

Effect of HIV/AIDS on the control environment

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Abstract

Objective: The management of organizations is responsible for risk management and control systems. HIV/AIDS could be a great threat in the achievement of strategic business objectives, implicating a great concern for management. Management needs to understand this possible risk. This study aims to identify the effect that HIV/AIDS could have on the different elements of the control environment.

Methodology: The archival research method was used. It was established that no formal research was conducted to date on the effect of HIV/AIDS on the control environment as a whole. Various studies have included the effect of HIV/AIDS on certain factors of the control environment. These studies will be discussed briefly to identify relevant findings.

Results: The study indicated that the disease could affect various aspects of the control environment, namely: competency of the workforce (e.g. productivity, quality of work, absenteeism, loss of skills and knowledge, training and recruitment, etc.); organizational structure (e.g. increase use of technology labour, disruption of processes, level of employees affected by the disease); human resource (HR) policies and practices (e.g. legislation applicable, prevention and awareness programmes, compensation and benefits).

Research limitation: HIV/AIDS is a relatively new potential risk to organizations. Knowledge of the disease is limited. HIV/AIDS is also a very sensitive issue as people fear the disease and do not like to discuss its existence. Government determined that it should be a non-notifiable disease and the disease is currently greatly stigmatized. The databases of companies investigated by other research studies were not developed to gather all the relevant information.

Conclusion: Management should be aware that HIV/AIDS poses a possible risk to organizations. Data on the effect of HIV/AIDS should be gathered and used in the decision-making process on how to manage this risk. To be able to fulfil this duty, management first has to determine: whether HIV/AIDS is a risk; the relevant cost involved that the disease is costing the organization; how to control these costs.

Keywords: Control environment; corporate governance; HIV/AIDS; risk management

INTRODUCTION

The world is becoming increasingly complex and the most serious challenges are global in nature. One of these global challenges identified by the Millennium Project (one of various environmental organizations focusing on HIV/AIDS) is the control and reduction of new and re-emerging diseases and immune micro-organisms.¹ Since the first cases of HIV/AIDS were reported in 1980, nearly 58 million people have been infected and 22 million have died - and these are only the known estimated figures.² For example, in 1997 the Doyle model predicted that by the year 2000 between 8% and 10% of adults in South Africa would be infected with HIV, increasing to approximately 22% in the year 2010.³ By 2001 the national prevalence rate among pregnant women had already reached 24.8%.⁴

A particularly pertinent aspect for the business environment is that infection levels are very high among young, economically active persons.⁵ This will not only influence consumer power but has an overwhelming effect on the workforce and is thus a major threat to the achievement of strategic business objectives and related business risks, forming a great concern for management. A further concern for managers of organizations is the various legislative regulations relating to HIV/AIDS. Responding to HIV/AIDS in the workplace is essentially about managing the issue as a business risk; that is having accurate and relevant information about the epidemic, monitoring progress, knowing or predicting the risk and addressing the risk

though management.⁶ In order to address the problem of HIV/AIDS, management needs to know the risks involved, and minimize the risks by implementing a proper strategic action plan.

The Treadway Commission's report, issued in 1987,⁷ identified control as the most important mechanism that management can use to ensure that its plans and procedures are adhered to, thus minimizing the risks threatening the organization. According to the King Report on Corporate Governance,⁸ the implementation and maintenance of a sound control system is the responsibility of management.

HIV/AIDS is a threat to people and, therefore, to the workforce and the control system that is based on the actions and tasks of individuals. The control environment forms the basis of the control system. Management must thus understand the effect of the potential risk of HIV/AIDS on the control system, including the control environment.

OBJECTIVE

This study aims to identify whether the disease HIV/AIDS does have an effect on the control environment, and therefore the control system of an organization. Should this prove to be true, management needs to be aware of this fact. The scope and extent of the effect of the disease in the organization can only be determined by having accurate and relevant information. With this, management will be able to manage the potential effect of HIV/AIDS on the organization, including the control system.

BACKGROUND

To understand the potential effect that HIV/AIDS could have on the control environment, it is necessary to first understand the concepts of the control environment and the disease HIV/AIDS, as well as the effect of the disease on the economy and business environment.

