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The role of social entrepreneurship in HIV/AIDS management across the education sector in Kenya

The role of social entrepreneurship

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Abstract

Purpose – The overall purpose of this study is to identify key entrepreneurial variables in the realm of social entrepreneurship that may contribute to enhancing impact mitigation of HIV/AIDS. In addition, the study seeks to establish which of the correlations between the entrepreneurial variables and management of response of impact mitigation of HIV/AIDS were significant at the 0.001 level.

Design/methodology/approach – The study adopted a cross-sectional survey design. The analysis engaged a correlational qualitative research approach so as to enable the researcher determine whether the correlation between entrepreneurial management initiatives and the management of the response on the impact of HIV/AIDS in the education sector was statistically significant.

Findings – The result of the correlation analysis showed that organizational boundaries, work discretion, rewards management support and time availability explain about 53 per cent of the aspects of management response to HIV/AIDS impact mitigation. The correlations were statistically significant at the 0.001 level. The implication is that introduction of entrepreneurship within institutions dealing with HIV/AIDS in the education sector would lead to improved mitigation of the impact of the scourge on the sector.

Research limitations/implications – The study considers one thematic area in the HIV/AIDS mitigation process, that is management of the response, leaving three other thematic areas, namely: care and support, prevention as well as HIV/AIDS and the workplace. The generalization of the study's results will therefore be limited.

Originality/value – The study established that administrative management practices are not effective in the management response to impact mitigation of HIV/AIDS in the education sector. It therefore proposes innovative, approaches to the mitigation effort. This in turn calls for a dramatic shift in management that entails the extension of market principles into social institutions, government and civil society and an inevitable blurring of the boundaries between these sectors.

Keywords Entrepreneurialism, General management, Strategic management, Education sector, Kenya

Paper type Research paper

Introduction

Since its emergence in the early 1980s, HIV/AIDS has spread at an alarming rate worldwide with the number of new infections rising each year. Africa continues to bear the brunt of the scourge. Globally, 42 million people are infected with HIV/AIDS, 29.4 million of them in sub-Saharan Africa (UNAIDS, 2006). There were 3.5 million new HIV/AIDS infections in sub-Saharan Africa in 2004 out of the five million worldwide. Furthermore, majority of the more than 21.8 million people who have died from HIV/AIDS since the start of the epidemic are from Africa (UNAIDS, 2005). In addition, AIDS deaths have left over 8 million orphans in sub-Saharan Africa. In November



2003, UNICEF released a report; *Africa's Orphaned Generations*, predicting that there would be 20 million AIDS orphans in Africa by 2010 and that in a dozen countries orphans from all causes would account for 15 per cent to more than 25 per cent of children under 15 years of age. These high rates of HIV/AIDS incidence make the disease the leading cause of death in Africa (UNESCO, 2005).

One of the areas that is increasingly being focussed on in the fight against HIV/AIDS is the management of the response (Kelly, 2003a). The assumption is that unless there is prudent management of resources all efforts at mitigation will not yield the desired outcomes. A comprehensive, prioritized plan of action, from assessment and sector policy development, to decentralised planning and implementation within a flexible framework is necessary for strategic response. Effective response within such a framework must therefore be based on dependable data and regular monitoring, evaluation, review and reporting. To be effective, the strategic response framework must cover the following key phases; understanding impact, planning mitigation, implementation, monitoring and review (UNAIDS, 1997).

In spite of the important role of management of the Response, however, the bulk of the research on HIV/AIDS and education has focussed on prevention and advocacy; care and support; and workplace policy. Only a few studies have examined the current and potential role of management of the response in the context of HIV/AIDS (Kelly, 2003a). In general there appears to be an implicit assumption on the part of policy makers and practitioners in education that provided efforts are made at prevention and workplace policy, however piecemeal, these will create an impact.

The overall purpose of this study was to identify key entrepreneurial variables that may contribute to enhancing impact mitigation. In this manner, the study sought to fill the gap in research on management practices and HIV/AIDS which has typically focused on administrative management practices. The assumption of this study was that innovative management practices with a business approach would enhance mitigation efforts and in a sense bridge business and benevolence; an aspect of social entrepreneurship. The net outcome being that this would be a key input into policy decisions and into the design of practical interventions that will strengthen the management response to HIV/AIDS.

The education agenda in the twenty-first century

Education for All (EFA) is a historic commitment to basic education taken on by the International Community in Jomtien, Thailand, in 1990 and reaffirmed at the World Education Forum in Dakar, Senegal, in April 2000 (World Bank, 2002); and at the UN Conference in New York. The commitment reflects a vision that all children, young people, and adults have the human right to benefit from an education that would meet their basic learning needs in the best and fullest sense of the term. Ten years after Jomtien, the Dakar forum reaffirmed the determination of the countries of the world to work together to fulfil the right to education for each person.

The Dakar Forum set important goals that imply a major effort to expand both the quantity and quality of education. It also made a commitment to tackling HIV/AIDS as a matter of extreme urgency. This commitment is essential, because HIV/AIDS and EFA are intimately connected. Good quality education is a powerful weapon against HIV/AIDS. However, the HIV/AIDS pandemic threatens the infrastructure of education, taking the lives of policy makers, teachers and administrators and

causing untold suffering for children and their families. Consequently, winning the battle against HIV/AIDS is essential in achieving EFA goals, and working toward these goals is in itself a contribution to the battle against HIV/AIDS (UNESCO, 2006). Sustainable management of HIV/AIDS and the eventual victory over this pandemic calls for different management strategies. This study proposes the application of social entrepreneurship to HIV/AIDS management. Social entrepreneurship refers to innovative efforts to solve social problems without a profit motive.

