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APPLICABILITY OF MANAGERIAL ECONOMICS IN CORPORATE GOVERNANCE: A DECISION-MAKING PERSPECTIVE

R. Kyagulanyi & R. Ncwadi¹

ABSTRACT

This article considered the application of Managerial Economics in corporate governance from a decision-making point of view. To achieve the research objectives, a comprehensive literature study has been conducted so as to provide a theoretical framework for the empirical study. As this research is purely qualitative, secondary data has been a key issue in the analyses.

The results were analysed and different concepts of the economic analysis have been related to business operation in establishing informed decision-making. The article goes beyond the financial and regulatory aspects of governance in order to address the interests of stakeholders. Theories have been applied from different economists such as Baumol's theory of sales revenue maximisation with his view that instead of firms overcharging their customers in order to increase profits, they charge reasonable prices with a view to increasing sales. This would also deter competitors who tend to threaten businesses by selling at lower prices.

Keywords: Managerial Economics; Corporate Governance; Decision-Making.

INTRODUCTION

According to Dwivedi and Mansfield (2004: 5) Managerial Economics is the application of economic concepts, logic and tools of economic analysis that are used in the process of business decision-making. Economic theories and techniques of economic analysis are applied to analyse business problems, evaluate business options and opportunities with a view to arriving at an appropriate business decision. Managerial Economics is thus constituted as that part of economic knowledge, logic, theories and analytical tools that is used for rational business decision-making.

According to Thompson, Strickland and Gamble (2012: 325), the word governance is derived from the Latin word "gubernare" which means to steer, thus referring to the process of running a government or an organisation. This process consists of mechanisms and institutions through which an organisation articulates its interests, exercises legal rights, meets obligations and mediates differences (Brealey, Meyers & Ngoma, 2004). It must indicate the means by which direction and control are applied to the stewardship of an organisation's assets so as to create sustainable future value.

It is further concerned with holding the balance between economic and social goals and individual and communal goals in order to align the interests of individuals, organisations and society. This notion goes beyond the financial and regulatory aspects of governance in order to address the interests of a wide range of stake holders and to expose the fundamental principles of social, ethical, environment and good financial practices. It is a partnership of shareholders, directors and management to provide wealth creation and economic well-being to the wide community of stakeholders and society (Hough *et al*, 2012: 324).

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The focus of this article is thus on applicability of Managerial Economics in business decision-making and the governance process in organisations and the “examination of morality” in organisations. While making a profit is a major priority for most organisations, it can be argued that the interdependent relationships that exist among organisations and their stakeholders and the economic system and the community within which they operate are all of equal importance (Werther & Chandler, 2006: 8). These relationships should therefore be nurtured and properly governed.

The main purpose of this article is to identify the relevancy of Managerial Economics in business decision-making. The first aspect addressed is the problem statement and research objectives of this study. The next section covers the theoretical overview of analytical tools and concepts of Managerial Economics and corporate governance. This is followed by the research methodology used for this study. Thereafter, the empirical result is addressed, followed by the main conclusions and recommendations flowing from the study.

Problem statement

Davis and Chang (2004) state that Managerial Economics applies the principles and methods of economics to analyse problems faced by the management of a business, or other types of organisations and to help find solutions that advance the best interests of such organisations. Daft and Robbins (2008: 330) state that many organisations see their purpose as more than simply the pursuit of profit: there is a challenge to include the needs of the society and the environment in strategic decision-making and corporate governance efforts.

The problem relates to the failure of many managers of organisations to fully realise the importance of economics in business undertakings and corporate governance. The main research question to be addressed in this article is therefore as follows:

What major lesson can be drawn from the economic concepts and tools to be applied in business operations and decision-making?

Aims and objectives

The aim of this article is to identify the relevancy of Managerial Economics in business decision-making:

- To clarify and conceptualise the concept of Managerial Economics in business undertakings.
- To provide a comprehensive literature overview of corporate governance from an economics point of view.
- To provide empirical assessment of Managerial Economics regarding business operations.
- To provide guidelines and recommendations so as to ensure the smooth running of business enterprises.

THEORETICAL OVERVIEW OF MANAGERIAL ECONOMICS AND CORPORATE GOVERNANCE

Concept clarification

According to Dwivedi and Mansfield (2004: 4) Managerial Economics is constituted of economic theories and analytical tools that are widely applied to business decision-making. It is therefore useful to understand economics as a social science that tries to study people – individuals, house-

holds, firms and nations. It is believed that households allocate their income between the various goods and services they utilise with the aim of maximising total utility. Economics studies how producers decide on the commodity to produce, the production technology, location of the company, market segment to cater to, price of the product, the amount to spend on advertising, if necessary, and the strategy to manage competition. It also studies how nations allocate their resources, people and materials, between competing needs so that the economic welfare of the society can be maximised.

General aspects of corporate governance

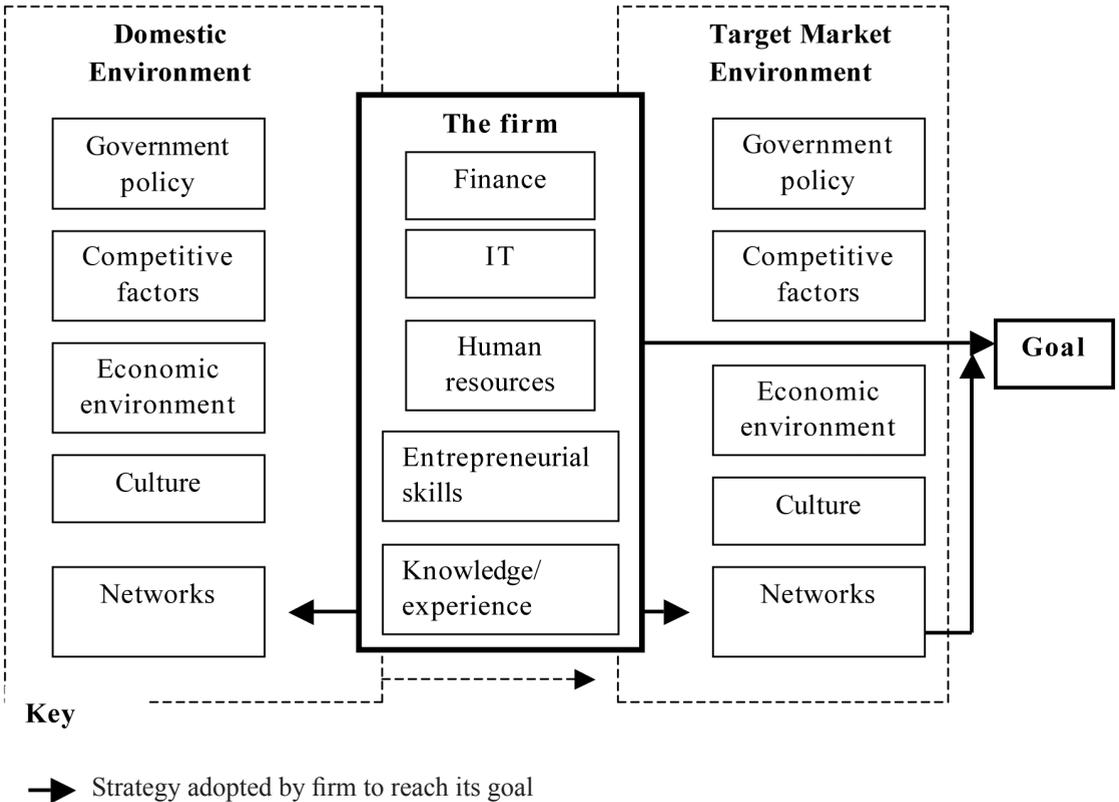
Banerjee and Brajesh (2008) argue that corporate governance practices includes a set of structural arrangements that align the management of organisations with the interests of stakeholders and cover ethical efficiency and accountability issues. The cornerstone of government practices, policies and procedures should thus ensure that they cover these critical areas which in essence capture the real nature of corporate governance. Kim and Nofsinger (2007) further state that corporate governance has its origins in corporate ownership and control, i.e. Stakeholders and Management. The stakeholders own the organisation and management controls it. As organisations become bigger there is separation of ownership and control, where control shifts from entrepreneurs to professional managers, while ownership becomes dispersed among many stock holders who are removed from day to day management and running of the organisation.