Control environment

The control environment is a subsection of an organization's control system.⁷ The Treadway Commission Report issued in 1987,⁷ identified control as the most important mechanism through which management can minimize the risks threatening an organization. The Committee of Sponsoring Organisations (COSO) was asked to conduct a review of internal control as a result of the findings of the Treadway Commission's report. In September 2004 the Committee published a further report, namely COSO Report: Enterprise Risk Management.⁹ This report still recognizes that the control environment, or also called the internal environment, is the basis for the rest of the control system and enterprise risk management process.

The framework⁷ described in the first COSO Report consists of six components with the control environment as the basis followed by risk management (including objective setting), control activities, information and communication, and monitoring. The control environment provides an atmosphere in which people conduct their activities and carry out their control responsibilities. It has a direct influence on the way activities are structured, objectives are established and risk is addressed, and therefore it affects the control consciousness of people performing their day-to-day activities.¹⁰ The control environment consists of various elements^{7, n} with commitment to competence, the organizational structure and human resource policies and practices probably most affected by HIV/AIDS.

Commitment to competence refers to the need for employees to have the necessary knowledge and competence to perform their duties properly. If an employer does not have and display the necessary qualities, the control environment is weakened.¹² Factors such as employee performance, a loss of personnel, recruitment of new personnel, and abnormal absenteeism, are some of the risk factors that threaten the competency level of the workforce. The organizational structure is the framework used for the execution, controlling and monitoring of the activities of the organization to ensure the organization's objectives are reached. Resources are organized in a formal, structured manner, and if this is disrupted, for example, due to a loss of personnel to AIDS, or absenteeism as a result of HIV, the structure will either collapse or not fulfil its function.¹³ Human resource management should ensure the employment of sufficient and capable people, as well as the development and well-being of these employees. An employment policy that is not in line with government regulations, medical aid and pension plans, training, remuneration structures, and more, can create risks that could threaten the organization. Legislation, governmental codes of good practices on HIV/AIDS issues, management's responsibility regarding HIV/AIDS in the managing of

their business, and other factors all play a key role in the development of policies and practices for the workforce.

The control environment sets the agenda for establishing objectives for the organization. Objective setting is a precondition to proper risk assessment.⁷ Objectives must first be identified before management can identify risks that threaten these objectives' achievement and take necessary action to manage these risks. Therefore, management needs to be aware of the business risk that HIV/AIDS has on the organization.

HIV/AIDS

HIV/AIDS is a known threat world-wide, especially sub-Saharan Africa and South Africa.⁵ It is vital that the consequences of the spread of the disease on the economy, governments, the business environment and individual organizations in particular are studied. Studies performed inter alia by the Centre for International Health, Boston University School for Public Health,¹⁴ Barac and Otter,¹⁵ SABCOHA,¹⁶ Deloitte and Touche¹⁷ have indicated that management are aware of the possible risks posed by HIV/AIDS to their organizations. To determine the effect of HIV/AIDS on the business environment, the organization and the control environment, participants need to familiarize themselves with how the virus works. Certain aspects regarding the infectiousness, time span and spread of the virus are unique and could have an effect on the management of the risk.

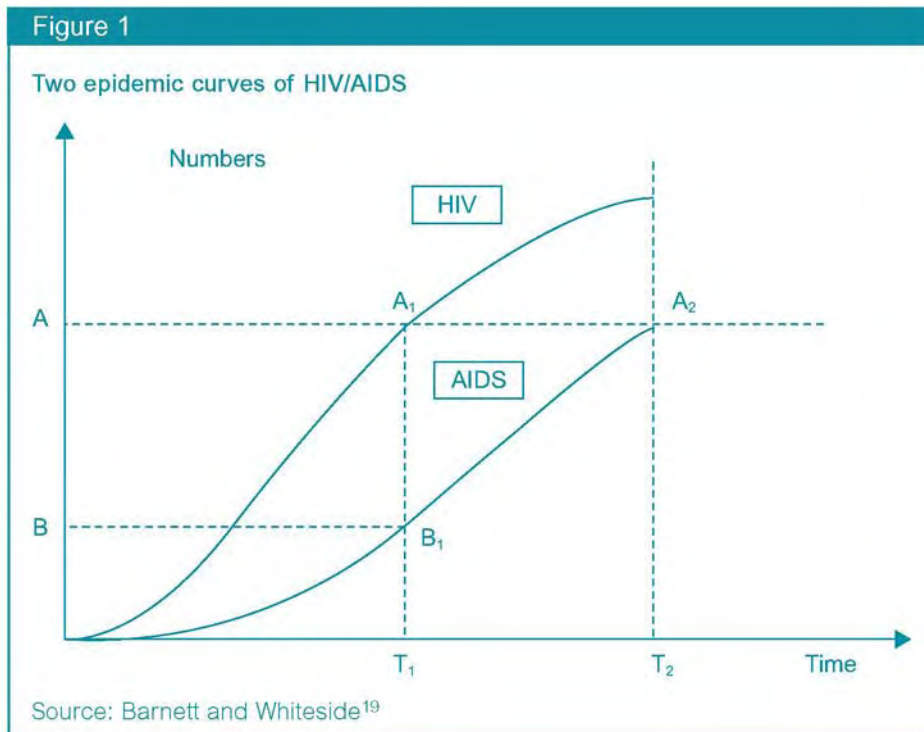
The human immunodeficiency virus (HIV) enters the body and attacks the immune system. The immune system's function is to control or eliminate viruses that threaten the body, and to eliminate damaged body cells that could become cancerous. If the immune system deteriorates, the body cannot fight diseases and it becomes ill. When illnesses, anything from influenza to cancer, together with HIV attack the immune system, this is known as acquired immune deficiency syndrome (AIDS), which is fatal.^{18,19} Unfortunately the knowledge that HIV causes AIDS and thus ultimately causes death is only the beginning of understanding the epidemic.