In the Kenyan context, the rationale for the Sessional Paper No. 1 of 2005 on “*A Policy Framework for Education, Training and Research*”, is to achieve EFA in order to give every Kenyan the right to education and training no matter his/her socio-economic status. The vision is guided by the understanding that quality education and training contributes significantly to economic growth and the expansion of employment opportunities. The vision is in tandem with the Government’s plan as articulated in the Economic Recovery Strategy (ERS) paper for Employment and Wealth creation of 2003. The ERS policy framework therefore provides the rationale for major reforms in the current education system in order to enable Kenyans have access to lifelong education and training. The introduction of Free Primary Education in 2003 is an initiative towards realizing the EFA goals. However, the challenge of HIV/AIDS on the sector can and will have a devastating impact on both the EFA and MDG initiatives contrary to the expectations in Sessional Paper No 1 of 2005.

The impact of HIV/AIDS on the education sector

The World Bank (2002) sums up the current situation by stressing that HIV/AIDS has a heavy impact on the education system from three perspectives. The first of these is the demand for education, as children are getting sick themselves as well as caring for sick parents, leading to absenteeism and dropping out of school. The second impact is on supply of education as a result of sickness, psychological and economic strain on teachers. And finally, the combined effect of the impact on supply and demand has a considerable impact on the costs of education, as sick days go up and new teachers have to be trained to substitute for those that are falling sick and dying. In many countries teachers seem to be dying at a much higher rate than similar age groups – quite possibly as a result of contracting HIV. As a result, Kelly (2003b) notes that the education system will need to establish programs and activities that run on a continuum from prevention to care, so as to be able to prevent the spread of the pandemic among these two groups that are already affected by the pandemic. To achieve this noble goal, different and varied management strategies have to be embraced by all those organisations mandated to contain the HIV/AIDS scourge.

Entrepreneurship

The literature suggests that entrepreneurial management facilitates organizational performance (Block and MacMillan, 1997; Brown *et al.*, 2001; Lumpkin and Dess, 1996; Stevenson, 1983; Stevenson and Gumpert, 1985; Stevenson and Jarillo, 1986, 1990a) that in turn can enhance financial performance (Zahra, 1991). Entrepreneurial management has been contrasted with administrative management (Kanter, 1985; Stevenson, 1983; Stevenson and Gumpert, 1985; Stevenson and Jarillo, 1986, 1990a). Entrepreneurial management focuses on facilitating for organizational members to create change by developing something new (Kanter, 1985). Conversely, administrative management is

geared towards existing activities and holding things in place to ensure continuation of already developed activities (Kanter, 1985). Despite the recognition of the importance and nature of both types of management, there has been little empirical research that examines the outcome of entrepreneurial management on dysfunctional systems and sustainability of such systems so as to serve as prototypes for application in management situations (Zahra and Covin, 1995). It is hoped that this study will offer additional insights and add to the documentation on the effect of entrepreneurial management on the functionality and sustainability of management systems designed for impact mitigation of the HIV/AIDS pandemic on the education sector. Since this approach aims at creating and managing an innovative entrepreneurial initiative whose primary mission is social change and development of society; the study, therefore, falls in the realm of social entrepreneurship.

Statement of the problem

The existing management responses to the HIV/AIDS epidemic are piecemeal, of small scale, health-focused, and weakly integrated into related efforts (World Bank, 2002). A successful response will therefore require flexibility and creativity to meet the challenges of a sector in flux, and constructive engagement with key stakeholders such as communities, religious leaders, educators, and politicians, who have influence – and often, conflicting points of view (Kelly, 2000). In addition, most research on HIV/AIDS in Africa (as opposed to western settings) has neglected to test key models and theories that may provide useful indications as to how to plan or further refine management interventions (Kelly, 1999). As a consequence, no research has been done in the Kenyan context to bring out the strategies that may contribute to the efficiency and sustainability of the management response in combating HIV/AIDS. The purpose of the study was to establish the need for different management approaches in the impact mitigation process. The study therefore takes cognisance of entrepreneurial variables that in other studies have been shown to enhance organizational outcomes and which can be applicable in the mitigation of the impact of HIV/AIDS on the education sector.

Research hypothesis

- Ho.* There is no statistically significant relationship between the perception of each entrepreneurial factor measured by the Corporate Entrepreneurship Assessment Instrument (CEAI) and improved management response to HIV/AIDS impact mitigation in the education sector.

