the company pays (where possible please indicate amounts per categories)			
	Total amount spent on training:			
	Where possible please provide a breakdown in terms of the following:			
	Bursaries	FET		
		HET		
		ABET		
		Schools		
	Learnerships			
	Apprenticeships			
	Internships			
	Skills Programmes			
	Other support for FET Institutions			
	Other support for HE Institutions			
	Other (please specify if possible)			
28	As a rough indicator, what was the percentage split of your training spend across the following groups?			
----	% White	% Black	% Women	% People with disabilities

29	As a rough indicator, how much of the training would you say is funded by returned skills development levies (in terms of the categories below) or how much from other company resources?				
	% Mandatory Grant	% Discretionary Grants	% NSF funding through the SETA	% Company funds	Other (Please specify in lines below)

Role of the SETA

30	Do you feel that your SETA is supporting the skills priorities in your company?			
	Not at all	Somewhat	Supporting skills priorities	Significantly supporting skills priorities
31	Please explain how the SETA is/is not supporting skills priorities in your company			
32	Do you have any recommendations on how SETAs could improve their support to companies? If yes, please explain below		Yes	No
33				
	What are the key challenges that you face in implementing skills development?			
34	What recommendations do you have to address these challenges?			

Corporate Social Investment (CSI)

35	In 2006, what was your total CSI spend on skills development?			
36	What was the percentage split of this investment in the following areas:			
	Primary and secondary schooling	Further Education and Training	Tertiary education	Adult basic education and training
37	Could you indicate how you currently report on skills development? (please tick the relevant box)			
	Annual Report		Employment Equity Reports	
	Financial Statements		BBBEE Scorecards (linked to the Charters)	
	WSP		Other reports (please indicate which)	
	Annual Training Report			
38	What do you believe would be the most effective way of reporting on what skills training your company is supporting?			

Further Education and Training

1	The numbers of students that your company is supporting in programmes in the FET Band (NQF 2-4)?									
	Number of people in learnerships					Number of people in National Senior Certificate (NSC) Vocational				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
	Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled
	Number of people in N programmes (Nated) (excluding those in apprenticeships)					Number of people in apprenticeships				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
	Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled
	Number of FET Internships					Number of people in skills programmes				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled	
Other (formally certificated)					Other (not formally certificated)					
Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled	
Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled	
2	What kinds of support are given to students within the FET band?									
	Number of FET bursaries for students for the institutional learning component					Number of people receiving coaching (that is people that are being actively supported to develop new knowledge and skills related to their occupation while they are in the workplace)				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
	Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled
	Number of people receiving mentoring (that is people who have individuals assigned to them to assist them to plan their learning and workplace activities)					Number of unemployed people receiving stipends (learner allowances)				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
	Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled
Number of employed people receiving financial study aid					Number of students being supported in high school					
Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled	
Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled	

Higher Education

3	Is your company supporting students in higher education through any of the following?									
	Number of bursaries for students in higher education					Number of interns for students currently undertaking a higher education programme				
	Employed	White	Black	Women	Disabled	Employed	White	Black	Women	Disabled
	Unemployed	White	Black	Women	Disabled	Unemployed	White	Black	Women	Disabled
	Bursary Fields?					Fields that interns are in?				
	Number of interns for graduates from higher education									
	Employed	White	Black	Women	Disabled					
Unemployed	White	Black	Women	Disabled						
Fields that interns are in?										