From the above it is inferred that this separation and concomitant specialisation of ownership (risk bearing) and management control (decision-making) should lead to the highest return for its owners. However often there is conflict between the objectives of the organisation and of those who act as custodians of its assets and undertakings: the directors and senior executives. This is known as the principle agent or agency problem where shareholders are the principals and the managers are the agents (Brown, Seal, De Jong & Lessidrenska, 2009: 389).

Hough *et al* (2012) and Wright and Rippey (2003: 324) agree that this separation of ownership of control often leads to a conflict of interests. On the one hand the organisation and its shareholders require undivided and unselfish loyalty. According to this view there should be no conflict between this duty and self interest. But if managers follow an exclusive approach to governance they do not always act in the best interest of shareholders. The rule of law forms the foundation of good governance: this requires the application of legal frameworks in fair and impartial manner. Corruption and fraud distort the rule of law and are thus contrary to good governance (Mashaw, 2009: 353). Moreover, it is important that meaningful disclosure related to the organisation's activities is given to all stakeholders (Hess, 2008). A result of good governance is that disclosure of information related to the organisation's financial, social and environmental performance is provided to all relevant stakeholders (triple bottom line) (OECD, 2004).

Macroeconomic issues relating to an organisation and its environment

The firm can be envisaged as a collection of different inputs which represents the resources the firm is able to marshal for the purpose of pursuing its goals. The inputs include finance, various technologies, human resources, and general knowledge, experience and entrepreneurship skills. The firm is subject to resource constraints due to limited capital. (Harvie Haynes, Riding & Thomas, 2002: 4).

Figure 1: The firm in its economic environment

According to Aras and Crowther (2008) a survey of SMEs revealed among other things that the key problems facing SMEs is lack of access to the key resource inputs of finance and human resources in the form of skilled personnel, as well as problems of access to markets, because of lack of information and international protectionism. Therefore it is paramount to note that Managerial Economics has an answer in coming with possible solution to business constraints through its analytical tools like demand forecasting, techniques of minimising cost and maximising profits of the firm.

RESEARCH METHODOLOGY

A qualitative research methodology has been used, with an emphasis on quality of the already existing literature given relating to business operations and how to survive the rigorous stiff competition today. The main purpose of this research is to relate the already existing literature to business operations today.

Sampling procedure

A non-probability convenience sample of 20 researchers has been used so as to come up with the clear picture of how economic and good governance can be used to understand business operations. Lessons have been drawn from different economic concepts.

Data collection

Only secondary data has been collected basing on different authors with a view on Managerial Economics concepts and Corporate Governance.

EMPIRICAL FINDINGS

According to Dwivedi and Mansfield (2004), essentially management studies can be attributed to at least three factors:

- Growing complexity of business decision-making process due to changing market conditions and business environment.
- Consequent upon, the increasing use of economic logic, concepts, theories and tools of economic analysis in the process of business decision-making.
- Rapid increase in demand for professionally trained managerial manpower. However the growing has inevitably increased the application of economic concepts, theories and tools of economic analysis in this area. The reason is that making an appropriate business decision requires a clear understanding of market conditions, market fundamentals and the business environment. This requires an intensive and extensive analysis of the market conditions in the product, input and financial markets.

On the other hand theories, logic and tools of analysis have been developed to analyse and predict market behaviour. The application of economic concepts, theories, logic and analytical tools in the assessment and prediction of market conditions and business environment has proved to be of great help in business decision-making.

Business decisions and economic analysis

Business decision-making is essentially a process of selecting the best out of a alternative opportunities open to the firm. The process of decision-making comprises of four main phases:

- Determining and defining the objectives to be achieved;
- Collections and analysis of information regarding economic, social, political and technological environment and foreseeing the necessity and occasion for decision;
- Inventing, developing and analysing possible course of action; and
- Selecting a particular course of action from the available alternatives.

These step put manager's analytical ability to test and determine the appropriateness world.

Micro economics applied to operational issues. Operational problems are of internal nature. Those include all those problems while arise within the business organisation and fall within. The preview and control of the management some of the basic internal issues are:

- Choice of business and the nature of products i.e. what to produce.
- Choice of size of firm i.e. how much to produce.
- Choice of technology i.e. choosing the factor combination like what type of labour do you need that will much with technology employed.
- Choice of price i.e. how to price the commodity basing on the elasticity situations in the market e.g. inelastic situations forces the seller to charge higher prices for his products and lower prices charged in case elastic situations.
- How to promote sales basing on the needs of the society.
- How to face price competition.
- How to decide on new investments basing on the demand for product through demand forecasting.
- How to manage profit and capital by drawing up business plans.
- How to manage inventory i.e. stock of both finished goods and raw materials by minimising problems associated with overstocking that leads to obsolescence of the materials and under stocking stagnates production. These problems may also figure in forward planning.

Theory of demand

This explains the consumer's behaviour. It answers the question. How do the consumers decide whether or not to buy a commodity? How do they decide on the quantity of a commodity to be purchased? How do the consumers behave depending on price fluctuations in the market? The knowledge of demand theory can therefore be helpful in the choice of commodities for production.

Theory of production and production decisions is often called "theory of the firm". This explains the relationship between inputs and outputs. It also explains under what conditions costs increase or decrease – how total output increase when units of one factor (input) are increased *ceteris paribus*.

Price theory

This explains how prices are determined under different market conditions. Profit making is the most common objective of all business undertakings. But, making a satisfactory profit is not always guaranteed because a firm has to carry out its activities under conditions of uncertainty with regards to:

- Demand for the product.
- Input prices like raw materials in the factor market.
- Nature and degree of competition in the product market.
- Price behavior under changing conditions in the product market.

Profit theory guides firms in the measurement and management of profit, in making allowances for the risk premiums.

Theory of capital and investments decision

Capital like all other inputs is scarce and an expensive factor. It is a foundation of business. Its efficient allocation and management is one of the most important tasks of the managers, and a determination of the success level of the firm.

Macroeconomics applied to business

Environmental issues pertain to the general business environment in which a business operates. They are related to the overall economic, social and political atmosphere of the country. The factors which constitute economic environment of a country include the following:

- The type of economic system, of the country to which a business personnel has to know this will him to understand the flow of authority as regards to resource allocation and ownership.
- General trends in production, employment, income, prices, saving and investment policy.
- Structure of and trends in the working of financial institutions e.g banks, insurance companies, financial corporations etc.
- Magnitude of and trends in foreign trade.
- Trends in labour and capital markets.
- Government's economic policies e.g. industrial policy, military policy, fiscal policy, price policing. A business man will locate his plant basing on the security of the area and the investment incentives put up by the government.