Today it is known that there are two types of HIV, namely HIV-1 and HIV-2. They are very similar, but HIV-1 is more aggressive in causing diseases. Apart from this difference in the viruses, scientists have now identified 11 subtypes of the HIV-1 virus.^{18,20} The study and tracking of each subtype is important, as each type responds differently to a given treatment. Reinfection by another type could damage the immune system even more rapidly than infection by only one type. The effect of re-infection on the organization and its control environment could thus be catastrophic, as people who are infected with different subtypes become weaker more quickly and die faster. The period from HIV infection to death varies, depending on the circumstances of the individual. Recent studies have indicated that resistance to existing drugs is growing and the period between infection and AIDS has shortened to an average of seven years.¹⁹ Although antiretroviral therapy generally postpones the onset of AIDS, the medicine should be taken according to prescribed directions to be effective.¹⁸

All epidemics have a specific pattern: infecting the population slowly, affecting some and missing others. Then the infection rate increases dramatically. Finally, the infection rate slows down as most people are already infected and the epidemic reaches a plateau.¹⁹ What makes HIV/AIDS different from other epidemics is the fact that there are two curves (see Figure 1), namely one for HIV and one for AIDS.¹⁹ This pattern followed by the illness makes this disease more dangerous than most epidemics, as people tend to forget about the second curve that follows the first years later.

At a given time (T_1), the number of people infected with HIV (A_1) does not dramatically influence the community or workforce, as some of them will not even know they are infected or will not become ill, and the AIDS cases (B_1) are low. It is important for management to determine what the HIV rate is at a given time for their organization, as this will give an indication of the risk to follow (AIDS cases). As this is not always possible due to the fact that HIV is a non-notifiable disease in many countries, a properly managed prevalence study (usually anonymous blood tests performed on personnel) should give a realistic estimation of the extent of the disease.

The United Nations' programme on HIV/AIDS, namely UNAIDS, joined forces with the World Health Organization (WHO) to address this problem globally. Shocking figures were revealed in the latest UNAIDS/WHO report, issued in December 2003.⁵ Globally, it is estimated that AIDS claimed more than 3 million lives during 2003, an estimated 5 million were infected with HIV during this time, bringing the total



number of people living with the virus to 42 million. Sub-Saharan Africa is the most severely affected, with the Southern African Development Community containing the highest number of infected individuals.⁵

In South Africa, the Department of Health annually performs an HIV/AIDS study by testing all pregnant women attending a public sector antenatal clinic.⁴ This is not the most accurate method of determining the national HIV/AIDS prevalence rate, as: abortions are not included; a woman who is HIV positive has a 50% reduced chance of becoming pregnant than one who is HIV negative;¹⁹ women are more likely to be infected than men;¹⁸ not all pregnant women attend public sector clinics; and the government has declared HIV/AIDS a non-notifiable disease.²¹ The information gathered was grouped to identify the extent of the problem for different age groups.⁴ A worrisome fact to the business environment is that infection levels are very high among young, economically active people. This will not only influence the economy, for example productivity levels and consumer purchasing power, but will have an overwhelming effect on the current and potential workforce. The youth is the future of a nation and therefore, the statistics represent a great threat in the achievement of strategic business objectives and related business risks for individual organizations.