Literature review

Entrepreneurial management versus administrative management

The literature suggests that entrepreneurial management facilitates effective performance of organizations (Stevenson, 1983; Stevenson and Gumpert, 1985; Stevenson and Jarillo, 1990b; Lumpkin and Dess, 1996; Block and MacMillan, 1997; Brown *et al.*, 2001) that in turn enhances organizational performance (Zahra, 1991). Most of these studies were however conducted on profit making organizations. Very limited research on entrepreneurial management has been conducted on non-profit organizations. In the review, entrepreneurial management was contrasted with administrative management (Stevenson, 1983; Kanter, 1985; Stevenson and Gumpert, 1985; Stevenson and Jarillo, 1990b). Entrepreneurial management focuses on

innovation, flexibility, proactiveness, risk-taking propensity (Kanter, 1985), conversely, administrative management is geared towards existing activities and holding things in place to ensure continuation of already developed activities. This study attempted to assess and subject the two types to the management of HIV/AIDS in the education sector. In this study the Corporate Entrepreneurship Assessment Instrument (ICEAI) by Morris and Kuratko (2002) was used. By synthesizing the literature, Hornsby *et al.* (2002) identified five key factors that influence corporate entrepreneurship to include management support, work discretion and autonomy, rewards and reinforcement, time availability, and organizational boundaries. From this, Hornsby *et al.* presented the Corporate Entrepreneurship Assessment Instrument (CEAI) – a survey instrument designed to help managers and leaders measure each of these factors. In essence, Ireland *et al.* (2006) argue that the CEAI provides a sound basis for managers to effectively manage, facilitate and improve Corporate Entrepreneurship activities.

Social entrepreneurship

Social entrepreneurship is the work of a social entrepreneur. A social entrepreneur is someone who recognizes a social problem and uses entrepreneurial principles to organize, create, and manage a venture to make social change. Whereas a business entrepreneur typically measures performance in profit and return, a social entrepreneur assesses success in terms of the impact s/he has on society. While social entrepreneurs often work through nonprofits and citizen groups, many work in the private and governmental sectors. The main aim of a social entrepreneurship as well as social enterprise is to further social and environmental goals. This need not be incompatible with making a profit, but social entrepreneurs are often non-profits. Social enterprises are for “more-than-profit”, they seek greater social capital.

Case studies of social entrepreneurship include the following:

- *The Grameen Bank Model.* One well known contemporary social entrepreneur is Muhammad Yunus, founder and manager of Grameen Bank and its growing family of social venture businesses, who was awarded a Nobel Peace Prize in 2006. The work of Yunus and Grameen echoes a theme among modern day social entrepreneurs that emphasizes the enormous synergies and benefits when business principles are unified with social ventures. The Grameen Bank model forms small groups of five people to provide mutual, morally binding group guarantees in lieu of collateral. Past participants have proven to be reliable borrowers and astute entrepreneurs; as a result, they have raised their social status, lessened their dependency on their husbands, improved their homes, and provided better nutrition for their children. GB provides group lending for poor people without collateral and has succeeded in expanding organizational capacity to serve millions of small borrowers. It has also expanded poor women’s roles in income generation, as well as in micro-credit theory and practice around the world.
- *The Green Belt Movement (GBM).* Was established in 1977 by Professor Wangari Maathai, (a Nobel Laureate) and the National Council of Women in Kenya. The Movement organized small groups of poor community members in both rural and urban settings to grow, plant, and care for trees in “greenbelts” on public and private land. The Movement has organized more than 6,000 groups in poor villages and urban areas throughout Kenya and has planted over 20 million trees. Over the last ten years, GBM has adopted a “conscientization” approach to

mobilize community consciousness for self-determination, equity, improved livelihoods, and environmental conservation. It has helped hundreds of grassroots leaders to advocate for social, economic, and political justice. Internationally, GBM has begun to facilitate a Pan-African Network to assist “green conscious” and social justice groups in other African countries in developing similar approaches to community mobilization. Essentially it promotes grassroots mobilization, “conscientization” and leadership development through environmental activities. It has facilitated planting of 20 million trees in Kenya at 70 per cent survival rate and mobilized 50,000 Kenyan households to care for the environment and improve their own welfare. A sense of mobilization at community level can be achieved in the mitigation of HIV/AIDS by adopting the Green Belt Movement model.

Today, nonprofits and non-governmental organizations, foundations, governments and individuals promote, fund, and advise social entrepreneurs around the planet. A growing number of colleges and universities are establishing programs focused on educating and training social entrepreneurs. (Cooperrider and Pasmore, 1991) has urged that social change organizations be the setting for a research thrust due to their increasing importance in the world. They are, and will be, playing a tremendous role in the upliftment of the disadvantaged, especially in the third world and in the sustainable growth and development of the globe. They can have considerable cumulative impact on society and can lead to economic development apart from socio-political change. The adoption of entrepreneurial practices to a social condition is the basis of this research. The social problem being the devastating impact of HIV/AIDS not only on the education sector but society as a whole.

Management of the response to HIV/AIDS impact mitigation

The review of literature has produced reoccurring themes emphasizing the negative impact of HIV and AIDS on the education sector (Mkumba and Edwards, 1992; Venier *et al.*, 1997; IBRD/WB, 2002; Nworocha and Nwakoby, 2002; Barnett and Whiteside, 2002; MTT, 2003; Kelly, 2003a; Nyaga *et al.* 2004; UNESCO, 2005; UNAIDS, 2006; Coombe, 2002). The above studies were essentially impact studies with very little research relating to the management of the response to HIV/AIDS impact mitigation. Coombe (2002) highlighted the fact that the response to the pandemic needs to be managed properly and proposes practical generic strategic principles towards mitigation of HIV/AIDS. Coombe proposes that governments must work in support of communities and that national strategies must reflect this balance. This current study attempts to provide empirical evidence of how governments can collaborate with communities or stakeholders to address a social concern. The study was placed in the realm of social entrepreneurship since HIV/AIDS is not only a health issue but a social-economic concern as well. The rationale of the study being that effective mitigation of HIV/AIDS will not only eliminate its negative impact on the education sector, but it will also accelerate the attainment of Education For All goals and the Millennium Development Goals.