Lessons from profit maximisation as business objectives

The conventional economic theory assumes profit maximisation as the only objective of business firms. Profit maximisation as the objective of business firms has a long history. It is regarded as the

most productive business objective it helps on predicting the behavior of price and output under different market conditions:

$$\text{Total profit} = \text{TR} - \text{TC}$$

Where TR = total revenue and TC = total cost.

There are two conditions that must be fulfilled for TR – TC to be maximum. Those are:

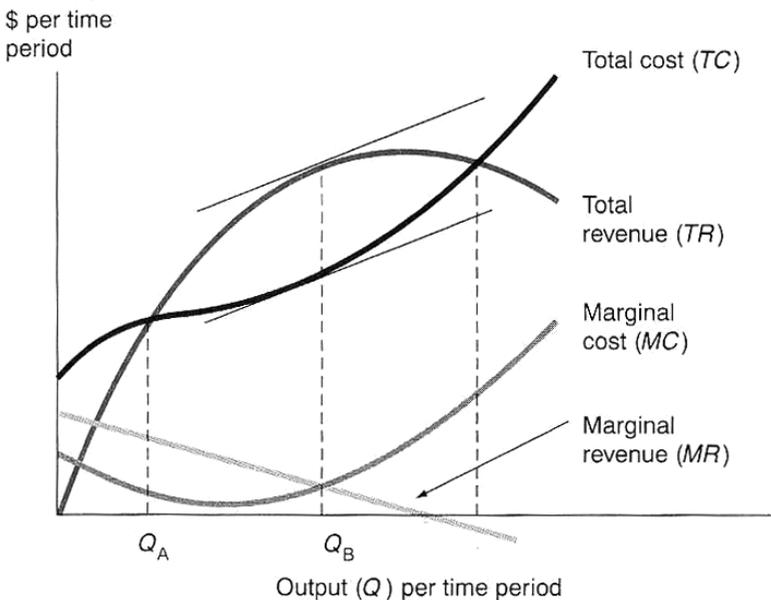
- Necessary condition; and
- Secondary or supplement ally condition.

The necessary condition requires that marginal revenue (MR) must be equal to marginal cost (MC).

By definition of marginal revenue is the revenue got from production and sale of one additional unit of output and marginal cost is the cost arising due to the production of one additional unit of output.

The secondary order condition requires that the necessary conditions must be satisfied under the condition of decreasing MR and rising MC. The fulfilment of the two conditions makes it the sufficient condition. This condition is illustrated by point P_2 (see below).

Figure 2: Fulfilment of two conditions



First order condition

Here the condition is that the first derivative must be equal to zero we differentiate and equate it to zero:

$$\frac{d\pi}{dq} = \frac{dTR}{dq} - \frac{dTC}{dq} = 0$$

$\frac{dTR}{dq}$ = is the slope of the total revenue

Similarly, the term $\frac{dTC}{dq}$ is the slope of the

Total cost curve or (MC). Thus, the first order condition for profit maximisation can be stated as:

$$MR = MC$$

So it is generally known as necessary condition. A condition is said to be necessary if its non-fulfillment results in non-occurrence of an event.

Second order condition in non-technical terms requires that first order decreasingly MR, MC and MR intersect at point P_1 and P_2 . The first order condition is satisfied at point P_1 and P_2 while the second is only satisfied at point P_2 which requires that the second derivative of the profit function is negative.

The total profit curve has turned down after having reached the peak. The second derivative of the total profit function is given as:

$$\frac{d^2\pi}{dQ^2} = \frac{d^2TR}{dQ^2} - \frac{d^2TC}{dQ^2}$$

The second order

$$\frac{d^2TR}{dq^2} = \frac{d^2TC}{dq^2} < 0$$

Since d^2 is the slope of MR and d^2TC/dq^2 is the slope of MC, then the second condition may also be written as:

Slope of MRC < slope of MC

Basing on the above scenario managers learn that there is need to be creative and innovative because even when profits are made, costs may raise up if we don't control output and minimise costs, this is what causes Marginal cost curve to rise up again causing losses in the long run.

Baumol's hypothesis of sales revenue maximisation

Baumol (www.slideshare.net/birubiru/baumols-sales-maximisation-model:2011) postulated maximisation of sales revenue as an alternative to profit maximisation objective. The reason behind this arises from separation of Ownership and Management in large business corporations. These powers give managers an opportunity to set their goals other than profit maximisation goals which most owner businessmen pursue.

According to Baumol, the most plausible factor in manager's utility functions is maximisation of the sales revenue.

The factors which explain the pursuance of this goal by the managers include:

- Salary and other earnings of managers are more closely related to sales revenue than profit.
- Banks and financial corporations look at sales revenue while financing the corporations.
- Trend in sales revenue is a reading available indicator of the performance of the firm. It helps in handling personal problems as one can easily ask for an advance when there are sales.
- Increasing sales revenue enhances the prestige or managers while profits go to the owners.
- Managers find profit maximisation a difficult objective to fulfill consistently overtime and at the same level. Profits may fluctuate with changing conditions.
- Growing sales strengthen competitive spirit of the firm in the market and vice versa.

Besides that, it is also argued that in the long run, sales maximisation and profit maximisation objectives converge into one.

CONCLUSION

In general, the scope of Managerial Economics comprehends all those economic concepts theories and tools of analysis which can be used to analyse the business environment and to find solutions to practical business problems. In other words Managerial Economics is economics applied to the analysis or business problems and decision-making. Broadly speaking, it is applied may be broadly divided into two categories.

The contribution of economics to business decision-making has come to be wisely recognised, consequently, economic theories and analysis tools which are widely used in business decision-making have turned into a separated branch of management studies, called Managerial Economics or business economics.

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CHANGE MANAGEMENT INSIGHTS FROM A HIGHER EDUCATION MERGER

M. Anstey, D. Venter & I. Wannenburg¹

ABSTRACT

This article examines the South African government's drive to restructure higher education institutions from the perspective of employees in one merged institution. Employees were asked to evaluate the outcome and the management of the process. The results reflect a low positive evaluation of the outcome, and offer some useful insights into the management of merger processes. Employees doubted the efficacy and urgency of the process with implications for mobilisation of support. The design of the merger process created problems of leadership and communication with employees. However the survey also indicated that there was still room to motivate employees in the 'post-combination' phase and that this is the critical period for merged organisations.

Keywords: higher education, merger, leadership, management, organisational change

INTRODUCTION

On the 9th December 2002, following lengthy planning, the South African government announced final plans for a rapid large scale restructuring of the national tertiary education system, reducing the number of higher education institutions from 36 to 21 by December 2005 through a process of incorporations and mergers. The primary intention, according to Jansen (2002, 2003), was to create a smaller number of high-quality, non-racial institutions at lower cost. Implementation of the plan took affected organisations into complex processes of organisational restructuring.

Organisational change has become an important area of research, partly because of the nature and extent of change initiatives, but also perceived failures of many such initiatives (Kaplan & Norton, 2001: 1).

Jansen (2002) concluded that early South African mergers in the higher education system often had a devastating impact on staff of affected institutions, but produced little in terms of objectives of equity, cost reduction or efficiencies. This study explored two dimensions of the change management process from the perspective of employees as organisational stakeholders in one merged institution. Firstly, employees were surveyed regarding whether the incorporation and merger process to form a new merged institution had achieved its intended objectives. Secondly, from a process perspective they were asked to evaluate how well the process had been managed. Effective process management is understood to be important in creating the platform to delivery of restructuring objectives (Hayes, 2010).