Effect of HIV/AIDS on the business environment

The most obvious impact of HIV/AIDS on the business environment is its effect on the labour force. Principally, the disease affects people during their most productive years of life.⁴ As labour is a key input in production, lower growth in the population and thus in the workforce will have a negative effect on economic growth.¹⁶

The effect of HIV/AIDS on organizations can be divided into two main groups, namely risks threatening the external environment and those influencing the internal environment. Internal risks can further be divided into direct and indirect risks.²² These risks can either be caused directly by death, absenteeism or illness, or indirectly flowing from direct risks. Direct risks include the increased cost of group life cover; the cost of providing medical and retirement benefits; the cost of absenteeism; higher staff turnover (the cost for recruiting and training new staff); the cost of compassionate leave (attending funerals or attending to sick family members) or sick leave (providing additional part-time employees to do the job); the cost of HIV/AIDS management programmes (including consultants' fees); the increased cost of bad debts as a credit risk; and many others.²² Shocking statistics underlying these risks have been released by various companies. Other risks developing from direct risk are difficult to quantify. This does not mean that they are less serious or can be ignored.

Indirect risks include reductions in staff productivity (as a result of illness); increase in staff supervision; influence in competency levels (a high staff turnover); increased litigation (there are many laws and regulations regarding treatment of employees with HIV/AIDS); higher salaries (the loss of skilled or managerial competencies); a loss of workforce morale (people without HIV/AIDS feel that they have to work harder); the loss of client relationship (due to high staff turnover); a decline in reputation in the business environment or clients (result of bad service).²² The above lists not only give an indication of the scope of the possible risks, but also of the fact that HIV/AIDS is a risk to any organization that has customers and/or employees. The King Report on Corporate Governance specifically states among its recommendations for sound corporate governance that companies should understand the social and economic impact that HIV/AIDS will have on business activities; adopt an appropriate strategy, plans and policies to address and manage the impact; regularly monitor performance; and report on HIV/AIDS to stakeholders.⁸ Through such procedures, management will know the true effect of the disease and how this should be managed within their organization if proper research is carried out.

RESEARCH METHODOLOGY

The archival research method was used to confirm that HIV/AIDS has an effect on the control environment. After a thorough search was performed on various information resources, it was established that no formal research had been conducted to date on the effect of HIV/AIDS on the control environment as a whole. The study was limited to the three main areas of the control environment most likely to be affected by HIV/AIDS, namely the commitment of the workforce to competency, the organizational structure, and human resource policies and practices. Although no formal research was performed on the effect of HIV/AIDS on the control environment, various studies have included certain factors influencing the above-mentioned three elements. These studies will be discussed briefly to identify relevant findings.

LIMITATION OF THE STUDY

HIV/AIDS is a relatively new potential risk to organizations. Knowledge of the disease is limited, as even medical experts are uncertain about all the issues related to HIV/AIDS. This is underlined by all the new research being carried out and being made available on the medical aspects of the disease. HIV/AIDS is also a very sensitive issue as people fear the disease and do not like to discuss it. Government determined that it should be a non-notifiable disease and the disease is currently greatly stigmatized. The databases of companies investigated by other research studies were not developed to gather all the relevant information and, as this disease is a sensitive matter, it was not possible to gather all the data needed to determine the effect of the disease on the organization, including factors influencing the control environment.

RESULTS OF THE STUDY

The results of the study will be discussed according to the three main areas of the control environment outlined above.

Effect of HIV/AIDS on personnel commitment to competence

A study performed by Moore *et al.*²¹ regarding competency of the workforce of organizations concluded that competency is more than just knowledge and the ability to perform a specific job or task. It includes individuals' behaviour and attitude regarding their duties. Factors such as poor employee performance (as a result of illness, illness or death at home or of someone close to the employee), absenteeism of employees (and the effect thereof on the morale and attitude of the workforce), the loss of personnel, technical skills and experiential knowledge, increased staff turnover and the cost of recruiting and training new personnel (especially where the possible recruitment pool would become smaller), and the effect of the above on production output should be investigated to be able to conclude whether HIV/AIDS could affect the competency of the employees of a particular organization.