Research method

The study adopted a correlational quantitative research design using a modified Corporate Entrepreneurship Assessment Instrument (CEAI) developed by Morris and

Kuratko (2002). In this study, the CEAI instrument was modified so as to meet the purpose of the study; be applicable to the data and population of the study. It has been established that quantitative methods enable researchers to conduct comparisons across individuals (Cook and Rousseau, 1988). The tool was found to be appropriate since it enabled the researcher to determine statistically significant relationships exist between established entrepreneurial variables and the management response to the impact mitigation of HIV/AIDS.

Population

The study population consisted of the Ministry of Education and finance officials and other stakeholders engaged in HIV/AIDS activities in the sector. A total of 160 elements formed the population. All these respondents were considered information rich since they are involved in the management of the impact of HIV/AIDS on the sector. The unit of analysis for this study were organizations involved in HIV/AIDS work in the education sector.

Sampling design and sample size

The 66 participants in this study were identified by the use of three methods:

- (1) purposive sampling;
- (2) stratified random sampling; and
- (3) systematic sampling.

Senior managers in education sector, Donor Agencies, Director Policy and Planning, Director, NACC, Coordinators AIDS Control Units were selected through purposive sampling, these were information rich respondents. District Education Officers and District ACU Coordinators were selected by the use of stratified random sampling. Ten (10) districts were selected by first establishing a list of all the 74 districts in the country in terms of HIV/AIDS prevalence rates. They were then stratified per province. Three districts with the highest prevalence per province were selected purposively. The resulting 24 districts were then subjected to random sampling to select the 20 respondents that were used in the study. The 20 directors of AIDS Control Units in universities and colleges were selected out of a sampling frame of 100 universities and colleges using systematic sampling.

Data collection

Prior to embarking on data collection, a permit for research was obtained from the Ministry of Science and Technology. The study's main questionnaire was the modified Corporate Entrepreneurship Assessment Instrument; (CEAI) developed by Morris and Kuratko (2002) and was pre-tested to ascertain its validity and reliability. It was administered to the ACU coordinators at the district and provincial levels. It was dispatched both electronically and by hand and was self-administered by the ACU coordinators at the Headquarters, the universities/colleges, provinces and districts. The purpose of this instrument was to ascertain the level of entrepreneurship practices that exists in the organizations. This questionnaire provided data on evidence of relationship between the dependent and the independent variables in the study.

The interview schedule was administered by the researcher to the programme officers of the selected Donor Agencies; top management of the ministries such as the

Permanent Secretaries, Education Secretary and the Secretary Teachers Service Commission. It was administered as a semi-structured interview and the responses were tape-recorded in order to capture the responses wholesome. The purpose of these in-depth and semi-structured interviews was to prompt and explore issues further since this is an exploratory study that premises that well implemented social entrepreneurial strategies will accelerate impact mitigation of HIV/AIDS in the sector.

Instrumentation

The Corporate Entrepreneurship Assessment Instrument. This instrument was developed by Morris and Kuratko (2002) and is used to assess entrepreneurial activity within an organization. In this study the modified version was used to test the hypothesis by determining the level of application of entrepreneurship strategies in the management of the response to HIV/AIDS impact mitigation.

The Corporate Entrepreneurship Assessment Instrument (CEAI) is designed to measure five key areas within an organization:

- (1) management support for corporate entrepreneurship;
- (2) work discretion;
- (3) management rewards/reinforcement;
- (4) time availability; and
- (5) organizational boundaries.

The instrument is constructed as a five-point Likert scale assessing these five constructs. The desired outcome of the Corporate Entrepreneurship Assessment Instrument is to assess the level of entrepreneurship intensity and recognition of entrepreneurship by management within an organization. The respondents were the AIDS Control Unit coordinators across the sector. This instrument had not been used in public organizations in Kenya and was therefore pilot tested at the Headquarters and selected universities with AIDS Control Unit coordinators to establish its validity and reliability. The pilot test showed that the instruments were clearly understood by the respondents.

Interview schedule. This schedule comprised 12 questions of the open-ended type. These were questions that asked for unprompted opinions with no predetermined set of responses and the respondents were free to answer however he/she chose. This interview schedule solicited data that was used to answer mostly objective number 3.

Data analysis

Correlation analysis was undertaken to determine if the dependent variable had a strong association with the predictor variables. Pearson's correlation coefficient (r) was used to establish the strength of the association among the variables. Since the value of " r " was high the researcher proceeded to perform regression analysis. A multiple linear regression was used to establish causality relationships between management of the response to HIV/AIDS impact mitigation as a dependant variable and the predictor variables. The coefficient of determination Adjusted R -squared was used to show the explanatory power of the predictor variables of this study. The student (t) test statistic was employed by the researcher to ascertain the significance of the individual

coefficients of the regression equation. The “*F*” statistic was used to reject or uphold the hypothesis in the study (Cooper and Schindler, 2003).