The research methodology for this article was essentially a survey of employees who had been involved in the incorporation/merger process. In order to contextualise the findings, a brief background to the merger process is provided below together with a description of the merger process. The survey instrument was developed using Anstey's (2006) conceptual framework for managing organisational change which seeks to integrate the contributions of various theorists in the field.

THE CASE UNDER REVIEW

In 2000, three higher education institutions, two universities and one technikon, were merged into a new institution, which, for purposes of confidentiality in this article, is called MU.

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CONSTITUENTS OF THE MERGER

The three tertiary institutions that merged to form the MU in this study had the following student profiles in 2000:

- University 1 (U1) had 7 000 contact students, and 15 000 distance education students, largely studying education. Seventy one percent of enrolments were in humanities and education, 20% in science, engineering and technology and 9% in business and management.
- University 2 (U2) reflected a student enrolment of 2 000 largely in business and management (42%) and humanities (42%), with smaller student populations in science, engineering and technology (10%) and education (6%).
- The technikon had 7 000 students with 85% of these enrolled in undergraduate diploma and certificate programmes.

THE LEGISLATIVE POLICY FRAMEWORK OF THE MERGER

The legal framework for the restructuring process is reflected in Sections 20 to 25 of the Higher Education Act (101/97) as amended, the Labour Relations Act (66/95) as amended and the Standard Institutional Statute. Sections 20 and 21 of the Higher Education Act (HEA) empowered the Minister to establish a university, technikon or college by notice in the Government Gazette through a merger (s23) or incorporation (s24). The Minister was further empowered to appoint an interim council to govern a new institution for a period of six to twelve months. This body was required to appoint an interim management and ensure that a council was constituted in terms of the Standard Institutional Statute. In the case of a merger an interim council was to comprise a chairperson and between six and eight members appointed from nominations received from the institutions involved, excluding members of staff or students. The interim council was to co-opt three non-voting members of the interim management. To deal with delays the Minister had power to proceed at his/her discretion if institutions failed to make nominations. Section 22 made provision for the declared higher education institution to assume responsibility for assets, liabilities and contracts of the previous organisation(s).

The HEA protected employees in new institutions whether merged or incorporated, through an automatic transfer of contracts of service from an 'old' employer, one in the process of being merged with another, to a 'new' employer, a carryover of all rights and obligations in the employment relationship, and a guarantee of continuity of service in which all employees brought length of service and contractual rights relating to such service into a new organisation. Employees and students were to be subject to the rules and procedures of the new merged institution, but misconduct and incapacity enquiries and proceedings initiated in a former institution were carried over and dealt with in terms of the rules and procedures applicable in that institution. Existing rules and procedures of the various institutions applied until the new institution had instituted new rules. These guarantees protected employees transiting from old to new institutions but the HEA also made clear an 'old employer' could rationalise its workforce for operational reasons in accordance with s189 of the LRA. The provisions of the HEA mirrored s197 of the Labour Relations Act that provides for the transfer of contracts of employment when transferring businesses as going concerns.

New merged institutions were to continue with academic programmes offered by old institutions with the rules applying immediately prior to the merger, and to award qualifications in their own name while also reflecting the name of the original institution of student registration.

The process was governed not only by statute, but various policy directives for managing the process including a directive that parties in mergers participate as equals in the process.

“In short it requires a commitment from all institutions to accept that the merger process is a process between equals, irrespective of the current strengths and weaknesses of the merging institutions, which is a legacy of apartheid. The Ministry wishes to indicate that it intends to closely monitor the merger process to ensure that the principle of equality between merging institutions is not breached in the development of the policies, procedures and structures of the merged institution... A synergistic outcome is desired which cannot be based on the culture of and ethos of the stronger partner in the merger process. That would be a recipe for disaster. In this regard it is imperative that measures are put in place to ensure that differences in admission policies, fee structures and language policies are addressed in a manner that promotes and facilitates access’ (DoE, 2003: 29).

The statute and the policy of equality had important implications for the process, because it required a system of negotiated leadership at every level regardless of organisational size or strength. An interim governance and management structure was ensured during mergers, assurances were given to employees regarding job security and security of benefits during merger processes and to students as regards completion of their programs, but provisions also fixed certain costs into the establishment of the new institutions and reduced flexibility in their design. Unlike private sector transfers of business the merger partners in public higher education incorporations and mergers could not ignore arrangements if they doubted their financial viability, and left *all* staff vulnerable if some of the organisations involved were in financial difficulty.

STRUCTURING THE MERGER PROCESS AT THE LEVEL OF THE INSTITUTIONS INVOLVED – A BRIEF OVERVIEW

Organisational change is a complex multi-track process demanding simultaneous work along many fronts (Gouillart & Kelly, 1995). To initiate and organise the process, the three institutions involved in the creation of the new comprehensive university organised themselves in the following manner. It is necessary to consider that in terms of policy none was appointed in a leadership role, and none could assume it other than through a negotiated process.

A **Joint Management Core Group (JMCG)** comprising five members from each organisation was formed at the outset of the process in an effort to assume what Kotter and Cohen (2002) call a ‘guiding coalition of leaders’. The merits of this body are discussed later in this article under leadership. The first task of the JMCG was to negotiate its own terms of reference, design a process and agree a set of guidelines for its work as the leadership group of the process. It spent several months negotiating a **Memorandum of Agreement (MOA)**. One of the opportunities offered the institutions in the merger process was to make proposals to the Minister regarding the appointment of persons to the **Interim Council** of the new institution. Eighteen **joint task teams (JTT’s)** were established to attend to specialised areas of focus: strategic planning, governance, organisational structures, academic programmes, academic and educational development; library services, research administration, development and support; academic engagement; international engagement; student services; sport; academic administration; communications and marketing; computer services; finance and financial administration; human resources; technical and operational support services; and equity and transformation. The merger coordinators developed guidelines to assist the operation of the JTT’s defining their role and contribution to the larger process, clarifying their reporting system and ‘fit’ with the JMCG, outlining steps for effective operations, and offering a set of guiding principles. Importantly the JTT’s were advised not to declare disputes but to see themselves in the role of option developers for decision-making at other levels in the system – this in an effort to maintain a cooperative problem-solving mindset, limit positional plays in the process, and avoid a situation of multiple minor disputes when exchanges became difficult. The drive to consensus seeking was continued from the spirit of intent reflected in the operations of the JMCG and reflected in a Memorandum of Agreement (MoA).

Funding for an office to coordinate merger processes was limited and occurred late in the process, by which time the JMCG had accomplished much of its work, and task teams were already operational. A merger office was established in June 2004 staffed by a merger project manager, the merger coordinators from the three institutions affected and two administrative personnel. JTT's reported to the JMCG through the merger office which gathered reports regularly and used them to establish priorities, identify resolutions needed at the level of the JMCG, compile agendas for the JMCG, and identify cross-functional work required amongst JTT's.