According to a study performed by Morris and Cheevers²⁴ on the primary needs of a sugar mill's employees infected with HIV/AIDS, the cost involved for the company regarding the competency of the workforce is much higher than direct medical costs. The study concluded that it is costing a company 33% of the total direct cost of an HIV/AIDS worker to make sure that the work is being done (getting replacement

workers and training them) and 56% on a lower competency level of the workforce as a result of lost productivity and absenteeism.

Absenteeism is the greatest problem faced by organizations, according to Barnett and Whiteside.¹⁹ A comprehensive study was performed during 1995 at five hospital sites in California, to investigate differences in hours worked by HIV/AIDS-infected and non-infected patients.²⁵ The study concluded that there was no difference between the hours worked by patients without HIV/AIDS and those that were HIV-positive. However, there was a difference of 14 working hours per week between AIDS patients and the rest. Although the result is significant for management in respect of the workforce, the results of the study are limited because of the non-randomness of the sample; patients were recruited from well-known hospitals and clinics and were predominantly white men with higher education qualifications who could afford medicine and health care. It may therefore not be possible to generalize the results because of the population studied. A further limitation is the non-measurement of the quality of the work performed by the AIDS patients and that done by the HIV-positive patients.

A study performed by Deloitte and Touche¹⁷ on behalf of SABCOHA (South African Business Coalition on HIV/AIDS) to assess HIV/AIDS initiatives in the private sector included a question of whether staff have been encouraged and trained to become more multi-skilled to permit work to continue despite staff losses. Only 33.6% of the respondents answered 'yes' to this question, indicating that management are underestimating the possible threat to the competence of the workforce if a significant number of employees die.

Barac and Otter¹⁵ carried out a study on the financial accountability of HIV/AIDS. Questionnaires were sent to 50 companies identified by the *Financial Mail* Special Survey of Top Companies in June 2000. There were 28 responses. Companies were requested to rank the costs most influenced by HIV/AIDS. The relevant costs that influenced the commitment to competency were a decline in productivity as a result of illness (ranked highest), on-the-job training (ranked third), a decline in productivity as a result of morbidity on the job (ranked fourth), recruitment costs (ranked fifth) and pre-employment training costs (ranked sixth). To the question of whether absenteeism is taken into account in budgets, 35.7% indicated that this was the case. One has to ask whether the remaining 64.3% of the participants were aware that absenteeism is increasing as a result of HIV/AIDS, and how this could affect the organization financially and otherwise. To the question of whether employee losses were higher among unskilled workers than skilled ones, 57.1% indicated that they were, which suggests that 42.9% of respondents thought that employee losses occurred mainly among medium- to high-skilled workers and even key personnel, who are more difficult to replace. Conversely, 10% of the respondents indicated that they foresaw the appointment of more than one person for each job to compensate in advance for future HIV/AIDS replacements and 7.1% indicated that they were taking out key personnel insurance to cover the cost of recruiting replacements for people in critical positions due to the HIV/AIDS threat.¹⁵

The only research that could be found on the effect of HIV/AIDS on the productivity of the workforce was a study performed at a Kenyan Tea Plantation²⁶ where the workers are paid per kilogram of tea leaves plucked per day. The productivity of 54 workers who had either died of AIDS-related illnesses or had retired due to HIV/AIDS was compared to that of 217 non-infected workers who were working in the same field over the same period of time as the HIV/AIDS workers. There were no significant differences between the healthy and the ill workers in terms of age, years of experience or gender. The study concluded that workers' productivity declined by an average of 18% from a time 3 years before death, measuring an average of 7.6 kg per day at 6 months before death.

In the above studies the quantitative costs involved for an organization as a result of HIV/AIDS have been discussed. Qualitative costs are also involved, namely the impact of HIV/AIDS on the mental and physical efforts of an employee. No direct research could be found on this topic. The aim of a study performed by Massagali *et al.*²¹ was to determine the impact on personal (mental effort) and job characteristics (physical effort) from the time of AIDS diagnosis to employment loss. Interviews were held with patients at three medical care sites in Boston. The study investigated how long employees stayed employed after AIDS was diagnosed. Respondents who held a job that required high mental effort and little physical effort were employed for much longer after AIDS was diagnosed than people with a job that required a low mental effort but needed high physical effort. This could indicate that the employee performance by HIV/AIDS sufferers in a job requiring a high level of physical input could be lower than that of employees in a job that needed a high level of mental input.