Using in-depth interviews (and supported by the literature) together with the student *t*-test from the regression analysis, desirable entrepreneurial strategies were predicted for application in the mitigation of HIV/AIDS in the education sector.

Model specification

The management response to HIV/AIDS impact mitigation can be operationally defined in the following regression form:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$$

where:

- Y = Management response to HIV/AIDS impact mitigation.
- β_0 = Constant.
- $\beta_1.. \beta_5$ = Estimated coefficients.
- X = Factors/variables influencing management response to HIV/AIDS.
- X₁ = Management support.
- X₂ = Work discretion.
- X₃ = Rewards/reinforcement.
- X₄ = Time availability.
- X₅ = Organizational arrangements.
- ε = The error term for social enterprise: This explains variations in HIV/AIDS impact mitigation that are not explained by the factors in the regression.

The independent variables (X₁, X₂, X₃, X₄ and X₅ denoted management support, work discretion, reward/reinforcements, time availability and organization arrangement) were measured on a five-point Likert-scale based on the CEAI tool developed by Morris and Kuratko, (2002).

Results

Before running a regression, the researcher compared the correlation matrix whose results are shown below (see Table I). The idea was to see whether there was a problem of multicollinearity within variables. It also showed association between variables.

	M/R	MS	W/D	R	T/A	O/B
Management response (M/R)	1					
Management support (M/S)	0.37	1				
Work discretion (W/D)	0.46	0.18	1			
Rewards (R)	0.14	-0.14	0.29	1		
Time availability (T/A)	0.06	-0.16	0.57	0.24	1	
Organizational boundaries(O/B)	-0.52	-0.13	0.06	0.13	0.31	1

Table I.
Correlation matrix

The Spearman correlation coefficient of management support and management response to HIV/AIDS impact mitigation is 0.37. This implies that there is a positive association of 37 per cent between management support and management response to HIV/AIDS impact mitigation. The spearman correlation coefficients for work discretion, rewards, time availability, and organizational boundaries and management response to HIV/AIDS impact mitigation are 0.46, 0.14, 0.06, and - 0.52 respectively. These coefficients imply that there is a positive association of work discretion; rewards; time availability and management response to HIV/AIDS impact mitigation of 46 per cent, 14 per cent and 6 per cent respectively. However there is a negative relationship between organizational boundaries and management response to HIV/AIDS impact mitigation of 52 per cent. This implies that when organizational boundaries increases, management response to HIV/AIDS impact mitigation decreases and vice versa.

Looking at the correlation coefficient matrix above, collinearity was only visible between the variable time availability and work discretion (0.57). However, since only correlations of a value of ≥ 0.8 would have necessitated a variable being deleted or creating a new variable that would have been used as the new variable in place of its components. The use of a variable inflation factor (VIF) index was intended to measure the effect of the other independent variables on the regression coefficient. Large values, usually 10.0 or more, suggest collinearity or multi-collinearity. In this study, all the VIF values were less than 2 thus collinearity was not a concern in this analysis.

Regression results

Adjusted R-squared of 0.53 imply that the organizational boundaries, work discretion, rewards, management support and time availability explain about 53 per cent of the variables in management response to HIV/AIDS impact mitigation. The F value of 9.7 is significant to the 0.001 level at 5 degrees of freedom hence all variables as a group in the regression model significantly explain the changes in the management response to HIV/AIDS impact mitigation (see Table II).

The constant 3.028, is the intercept term which represent that level of management response to HIV/AIDS impact mitigation that does not depend on any level of the above five independent variables. The estimated coefficient for management support (0.249) imply that 24.9 per cent variation in management response to HIV/AIDS impact mitigation is attributable to management support while 39.7 per cent is attributable to work discretion, 12.7 per cent is attributed to rewards, and 12 per cent is attributed to time availability. Organizational boundaries explained a negative effect of 53.5 per cent

Independent variable	Beta coefficients	t	sig
(Constant)	3.43	4.494	0.000
Organizational boundaries	- 0.608	- 4.711	0.000
Work discretion	0.253	2.782	0.008
Rewards	0.378	1.119	0.270
Management support	0.029	2.146	0.038
Time availability	0.115	0.86	0.475

Table II. Estimated coefficients **Note:** Dependent variable: Management response to HIV/AIDS impact mitigation; Adjusted R-squared = 0.53; F-statistic = 9.7; p value for F statistic = 0.001

on management response to HIV/AIDS impact mitigation. The negative beta weight for organizational boundaries indicates that if management response to HIV/AIDS mitigation is to be increased, it is necessary to reduce the organizational boundaries that exist in the work environment. All t values ≥ 1.96 represents significant variables. Hence only rewards and time availability are insignificant in explaining management response to HIV/AIDS mitigation. The constant term is significant since its estimated t value (4.760) is more than 1.96. Organizational boundaries, does significantly influence management response since its estimated t value 4.711 is greater than 1.96. The negative sign reaffirms that the more the organizational boundaries (limitation) prevail, the less entrepreneurial an organization becomes. Management support significantly explains variations in the predicted variable since its computed t statistic (2.146) is greater than 1.96. Work discretion significantly explains variations in the predicted variable since its compute t statistic (2.782) is also greater than 1.96. Rewards do not significantly explain variations in the predicted variable since the computed t statistic (1.119) is less than 1.96. Similarly, the significance of time availability is debatable since the computed t statistic 0.86.