GOVERNANCE POWERS: TENSIONS IN THE CREATION OF AN INTERIM COUNCIL

A two-phase process was imposed – the incorporation of U2 by U1 by the end of 2004, and then a merger with the technikon by end 2005. Legally, U2 as an institution was dissolved and re-distributed to other universities as U1 could not merge with U2 as an institution but could absorb a part of the dissolving institution. To complicate matters although U2 was closing, its programmes were continuing for students currently registered and staff were to continue with their existing terms and conditions of service – a staff and student pipeline reality. U1 argued that this organisational reality should be recognised through U2 representation on its existing council, in its nominations for the interim council for the new institution, and in representation in the merger process into task teams. The technikon argued that there could not be U2 representation, only U1 as it was a two-party rather than a three-party merger process. Technikon resisted the idea of U2 nominees to interim council other than through U1, and U2 participation in processes other than as U1 representatives. The technikon argued that there could not be two universities and a technikon in the merger – it was a two-party incorporation process that is U1 and U2 followed by a two-party merger process, U1 and the technikon. U1 recognised that it was a phased process and that legally the merger would involve U1 and the technikon but proposed that the organisational reality meant that U2 would have a life beyond its legal end – its staff and students carried through into the process, and the reality of its service community should be active in the problem-solving process leading to the creation of a higher education institution comprising three traditions rather than two. Eventually in compromise U1 and the technikon each proposed three nominees plus a U2 nominee to the Minister for the interim council – a 3+1:3+1 scenario. It was agreed in the MoA that there should be no voting system and that 'fair representation' should be the guiding principle.

TENSIONS IN THE ORGANISATIONAL DESIGN OF THE MERGED UNIVERSITY

Designing the new university (MU) was not a simple task. The three institutions operated across six campuses and were configured differently, for example, the technikon had nine faculties, whereas U1 had six. At an inter-institutional *bosberaad* in February 2004 with about 60 participants a broad initial structure for the merged university was formulated. This base work was then assigned to the relevant JTT (Joint Task Team Organizational Structures – JTTOS) as a platform from which to begin the initial task. Its guiding principles included the following: avoid multi-level hierarchies; avoid a federal system; create a top structure with the focus on core functions; ensure continuation of services; create coherent academic structures; provide nationally and internationally coherent nomenclature; support performance management through manageable reporting lines; support vertical and horizontal networks to ensure integration; create financial stability; avoid duplication of services, maximise resources; optimal use of technology; adherence to legal requirements; utilise unique strengths, position and needs of sites and satellite campus; consider strategic importance of George campus; support coordination and co-operation between all sites including satellite campus; avoid vested interests; and interim structures to take into account pipeline programme realities.

The JTTOS made proposals for a top management structure of eight: an interim vice chancellor; three deputy vice chancellors: academic; research, technology and innovation; information, planning and quality; a registrar; and three executive directors: students, finance and facilities, organisational transformation and human resources. In addition it made proposals for a seven faculty merged university: Arts; Business and Economic Sciences; Education; Engineering, Built Environment and Information Technology; Health Sciences, Law and Science. These proposals were supported by the JMCG and approved by the Interim Council Elect (ICE). There were several immediate consequences. ICE had to agree on a process for the appointment of an interim VC (IVC). Problems were experienced regarding the timing of such an appointment with the technikon arguing for a system of two interim VC's until the end of 2004, while U1 pushed for an earlier appointment in the belief that the process required a 'driver' as soon as possible in light of the slow JMCG process. ICE eventually agreed that the process should be one limited to the existing VC's, bearing in mind its interim nature, and navigated internal disagreement to make an appointment on the 31st July 2004. The vice chancellor of U1 was appointed and the technikon chose not to participate in the process. The appointment of an IVC (elect) had some immediate benefits: it focused on a top managerial position with delivery of a viable merged university on 1st January 2005. This gave ICE an individual directly accountable for the merger with a single leader thus removing tendencies to support one or other across the institutions. The IVC was therefore not responsible for creating the merged university.

The immediate implications of adopting this structure affected the 19 deans comprising: nine at the technikon, six at U1 and four incorporated from U2 but no longer officially in the position of deans and this number would in due course be reduced to seven. Again the process was a difficult one in its design. Institutions were obliged to negotiate the redesign of each department and unit amongst themselves. And there could only be one head of each. Existing heads therefore had to design an entity with their own positions at risk, then an appointment process had to be agreed at higher levels, before they applied for the post in competition with one another. In addition for cost control and job security purposes all employees moved across into the merged university on their current grades and remuneration. This offered job security during the process but limited design options in the first instance and included some significant internal differentials. A hugely complex task arose in which about 2 000 jobs were under scrutiny. There would clearly be a reduction in the number of deans for instance but the sheer size of the new organisation and its multi-campus reality required new managerial posts. For every top manager affected there was a cluster of support staff affected.

THE CONCEPTUAL FRAMEWORK FOR THE SURVEY

While Manning (2001) proposes shareholder interests as the key driver for organisational change, the customer is identified as the major interest pushing transformation initiatives. This is clearly reflected in the change strategies embodied in total quality management (Fortuna, 1992), the ISO certification system (Rabbit & Bergh, 1994), lean production methods (Liker, 2004; Suzaki, 1993; Womack, Jones & Ross, 1990), and business process re-engineering or BPR (Hammer & Champy, 1993; Hammer & Stanton, 1995). There is an underlying recognition that change drivers in private sector businesses are tightly linked – a failure to be competitive in terms of delivery to customers, product innovation and quality, cost, service and delivery will see declining sales and returns for investors. Although financial indicators are commonly used to evaluate business success in the private sector, Kaplan and Norton (2001) point out that these are essentially 'lag indicators' and that assessments of future organisational success reside more in other indicators regarding delivery to customers, the alignment and efficiency of internal business processes, and the quality of systems which make for effective learning, innovation and adaptation (human and informational capital). In summary their balanced scorecard is one which obliges organisational leaders to pay attention to the range of stakeholders (customers, investors, suppliers, employees

and community agencies) involved in its success. Stakeholder thinking has enabled applications of the balanced scorecard to both private and public sector or public interest organisations. Though not profit driven public interest organisations are publicly accountable to their funders, have primary consumers or beneficiaries of their services, must be cost conscious, seek internal efficiency in their operations and develop, retain and motivate the people who work within them.

A stakeholder as opposed to a shareholder approach recognises that organisations reflect the interests of multiple role players: customers, shareholders, employees, suppliers, governments and other interest groups in the societies in which they are located (Anstey, 2006: 341). It also acknowledges the systemic nature of organisations, and that successful transformation of an organisation generally demands simultaneous attention to issues of direction, new organisational realities and business opportunities, consumer delivery and the mobilisation of people to optimise organisational redesign. From a systems perspective Gouillart and Kelly (1995: 7) propose that transformation is *'the orchestrated redesign of the genetic architecture of the corporation, achieved by working simultaneously – although at different speeds – along the four dimensions of reframing, restructuring, revitalization and renewal'*. Similar multi-track thinking is reflected in Ghoshal and Bartlett's (2000) *Individualised Corporation* and Hayes (2010) in his well-researched approach to planned change.