The study performed by the Centre for International Health at the Boston University School of Public Health¹⁴ gathered information on six companies regarding HIV/AIDS. These companies ranged from large corporations to smaller companies, operating in different sectors and were situated in South Africa and Botswana. Absenteeism is probably the biggest reason, directly linked with HIV/AIDS, for employees not performing their jobs properly. Regression analysis was used to estimate additional days sick leave taken in the two years prior to the termination of the service of employees who died of HIV/AIDS or were retired on disability due to HIV/AIDS. Only sick leave was included in the study because of a lack of data on reasons for special leave or funeral leave.²⁸ The study confirmed that an average of 35.4 days additional sick leave was taken by employees who had AIDS in the last year before they died or retired.

Another factor that has an effect on the commitment of the workforce on competency is the loss of people (and with them their skills and knowledge) and the replacement of those skills and knowledge. Human resource data were used to estimate the average duration of vacancies as a result of death or retirement due to AIDS. The study²⁸ concluded that on average, it takes a company 1.7 months to replace a skilled worker and 2.6 months to find a new manager. During this time, other employees must do the extra tasks (usually difficult tasks), become overworked, tired and make mistakes.

A further problem that aggravates the loss of knowledge and skills is a reduction in productivity due to new employees' learning curve. The time of training measured included time spent on pre-service orientation and time spent by a provider of on-the-job training. Second, an estimation of the reduction in productivity between employment and full productivity is given. According to the study,²⁸ it takes a skilled worker on average 2.5 months to become fully productive. During the learning stage, the worker performs, on average, 44% less. For a manager it takes even longer, namely 3.3 months and being 38.3% less productive. As discussed above, during this time, co-workers must either help to perform the new recruit's tasks, or the quality and quantity of the output is sacrificed.

A worker who is HIV positive or has AIDS and is still working can also have an effect on the production output as a result of poor performance and of supervisors' needing to assist such employees with their tasks. The loss of productivity of employees that have died or have been retired due to AIDS, as well as the estimated supervisor's time spent on helping these people, was investigated. According to the data collected,²⁸ employees who died of AIDS or retired as a result of the disease were 38% less productive in the 12 months before their death or retirement and on average 14.7% less productive in the 12-month period preceding the last year of service. On average, supervisors spent 14 days per year in assisting these ill people in performing their tasks. These figures indicate that people with AIDS and their supervisors have some difficulty in performing their tasks with the necessary efficiency and focus.

The above indicates that a competent workforce is in danger of disintegration. A competent workforce is a prerequisite to an organization achieving its potential, but this workforce's activities and structure must be properly planned to make sure that the organization's objectives are met. One way of doing this is to develop a proper organizational structure.

Effect of HIV/AIDS on the organizational structure

An organizational structure consists of a framework to ensure the organization achieves its objectives. This includes the structuring of authority and responsibility⁷ and it should be designed in such a way that the organization's strategies and objectives are achieved.²⁹ According to a study performed³⁰ on organizations of different sizes and at different stages of their business life cycle, the design of an organization can be divided into two categories. The first includes contextual elements (for example, strategy, technology, culture and business environment). The second refers to structural elements (such as the reporting relationship, decision-making processes, communication processes and co-ordination of work). It is management's responsibility to design an organization in such a way that these elements are addressed most effectively. HIV/AIDS could affect the way management structures the organization, as a result of absenteeism (the effect on the delegation of rights and responsibility, and co-ordination of tasks performed) and the diminishing competent workforce (due to the death of key personnel and the effect on decision-making processes, and increased use of technology to reduce labour dependency). Very little literature could be found on the effect of this disease on the day-to-day running of businesses, including the delegation of tasks, rights and responsibilities, and the co-ordination of activities. The only document that recognizes this

risk is the UNAIDS's Business Response to HIV/AIDS, where increased organizational disruption and the possible effects thereof on the decline in production are briefly mentioned.³¹

The study performed by Barac and Otter¹⁵ touched on the issue of the increased use of technology to reduce dependence on employees. On the question of whether organizations should invest in machinery and equipment to address the possible effects of HIV/AIDS on the organization, 32% of respondents indicated that this practice was increasing in their organizations. However, two-thirds either did not know of this practice or did not think it important enough. The study performed by the Boston University team²⁸ did not address these issues, as data were not available at the companies that they investigated. However, they identified the level of workforce affected by the disease. A matter of concern to the companies in the study was the high level of HIV positive employees that are either skilled workers (average 16.6%) or managers/supervisors (average 6.6%). These are the people who have the necessary knowledge and skills to make sure that activities run smoothly. Although these are the people who make sure the work gets done, it is usually unskilled workers (on average 23.6% are HIV positive) who perform most of the physical work.