Discussion

Management support

From the findings of this study, 62 per cent of the respondents affirmed that there was no management support across the education sector in the mitigation of HIV/AIDS. This scenario no doubt slowed the impact mitigation effort. These findings are not in congruency with those of Fisher *et al.* (2003) who established the importance of top management support, commitment, style, staffing and rewarding venture activities all of which are associated with intrapreneurship. The results also differ with those of Hornsby *et al.* (2002) reaffirmed organizational support in terms of training and trusting individuals within the organization to detect opportunities as well as related practices such as work discretion, innovation, rewards, time flexibility and loose intra-organizational boundaries as crucial organizational elements impacting intrapreneurship. Management support, relates to the willingness of managers to facilitate entrepreneurial initiatives as Sykes and Block (1989) and Hisrich and Peters (1999) established. In addition, the extent to which the management structure itself encourages employees to believe that innovation is, in fact, part of the role set for all members of the organization. Some of the specific conditions reflecting management support include: quick adoption of employee ideas, recognition of people who bring ideas forward, support for small experimental projects, and seed money to get projects off the ground.

Autonomy/work discretion

In this study it has been established that although the aspect of work discretion is reflected at the marginal 55.2 per cent of respondents disagreeing, it is still revealing in the sense that it reflects on the sector as not being entrepreneurially receptive. Workers ought to have discretion to the extent that they are able to make decisions about performing their own work in the way that they believe is most effective. Organizations ought to allow employees to make decisions about their work process and avoid criticizing employees for making mistakes when being innovative. Risk taking appears as a consistent element in an organization that has a strong

entrepreneurial culture. Employees and management must be willing to take a risk and have a tolerance for failure should it occur. This finding is consistent with those of Quinn (1985); Kanter (1994); Bird (1988) Sykes and Block (1989) who found that entrepreneurial firms allowed autonomy of work in their organizations.

Rewards/reinforcement

The statistics show that 67.4 per cent of the respondents strongly disagreed, disagreed or were not sure in terms of provision of rewards in their organizations for the innovators in the area of HIV/AIDS management. The result is not in congruent with Sathe (1989) who indicated that rewards and reinforcement enhance the motivation of individuals to engage in innovative behavior. Entrepreneurial organizations are characterized by providing rewards contingent to performance, providing challenge, increasing responsibility and making the ideas of innovative people known to others in the organizational hierarchy. Block and Macmillan (1993), argue that appropriate use of rewards must consider goals, feedback, emphasis on individual responsibility, and rewards based on results if it is to be effective.

Time availability

Of the respondents, 71.0 per cent confirmed the lack of time for the incubation of innovative ideas on enhancing impact mitigation. The fostering of new and innovative ideas requires that the individuals have time to incubate these ideas. Organizations must moderate the workload of people, avoid putting time constraints on all aspects of a person's job and allow people to work with others on long-term problem solving. Evidently HIV/AIDS is taken on as a secondary function by most coordinators of the HIV/AIDS Control units. Resources (which include time) and their availability are critical. Employees must perceive the availability of resources for innovative activities as Von Sykes and Block(1989); Hisrich and Peters(1999); Sathe (2003); and Kanter(1994) advocated.

Organizational boundaries

The response to this variable was 55.0 per cent in the affirmative with 17.8 per cent being not sure. This confirms the restrictiveness and rigidness that is typical in most public organizations. These are the boundaries, real and imagined, that prevent people from looking at problems outside their own jobs. People must be encouraged to look at the organization from a broad perspective. Organizations should avoid having standard operating procedures for all major parts of jobs, and should reduce dependence on narrow job descriptions and rigid standards of performance. Organizational structure, which is identified in various ways, appears as an essential factor. This factor was also emphasized by Hisrich and Peters (1986); Bird (1988); Sathe(1989) and Sykes and Block (1989) in the furtherance of entrepreneurship of whatever nature.

Conclusions

Considering the complexity of managing the response to HIV/AIDS in terms of resource mobilization, coordination, implementation and monitoring and evaluation, most of the respondents felt that a hybrid between private, non profit and public sectors be adopted under the framework of social entrepreneurship. Several approaches could come into play: one such hybrid could be by non-profit organizations having an entrepreneurial offshoot that generates revenue for the organizations social objectives. Another option

suggested was to put greater emphasis on the private, and for non-profit sector, developing a hybrid model where businesses lend money and expertise to non-profit organizations working with persons infected and affected with HIV/AIDS. In seeking to embed social entrepreneurship into the management of the response to HIV/AIDS one should perceive social entrepreneurship as a concept that seeks to marry rational economic calculation and a socially inspired vision as Shockley *et al.* (2002) suggested. Here the social mission is to mitigate the impact of HIV/AIDS on both the infected and affected in the education sector. At a time when money for social initiatives is short, this could offer a way forward for non-profits and the public sector to function in an increasingly competitive environment. Reis and Clobesy(2001) viewed this as a way for business to balance profit with public responsibility.