Anstey's (2006) conceptual framework for organisational change was used for the purposes of this research. This framework draws on the contributions of a spread of theorists in the field, including those discussed briefly above, in an effort to bring together the more 'people driven' approaches to managing change proposed by the likes of Kotter and Cohen (2002) with harder business-driven approaches from BPR, lean, TQM and ISO, and Kaplan and Norton (2001) whose goal-driven balanced scorecard enables integrated thinking. Although they deal with the elements a little differently the following common elements are reflected in change models:

- a. **Constructive unease (energy).** Change requires directed energy. This comes from recognition amongst key stakeholders that an organisation cannot survive or thrive unless it undertakes fundamental change (Hayes, 2010; Kaplan & Norton, 2001: 334; Kotter & Cohen, 2002). The key, according to Hayes (2010), is to turn the need for change into a desire for change. Boyett and Boyett (1998) argue that most people do not change because it is interesting or offers a personal growth experience, but only if they perceive there is simply no other choice. The process may be coerced but commitment is preferred to compliance in change processes (Gouillart & Kelly, 1995; Hayes, 2010). Anstey's (2006) *'constructive unease'* proposes that while a failure to change may invite organisational decline, undirected action is equally dangerous – the energy for change must not only be created but also directed. This is achieved through some of the other elements discussed below.
- b. **Clear purpose (raison d'être).** It is proposed that organisations are most effective if their stakeholders share a sense of purpose – a reason for being. Organisational purpose is usually expressed in the form of a customer-centred mission or value proposition. This is what enables a shared commitment (Kaplan & Norton, 2001: 334), and guides organisational strategy and design.
- c. **Challenging vision (direction).** The importance of generating a shared vision for change is commonly recognised. The use of a scorecard obliges statements of vision to be translated into clear objectives – typically, measurable ideals in terms of financial performance in order to deliver returns to investors; quality, cost, delivery and service to deliver returns to consumers; of internal processes, efficiencies; and learning, growth and employees, that is, human capital or labour stakeholders. While profitmaking organisations use financial measures as primary indicators of success, Kaplan and Norton (2001) point out these are 'lag indicators' and have limitations as predictors of future performance. Measures of customer delivery, internal efficiencies and learning and growth have greater value in this regard. A simplistic focus on financial indicators is also inappropriate for public interest in profit organisations which require

sound financial management to remain viable but are established to deliver to wider social interests than those of investors. Greater attention is given to delivery to their non-financial stakeholders – for instance, patients in hospitals, and students and employers of university graduates (Kaplan & Norton, 2001: 135). Scorecards are therefore not rigid in their content, but should reflect the strategic objectives of particular organisations. As a major provider of funding, an employer of graduates as the promoter and protector of national education and research, the South African government is a key stakeholder in the nation's universities. It was therefore in a powerful position to promote a new vision of higher education in the country. However, it is not the only stakeholder in national universities which also reflect the interests of students and their families, donors, widespread community interests and academic and non-academic employees. The objectives of the South African government for the restructuring process are clear goals against which to assess success of its change project over time. These are discussed later in this article. It is the employees of an organisation who must deliver the change project in terms of achieving its goals and their views, the extent to which they feel valued, motivated and provided with resources in the organisation are therefore critical to its success. These dimensions of delivery are also central to this research.

- d. Leadership.** Based on the preceding discussion it is clear that leadership is critical to change endeavours. Leaders are understood to be those capable of influencing others to achieve organisational goals and in this regard they typically recognise the need for change, identify change goals, communicate a sense of direction, formulate a change strategy, involve and motivate others, and create an organisational context conducive to change (Hayes, 2010: 162). The importance of delivering to the organisational stakeholders is key to holding change projects together (Ulrich, Zenger & Smallwood, 1999). It is not simply what leaders do, but how they do it that is important, that is, their leadership style (Blake, Mouton, Barnes & Greiner, 1964; Kotter, 1990; Nadler & Tushman, 1995). Goleman (2000) has distinguished between six different styles of leadership concluding that two – authoritarian and pacesetter – may be effective in circumstances of organisational crisis requiring rapid turnarounds but are negative regarding climate. Other styles – affiliative, democratic, authoritative and developmental – are regarded more favourably by members of organisations and are more sustainable in terms of long-term leadership-follower strategies. As Hayes (2010) points out these styles reflect basic assumptions about people and work and are expressed through communication styles, and influence at what stage and on what issues consultation with employees is engaged in during change processes. More coercive leaders drive through change on a task-driven basis against defined objectives and deadlines as an essentially technical and structural process. Alternative approaches recognise that it is the people within organisations who make them work and utilise means directed at mobilising their efforts towards a common goal. Successful change can seldom be driven by a single leader. Kotter and Cohen (2002) suggest the importance of a powerful guiding coalition to drive the process. Leadership at the top is essential but the efforts of leaders at all levels in the organisation need to be aligned to manage change coherently. On the basis of their research into healthcare organisations Denis, Lamothe and Langley (2001) concluded that change needed to be led by a collective leadership group rather than an individual for whom reaching and motivating the full spread of stakeholder interests within the top leadership team, organisational constituencies and external actors may simply not be possible. This research sought, in part, to gather information about perceived leadership in the merger process.
- e. Culture and community (identity).** Organisational culture develops over time around shared heroes, rituals, symbols and 'ways of doing things' (Hofstede & Hofstede, 2005; Trompenaars & Prud'Homme, 2004).
- f.** Many organisations strive for a culture of performance characterised by such dimensions as customer concern, discipline, stretch and accountability, continuous strategic thinking,

adaptability and the creation of a climate of support, tolerance, trust, fairness, and risk. Many mergers fail for reasons of incompatible cultures between merging entities (Hayes, 2010; Stahl & Mehendal, 2005; Trompenaars & Prud'Homme, 2004). While combining organisations may make sense from a strategic perspective to achieve access to markets, economies of scale, or improve profitability, a lack of synergy between the entities may see a new organisation fail to meet its objectives. The Daimler-Chrysler merger and later separation is an example (Trompenaars & Prud'Homme, 2004). If merging entities lack organisational fit, goals of developing a common culture of high performance may never be achieved. So an important post combination indicator of success in a restructuring project is the degree to which stakeholders perceive a new shared culture to have emerged within merged organisations.

- g. **Coherent strategy (a workable plan).** It is proposed that organisational stakeholders require not only a shared mission and measurable objectives but a coherent strategy – a clear implementation plan which is felt to be achievable. Efficacy theory (Vroom, 1964) proposes that people are motivated to undertake change if they perceive that they have the capacity to make it happen and that their efforts will lead to improved performance; that such performance will lead to desired outcomes where the goals of a change project are desirable and achievable; and that achievement of such goals will lead to satisfying returns or rewards. Jones, Jimmieson and Griffiths (2005) conclude that ‘change readiness’ or the extent to which employees hold positive views about the need to change and that the change will yield positive results for the organisation and themselves, is key to transformation projects. The important issue here is that it is not simply about having a plan, but whether employees see the plan as worthwhile, achievable and as likely to yield positive results.
- h. **Competitive competencies.** If employees in an organisation lack the competencies necessary to make their organisations competitive they cannot prosper. Goals may be set which are felt by organisational members to be beyond their capacity or have poor congruence with personal value systems (Hubbard, 1999). Successful universities are intensely competitive environments and internationally universities are graded according to their teaching and research outputs. In South Africa research funding is premised on research outputs and if academic staff are appointed who are incapable of supervising or conducting research, or of effective teaching at undergraduate or graduate levels they will decline in output and rankings. Important questions therefore are whether employees in the organisation feel the merger has generated greater capacity to achieve the stated goals of the merger, and whether the merged organisation is investing sufficient resources to enable this to happen.
- i. **Communication and consultation.** The fundamental process for organisational change is communication. This is the medium through which stakeholders become alerted to the need for change, are mobilised to participate in the process and inform top leaders of information critical to managing the process. The timing, style and content of communication inform members of the underlying philosophy of those driving the change process. Organisational stakeholders quickly determine whether they are involved in fundamental decisions or simply being informed of them, if their views about the change goals or process are respected, and if it is worthwhile to share information and opinions at their disposal. Relevant questions for evaluating the management of the change process are whether employees as a stakeholder group felt they had received enough information at regular intervals about the merger, and whether they felt they could influence it or were simply there to rubberstamp a predetermined outcome.