The above data only gives the HIV prevalence rate, but as was discussed previously, untreated HIV leads to AIDS and that in turn causes death. Companies that have high percentages of HIV positive employees have to acknowledge the fact that these workers, if untreated, in future, will become ill and die. The organizational structure, although it may involve a formal framework, in practice represents people. These individuals must be looked after by means of proper human resource policies and practices.

Effect of HIV/AIDS on human resource policies and practices

The personnel of an organization are regarded by many authors as the most important aspect of internal control: a simple system of control with a few competent and trustworthy personnel is more valuable than a complex and well-planned control system managed by people who are negative, incompetent and dishonest.³² HIV/AIDS is an illness that affects individuals and, thus, should be included in human resource management. Apart from the applicable legislation on HIV/AIDS, the cost of HIV/AIDS on human resource management must be calculated.

According to a study performed by Family Health International,³³ there are specific factors relating to a workforce that increase the risk HIV/AIDS poses to an organization's human resources. These include where a large number of employees live without their families or away from home; long-distance transport as an important part of the organization; middle -and upper-level employees who travel frequently; and being situated in a country or region that is undergoing rapid economic change. If these elements are present in an organization, a pro-active strategic plan should be developed with appropriate policies and practices for personnel issues.⁶ These should include recruitment processes and the training of new employees, HIV/AIDS prevention training, personnel evaluation, and the testing of all personnel and treatment for HIV/AIDS positive employees. Employee benefits such as sick and compassionate leave, medical aid, pension funds and remuneration policies should be established.

The South African government has implemented various forms of legislation to protect employees or potential employees with HIV/AIDS from unfair discrimination. According to the Code of Good Practices on key aspects of HIV/AIDS and employment,³⁴ no person with HIV or AIDS shall be unfairly discriminated against within the employment or recruitment relationship. It must be noted that HIV/AIDS is a non-notifiable disease.²¹ This means that a person does not have to inform an employer or potential employer that he or she is HIV positive. Employers can therefore only determine the extent of the disease among their workforce by performing voluntary prevalence studies.⁶ According to the study performed by Barac and Otter,¹⁵ most organizations do not see this as a problem, as 48% of the respondents indicated that, even if legally permitted, they would not ask job applicants to undergo a HIV/AIDS test. The hiring of especially skilled labour could become a problem as the pool of potential employees with knowledge will become smaller as people die of AIDS.

According to Barnett and Whiteside,¹⁹ there is consistent evidence of the impact AIDS has in companies across southern Africa due to deaths among workers. In 1999, it was calculated that 9.4 per 1000 workers in a sugar mill in Swaziland died of an AIDS related illness. Based on a study performed on five companies in Botswana, the average cost to recruit and train a replacement for an employee lost to AIDS is R8405 (±US\$1400).³⁵ This is most possibly an understatement in South Africa, as tertiary costs and personnel

recruitment agencies' costs are higher according to Greener's study. The above contradiction in the recruitment and training cost and the possible employment of a person with HIV/AIDS must be investigated.

Various studies have been performed to determine the extent and the cost of HIV prevention and training programmes. According to the study performed for SABCOHA by Deloitte and Touche,¹⁷ although 65.5% of the organizations indicated that they do have an HIV/AIDS awareness or education programme, only 36% of the respondents indicated that managers or supervisors had been trained to manage HIV/AIDS related matters in the workplace. Furthermore, the study observed that only 19% of the responding organizations had conducted an employee survey to determine the knowledge, attitude and practice around HIV/AIDS. This again indicates that most organizations' awareness and education programmes are not functioning effectively and efficiently.