Research implications and limitations

The results of this study indicate that the existing administrative management practices employed in the mitigation of HIV/AIDS in the education sector are not effective. This calls for new approaches to management that encompasses entrepreneurial management that will embrace innovation, flexibility and proactiveness (Kanter, 1995). Since HIV/AIDS is a social phenomenon, the new approaches will be within the realm of social entrepreneurship. Based on this study, the researcher makes the following recommendations:

- There is need to configure organizational management structures and put in place strategies to create space for social entrepreneurship approaches towards the mitigation effort. Organizations dealing with HIV/AIDS response might need to keep bureaucracy to minimum levels and allow innovations to flourish.
- Policy must be adjusted or formulated to support civil society so as to create constructive partnership interactions with the Ministry of Education. This will hold them publicly accountable to addressing the impact of AIDS on the education sector within a social entrepreneurship framework.
- The ministry should take lead in developing a comprehensive public database of organizations involved in education and HIV/AIDS, relevant structural and resource information, the location, capacity and reach of their activity, the nature and target of their programming and their potential for expansion, both programmatically and geographically. This is an aspect of strategic entrepreneurship management.

To promote social entrepreneurship in both public and private institutions, additional research should involve a longitudinal research to establish the processes and techniques used by social entrepreneurs in actualizing results in mitigating negative social phenomenon such as poverty and disease. Researchers may also engage themselves in determining the social dimensions of entrepreneurship so as to stimulate the academia in giving social entrepreneurship the status it requires to be taken on as a legitimate and worthy topic of research and teaching. It may also be useful to research on mechanisms for enhancing Advocacy as a tool for mitigating the impact of HIV and AIDS. This will indeed reinforce the fact that education is the “Social vaccine” for HIV and AIDS. Generality of these studies’ results will be limited due to the investigation of a single thematic area, namely management response to the mitigation of HIV/AIDS in the education sector.

References

- Barnett, T. and Whiteside, A. (2002), *AIDS in the Twenty-first Century: Disease and Globalization*, Palgrave Macmillan, Basingstoke.
- Bird, B.J. (1988), "Implementing entrepreneurial ideas: the case for intention", *Academy of Management Review*, Vol. IX, pp. 66-9.
- Block, Z. and MacMillan, I.C. (1993), *Corporate Venturing: Creating New Business within the Firm*, Harvard Business School Press, Cambridge, MA.
- Block, Z. and MacMillan, I.C. (1997), *Corporate Venturing*, Harvard Business School Press, Boston, MA.
- Brown, T.E., Davidson, P. and Wilkund, J. (2001), "An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior", *Strategic Management Journal*, Vol. 58, pp. 116-18.
- Cook, R. and Rousseau, D. (1988), "Behavioral norms and expectations: a quantitative approach to the assessment of organizational culture", *Group and Organization Studies*, Vol. 13, pp. 245-73.
- Coombe, C. (2002), "Mitigating the impact of HIV/AIDS on education supply, demand and quality", in Cornia, A.G. (Ed.), *AIDS Public Policy and Child Well Being*, UNICEF, Florence.
- Cooper, D.R. and Schindler, P.S. (2003), *Business Research Methods*, 8th ed., McGraw-Hill/Irwin, New York, NY.
- Cooperrider, D.I. and Pasmore, W.A. (1991), "Global social change: a new agenda for social science?", *Human Relations*, Vol. 44 No. 10, pp. 1037-55.
- Fisher, K., Gross, S.E. and Friedman, H.M. (2003), "Marriott makes the business case for an innovative total rewards strategy", *Journal of Organizational Excellence*, Spring, pp. 19-24.
- Hisrich, R.D. and Peters, M.P. (1986), "Establishing a new business venture unit within a firm", *Journal of Business Venturing*, Vol. 1, pp. 307-22.
- Hisrich, R.D. and Peters, M.P. (1999), *Entrepreneurship*, 4th ed., Irwin-McGraw Hill Publishers, New York, NY.
- Hornsby, J.S., Kuratko, D.F. and Zahra, S.A. (2002), "Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale", *Journal of Business Venturing*, Vol. 17 No. 3, pp. 49-63.
- IBRD/WB (2002), *Education and HIV/AIDS*, World Bank, Washington, DC.
- Ireland, R.D., Kuratko, D.F. and Morris, M.H. (2006), "A health audit for corporate entrepreneurship: innovation at all levels – part 1", *Journal of Business Strategy*, Vol. 27 No. 1, pp. 10-17.
- Kanter, R. (1985), "Supporting innovation and venture development in establishment companies", *Journal of Business Venturing*, Vol. 62 No. 161, pp. 23-6.
- Kanter, R.M. (1994), *Innovative Reward Systems for the Changing Workplace*, McGraw-Hill, New York, NY.
- Kanter, R.M. (1995), *World Class: Thriving Locally in the Global Economy*, Charles Scribner's and Sons, New York, NY.
- Kelly, M.J. (1999), "What is HIV/AIDS?", paper presented at Sub-Saharan Africa Conference on Education for All, Johannesburg, 6-10 December.
- Kelly, M.J. (2000), *Planning for Education in the Context of HIV and AIDS*, UNESCO, Paris.
- Kelly, M.J. (2003a), "Preventing HIV transmission through education", unpublished paper.