The systemic nature of the organisational change process makes it difficult to deal with these points in a sequential manner as it is their ongoing interaction that is critical. Effective change processes require attention to ‘soft’ and ‘hard’ variables concurrently – hard financial realities may translate into rationalisations in staffing, fee increases and austerity measures precisely when there is a need to motivate staff, lift morale, and present an exciting new brand to students and the general public. Change processes are not simply technical issues – they are about getting people to do

things differently, to break with the past, to take risks, to become motivated about change. It is the employees as ‘front liners’, rather than top management, who ultimately ‘make bumblebees fly’ and who ultimately must deliver a transformation initiative (Ghoshal & Bartlett, 2000). With this in mind an investigation of ‘frontliners’ was undertaken a few years after the structural and legal-technical aspects of the merger had been completed.

METHODOLOGY

In the first instance a brief descriptive background of the merger process is provided to contextualise the study and inform interpretation of results. Then, as already indicated, two dimensions of the merger process under investigation were regarded as important for evaluative purposes – employee perspectives regarding delivery to envisaged outcomes, and from a process perspective, how well it was managed for purposes of laying a platform for delivery of such outcomes. Wannenburg (2008) evaluated these dimensions of the process which created the merged university (MU). Using Anstey’s (2006) integrative framework for managing organisational change a structured questionnaire was generated and distributed electronically to gather employee views of the merger. The questionnaire consisted of both closed- and open-ended questions to be rated on a 5-point Likert scale. Ethical permission to conduct the study was obtained from the relevant university and participants completed the questionnaire voluntarily and anonymously. Numerical and graphical descriptive statistics were generated using MS-Excel and Statistica packages. The internal consistency of the entire instrument and for all its subscales was assessed using Cronbach’s alpha. The Cronbach’s alpha was significant (0.90) for the entire questionnaire as well as for all its subscales. Of the 1 490 permanent and contract employees eligible to participate in the study who had been in the employment at the three merged institutions before the merger process 199 responded (13%). Of those just over 50.3% were academics and 49.7% administrative staff; 59% were males and 41% females; 69% were white, 11% black, 8% coloured, 4% Indian and 9% classified themselves as ‘other’ in terms of race. This was representative of the demography of the university. Participation in the survey reflected equitable participation across previous employer institutions and across gender and race lines. The questionnaire also requested respondents to make additional commentary on aspects of the merger process adding a qualitative dimension to data gathering and providing additional insights into employee perceptions of the merger.

RESULTS – WAS THE MERGER A SUCCESS?

DELIVERY TO THE GOVERNMENT’S STATED OBJECTIVES FOR THE MERGER

Three core goals were defined in government’s planning: to meet the demands of social justice; to address the challenges of globalisation; and to ensure effective and efficient use of limited resources. The National Plan for Higher Education translated these into five strategic objectives:

- To increase student access to tertiary education institutions and the production of graduates with skills and competencies necessary to meet the needs of the country;
- To improve equity of access and outcomes to redress past inequalities through ensuring that staff and student profiles reflect the demographics of the South African society;
- To promote diversity in the institutional landscape through mission and programme differentiation to meet national and regional skills and knowledge needs;
- To build high level research capacity and promote research linked with national development needs;
- To build new institutional identities and organisational forms through restructuring the institutional landscape of the higher education system in order to transcend the fragmentation, inequalities and inefficiencies of an apartheid past and to enable the formation of South African institutions consistent with the vision and values of a non-racial, non-sexist and democratic society.

Responses to questions directed at assessing employee evaluations of goal achievement are reflected in Table 1. In only one area did the majority of respondents perceive the outcome of the change process positively – that the demography of students more accurately reflects that of the country. However, fewer than 25% of respondents believed the MU was producing graduates or research linked to regional or national needs or that the merger was followed by better academic programme design or improved research capacity. The high percentage of responses in the ‘neither agree nor disagree’ category suggests that many were too uncertain to make a judgement call. In short only a small minority at the time of the study perceived the outcomes in terms of government objectives positively, but it remained too early to judge conclusively.

The MU HEQC Audit Report (2008: 19-21) revealed a combined headcount enrolment of 32 343 in the institutions that were to form the merged university. This figure declined by 8 100 or 25% (23 688) by 2007. The deliberate decision of the university to reduce distance education programmes played a major role in this decline. However, the headcount enrolments in contact programmes grew after the merger. Between 2005 and 2007 the total headcount enrolments in contact diploma programmes grew by 5.2% while enrolments in contact undergraduate degree programmes remained static. At both undergraduate and postgraduate level, the distribution of enrolment at the MU was in line with Department of Education (DoE) approved enrolment projections for 2010. The 2007 student enrolment by race was 60.7% black, 24.7% white, 12.1% coloured and 2.5% Indian students.

Table 1: Responses as to whether the merged university has met the objectives intended by mergers as declared by the Ministry of Education (reflected in percentages)

Compared to the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Student profiles are a better reflection of the demographics of the country	6	45	39	6	4
For all its problems the merger has been a success	3	35	31	16	15
Fragmentation of the apartheid past has been reduced	3	31	34	20	13
Research is more linked to national developmental needs	2	21	59	12	6
Academic programmes are better designed to meet national needs	2	19	56	17	6
Student admissions have increased	3	18	48	23	8
Staff profiles better reflect the demographics of South African society	2	19	44	21	14
Research capacity of the merged university has increased	3	17	49	23	8
Inequalities of the apartheid past have been eliminated	4	15	39	27	15
Academic programmes are better designed to meet regional needs	2	16	54	21	7
Graduates with skills necessary to meet the needs of the country have increased	0	8	52	32	8

The study also gauged employee perceptions of the university's delivery to its societal stakeholders. Several authors argue the importance of a shared mission and vision as a mobilising force in organisational change processes (Kotter & Cohen, 2002; Ghoshal & Bartlett, 2000). The MU employees' responses to questions about the mission and vision statements of the new institution are reflected in Tables 2 and 3. Ideally there should be total commitment amongst employees to these goals. While a majority perceived MU to have a clear mission, and goal to serve, less than a third saw it as having a clear implementation plan to achieve its mission. Kaplan and Norton (2001) point out that most strategy plans fail not because of an absence of vision but because of poor implementation. The survey revealed low positive responses relating to the MU's vision, and its performance in balanced scorecard areas, compared with the situation prior to the merger.

Table 2: Responses to the question of whether the merged university has clear purpose (reflected in percentages)

In comparison with the situation prior the merger	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Customers or clients to be served are identified	6	57	21	12	4
The MU has a clear mission / purpose statement	9	53	24	11	3
Needs that the MU has to satisfy are stated	5	49	29	13	3
How the mission / purpose has to be to be achieved is clear	3	27	35	27	8

An effective vision should translate into clear objectives – ideals should be measurable (Gouillart & Kelly, 1995; Kaplan & Norton, 2001, 2004). Clear objectives also facilitate a sense of accomplishment. Kotter and Cohen (2002) argue for highly visible 'quick wins' to sustain energy in the process, providing evidence that sacrifices are worth the effort, acting as a review mechanism, dealing with those opposing transformation and building overall momentum in the process. The uncertainty about personal action making a contribution is evident.