A further area of human resource policies and practices that will most probably be affected by HIV/AIDS is the compensation and benefits for employees. As previously mentioned, salaries of employees could increase as the pool of knowledge decreases, especially skilled labour. Other areas that could be affected are medical aid, pension fund, leave and the treatment cost for employees diagnosed with HIV/AIDS. According to the study carried out by Deloitte and Touche,¹⁷ most companies' medical aids have a HIV/AIDS disease programme and provide death and disability benefits for HIV/AIDS employees. The larger companies have indicated a 16% increase in their benefit contribution. According to research gathered by Family Health International,³⁵ the medical cost at an agro-estate in Kenya between 1989 and 1993 increased by 150%. Barac and Otter¹⁵ confirm this trend, as 72.4% of the respondents in their study had experienced a substantial increase in the payment of medical services and/or health insurance in the past five years. Furthermore, 55% of the respondents indicated that the impact of HIV/AIDS had to be taken into account in the actuarial assumptions used to calculate retirement benefits. A large South African insurance company's estimate of potential benefit liabilities for lump-sum payments on death, spouse pension funds and disability pensions, indicated an increase from 7% in 1995 to 18% in 2010.¹⁹

The study performed by Boston University²⁸ addressed only the human resource costs that were readily available from the current databases of the participating companies. The increase in wages as a result of HIV/AIDS employees, the percentage of this cost in relation to the total wages of the organization, and the percentage of this cost as part of annual operating expenses, were investigated.

Although the cost for most of these companies appears relatively low in comparison to their annual operating expenses (all below 1%), HIV/AIDS is increasing the cost of labour and this affects the competitiveness of business in a global market. An increase of between 0.4 and 5.9% in labour costs due to HIV/AIDS seems rather low, but this increase in labour could affect the attractiveness of these companies to potential investors who depend on low-cost labour.³⁶ Factors that suggest that these figures might be higher include the fact that not all costs were available to the Boston University group, the assumptions used in this study were very conservative,²⁸ and the investigations were performed between 1999 and 2001 while the UNAIDS reports published since 1999 indicate an increase in the HIV/AIDS figures for Sub-Saharan Africa.⁵ Bearing these factors in mind, organisations should note that the cost of HIV/AIDS for human resource management could be much higher.

The above discussions clearly indicate that HIV/AIDS has an effect on the commitment to personnel's competency, the organizational structure, and the management of human resources. For some companies the cost could be lower than for others. The fact remains that there is an effect and management should know about this.

CONCLUSION AND RECOMMENDATIONS

Although this study was limited as a result of the availability of information on the topic, a lack of data available on the databases of the organisations investigated by the Boston University group, and the sensitivity of the disease, it was confirmed that HIV/AIDS has an effect on certain elements of the control environment. It may also be assumed that the effect of the disease will differ from organization to organization, and for some the effect can be devastating. For a competent workforce it was confirmed that absenteeism increased as a result of HIV/AIDS. Loss of employees occurred as a result of retirement or death of workers due to HIV/AIDS, and with that the loss of expertise and skills. There was a large reduction in productivity due to new employees' learning curve, people feeling ill at work and not performing their tasks to the best of their abilities, and supervisors who have to assist workers when they are feeling unwell or supervisors performing the workers' tasks due to absenteeism of employees with HIV/AIDS. With regard to

the organizational structure, the only information that could be linked to the effect of HIV/AIDS on the day-to-day running of the organization is the fact that the disease affects all levels of the workforce, from unskilled workers to managers, who are the people who make decisions and control functions and activities. Human resource management is affected by HIV/AIDS as it was confirmed that the cost of the disease as a percentage of total wages was as high as 5.9%.

According to the King Committee on Corporate Governance,⁸ management is responsible and accountable for a sound control system, as well as the implementation of a risk management process. Risk management is an integral part of the COSO framework.⁷ This framework focuses on organizations reaching their objectives by identifying and managing risks. Data should be gathered and used in the decision-making process.

Internal control, including the control environment, must support management's task to meet the organization's objectives by identifying and managing risks or potential risks, such as HIV/AIDS. Reliable information on risk matters, including factors influenced by HIV/AIDS, should be readily available to management for decision making. To be able to fulfil this duty, management first has to determine whether HIV/AIDS is a risk to their specific organization by performing prevalence studies. They also need to know that if the disease poses a risk, the control environment and, thus, the control system are being affected by HIV/AIDS. They need to measure the relevant amount the disease is costing the organization, as well as controlling these costs by being pro-active. This can be done by first altering the current database to measure these costs. Thereafter, these costs should be measured and monitored on a regular basis. Should it not be possible to measure costs involved, management still needs to implement a process that will regulate the effect of the disease on those issues, for example the morale of the workforce. Without knowing the real effect of HIV/AIDS on an organization, no proper plans can be put in place to regulate the risks involved. If management do not fulfil their duties, the effect on the organization could be devastating.

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