- Kelly, M.J. (2003b), *UNESCO Nairobi Cluster: Consultation on HIV/AIDS and Education*, MTT Report, Durban.
- Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *The Academy of Management Review*, Vol. 78 No. 616, pp. 47-89.
- Mkumba, S. and Edwards, J. (1992), "Study into the attitudes, knowledge and behaviour of students at higher institutions of learning", paper presented at the 3rd Zambia Conference, Lusaka.
- Morris, M.H. and Kuratko, D.F. (2002), *Corporate Entrepreneurship*, Harcourt College Publishers, Orlando, FL.
- MTT/Mobile task team on the impact of HIV/AIDS on Education (Southern Africa) (2003), Consultations, verbal and written reports of the MTT, University of Natal Health Economics and AIDS Research, Durban.
- Nworocha, A.R.C. and Nwakoby, B.A.N. (2002), "Knowledge, attitude and behavior of secondary (high) school students concerning HIV/AIDS in Enugu, Nigeria in the year 2000", *Journal of Pediatric Adolescent Gynecology*, Vol. 15, pp. 48-51.
- Nyaga, K.R., Kimani, K.D., Mwabu, G. and Kimenyi, S.M. (2004), *HIV/AIDS in Kenya: A Review of Research and Policy Issues*, Discussion Paper No. 38, June, Kenya Institute of Public Policy Research and Analysis.
- Quinn, J.B. (1985), "Managing innovation: controlled chaos", *Harvard Business Review*, Vol. 63, pp. 73-84.
- Reis, T.K. and Clobesy, S.J. (2001), "Unleashing new resources and entrepreneurship for the common good: a philanthropic renaissance", *New Directions for Philanthropic Fundraising*, Vol. 32, pp. 109-44.
- Sathe, V. (1989), "Fostering entrepreneurship in large diversified firms", *Organizational Dynamics*, Vol. 18, pp. 20-32.
- Sathe, V. (2003), *Corporate Entrepreneurship: Top Managers and New Business Creation*, Cambridge Publishers, New York, NY.
- Shockley, G., Frank, P. and Stough, R. (2002), "Toward a theory of public sector entrepreneurship", paper presented at the NCIIA 7th Annual Meeting: Big Ideas in a Small World, Boston, MA.
- Stevenson, H.H. (1983), "A perspective of entrepreneurship", working paper, Harvard Business School, Boston, MA.
- Stevenson, H.H. and Gumpert, W. (1985), "The heart of entrepreneurship", *Harvard Business Review*, Vol. 116, p. 233.
- Stevenson, H. and Jarillo, J. (1986), "Preserving entrepreneurs as companies grow", *Journal of Business Strategy*, Vol. 38, pp. 66-79.
- Stevenson, H.H. and Jarillo, J.C. (1990a), "A paradigm of entrepreneurship: entrepreneurial performance in the restaurant industry", *International Journal of Hospitality Management*, Vol. 11 No. 1, pp. 17-27.
- Stevenson, H.H. and Jarillo, J.C. (1990b), "A paradigm of entrepreneurship: entrepreneurial management", *Strategic Management Journal*, Vol. 11, pp. 17-27.
- Sykes, B. and Block, Z. (1989), "Corporate venturing obstacles: sources and solutions", *Journal of Business Venturing*, Vol. 4, pp. 159-67.
- UNAIDS (1997), *Learning and Teaching about AIDS in School*, UNAIDS, Geneva.

- UNAIDS (2005), *Intensifying HIV Prevention: UNAIDS Policy Position Paper*, UNAIDS, Geneva, available at: http://data.unaids.org/publications/irc-pub06/jc1165-intensif_hiv-newstyle_en.pdf
- UNAIDS (2006), *Report on the Global AIDS Epidemic*, UNAIDS, Geneva, available at: www.unaids.org/en/HIVdata/2006GlobalReport
- UNESCO (2005), *EFA Global Monitoring Report 2006: Literacy for Life*, UNESCO, Paris, available at: www.efareport.unesco.org
- UNESCO (2006), *Linking EDUCAIDS with Other Ongoing Initiatives: An Overview of Opportunities – An Assessment of Challenges*, UNESCO, Paris, available at: <http://unesdoc.unesco.org/images/0014/001479/147916E.pdf>
- Venier, J.L., Ross, M.W. and Adebowale, A. (1997), "HIV/AIDS-related adolescents in three African countries", *Social Science Medicine*, Vol. 46 No. 3, pp. 13-28.
- World Bank (2002), *Second Multi Country HIV/AIDS Program (MAPS) for Africa*, World Bank, Washington, DC.
- Zahra, S.A. (1991), *Predictors and Financial Outcomes of Corporate Entrepreneurship*, Dryden Press, New York, NY.
- Zahra, S.A. and Covin, J.G. (1995), "Contextual influences on the corporate entrepreneurship-performance relations: a longitudinal analysis", *Journal of business Venturing*, Vol. 80, pp. 332-741.

Further reading

- Coombe, C. and Kelly, M. (2001), *Education as a Vehicle for Combating HIV/AIDS*, UNESCO, Paris.
- Mertler, C.A. and Vannatta, R.A. (2001), *Advanced and Multivariate Statistical Methods*, Pyrezak Publishing, Los Angeles, CA.
- UNAIDS/IATT (2006), *Education Sector Global HIV&AIDS Readiness Survey 2004: Policy Implications for Education &Development*, UNESCO, Paris, available at: <http://unesdoc.unesco.org/images/0014/001446/144625e.pdf>
- Von Hippel, E., Thomke, S. and Sonnack, M. (1999), "Creating breakthrough at 3M", *Harvard Business Review*, Vol. 77 No. 95, pp. 47-57.

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