Table 3: Responses as to whether the merged university has a challenging vision with clear measurable objectives (reflected in percentages)

In comparison with the situation prior to the merger:	Strongly Agree	Neither	Disagree	Disagree	Strongly Disagree
Our department's objectives are better linked to those of the overall organisation	6	39	32	17	6
The MU has a clearer vision	3	33	37	22	5
The MU's vision is translated into clear measurable performance objectives	2	23	41	29	6
People are more certain about how they can personally contribute to attainment of the MU's performance objectives	2	19	36	33	11

Financial objectives

Respondents were asked to evaluate the new organisation in terms of a scorecard of measures: performance against financial objectives, consumer delivery, internal business processes and objectives of learning and growth. The low level of financial confidence revealed in the new entity is depicted in Table 4.

Table 4: Responses relating to the merged university's finances (reflected in percentages)

In comparison with the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
People feel more uncertain about the MU's financial future	16	41	25	17	2
The MU has a clearer strategy to achieve its financial objectives	3	23	45	23	7
More funds are allocated to departments	1	8	33	32	26

INTERNAL BUSINESS PROCESS OBJECTIVES

Several of the government's stated objectives for its restructuring initiative lay in changed 'business processes' and improvements in access for students and in their mobility through programmes. Within comprehensive institutions academics were required to consolidate and articulate existing programmes in response to regional and national needs, and there was an intention to achieve more effective and efficient use of resources in academic programmes and their administration. Transformation in this area revolves around two major areas – business processes and organisational restructuring and the primary purpose of both is to deliver better quality products and services to students and other stakeholders at reduced cost with greater efficiency and effectiveness.

Kaplan and Norton (2004) identify four major internal process clusters: operations management where products and services are delivered to customers; customer management so that relationships are established and leveraged with customers; innovation whereby new products, services, processes and relationships are developed; and where the organisation conforms with regulations and societal expectations and builds stronger communities. Each may have many sub-themes that may create value in some way but coherent strategy demands the identification of those critical strategic areas important for value proposition purposes.

On the operations management front the three institutions were required to review their academic programmes, search for new synergies, eliminate overlaps, seek routes between courses and tracks to facilitate mobility between previously distinct academic programmes. A new programme and qualification mix (PQM) was sought which inevitably interfaced with the innovation track. This new design should find favour with customers at all levels, new offerings must be relevant, translate into careers, be accessible, affordable and quality focused.

Employee responses relating to internal business processes, quality of output and restructuring are summarised below in Tables 5, 6 and 7 respectively.

Table 5: Employee responses relating to internal business processes (reflected in percentages)

Compared with the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Site allocation has not affected our department's performance negatively	5	32	19	18	25
The MU has better support services to deliver a quality service to its students	2	24	30	31	14
The MU has better facilities to deliver a quality service to students	2	23	28	32	15
The MU has more efficient administrative processes to support all its services	1	15	21	29	33

Table 6: Employee responses to questions regarding quality of output (reflected in percentages)

Compared with the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Our department's performance compares more favourably with that of other tertiary institutions	9	34	33	16	8
Our department delivers a better service to the university	4	22	43	20	10
The MU graduates compare more favourably with graduates of other universities	4	15	48	22	11
The quality of academic programmes has improved	1	16	49	24	11

Table 7: Employee responses relating to restructuring (reflected in percentages)

Compared with the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
The MU staff have decreased their research outputs*	5	25	54	15	1
The MU staff have become less responsive to student needs*	6	30	33	27	4
The organisational structure of the MU has become a barrier to getting the work done*	23	38	28	10	2
The MU staff have become more responsive to community needs	2	24	49	22	4
The decentralised decision-making systems have made it easier to get the job done	4	20	44	25	6
The MU's relationships with relevant stakeholders have improved	2	22	61	14	2
The MU staff have increased their innovation / entrepreneurial outputs	2	13	60	21	5
Staff's work has been more linked to reward systems	4	7	30	36	23
* Negative statements					

LEARNING AND GROWTH

In this section questions focused on employee views as to whether MU had given rise to new competitive competencies, and a new culture. Improved business process efficiencies are unlikely if employees perceive themselves as lacking the skills to do so, feel they lack direction and leadership or do not share a sense of common purpose. As discussed earlier positive organisational cultures reflect a strong sense of community, a positive climate of support and trust and a shared sense of 'how we do things around here' (Robbins, 2008). Mergers sometimes oblige organisations with incompatible cultures into being as in the Daimler-Chrysler case (Trompenaars & Prud'Homme, 2004). As organisational culture cannot be created on an 'add water and mix' basis, development of a new culture needs specific focus if factional contests are to be averted over what matters, and how business should be done.

Less than a quarter of respondents felt the new merged organisation had become more competitive through a synergy of skills, or was more development or performance focused or had generated greater creativity amongst its employees (Table 8).

On the organisational culture front only 18%, felt that all stakeholders identify more strongly with the MU compared to the situation prior to the merger, identification with previous institutions (Table 9), although more recognised there was effort being invested in developing culture (only 39%). Of greater concern than the absence of these elements was that so few were positive about the way the university was developing a culture in terms of its policies, reward systems, appointments processes, and the behaviour of its leadership.

Table 8: Do the merged university's people see themselves as more competitive since the merger? (reflected in percentages)

Compared with the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
People in our department have more skills to achieve the objectives of the university	4	25	37	27	8
People in our department have clearer performance targets according to which they are assessed	2	26	30	27	15
People in our department get more regular feedback from their supervisors on their work performance	3	23	28	27	29
People in our department are learning and updating their skills more frequently	3	21	30	30	16
People in our department are more creative than before the merger	2	14	35	29	20

Table 9: Has the merged university developed its own culture post-merger and is it acting in a way to develop such a culture? (reflected in percentages)

Compared to the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
The MU is putting more effort into the development of its own culture, shared values/beliefs/purposes in work	6	33	32	22	7
Behaviour of fellow employees reflects the value system of the university	2	29	45	16	8
Policies reflect the values of the university	2	26	46	17	9
Behaviour of middle management reflects the values of the university	2	25	41	18	14
All stakeholders identify more strongly with the MU	1	17	30	34	18
Appointment procedures reflect the values of the university	0	15	41	26	18
Behaviour of top management reflects the values of the university	1	14	38	27	20
Reward systems reflect the values of the university	1	4	27	40	28

The next set of questions reflected whether employees felt the merger had strengthened the capacity of their various departments, and whether the merged university's policies were facilitating the attraction, retention and motivation of high performing academic staff. Employees' responses in this regard are summarised in Table 10.

Very few respondents were positive to questions regarding whether the merger had seen a strengthening of their departments in terms of top academic performers, and whether the university's development and recognition and reward systems would be successful in doing so.

EVALUATION OF THE MANAGEMENT OF THE MERGER PROCESS ITSELF

Transformation projects cannot be understood simply by their outcomes. A greater understanding of perceptions demands an examination into the process by which they were achieved. For instance if employees perceived the outcomes negatively, were there problems in the way that they were mobilised around the process, how it was led, the nature of communications in the process, and the manner in which it was structured?

Table 10: Employee responses to questions relating to the competitive competencies of staff after the merger. (reflected in percentages)

Compared to the situation prior to the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
The MU's pay systems have improved	2	19	21	26	32
The MU encourages entrepreneurship more	2	15	36	25	22
We have more top performers / academics in our department	1	11	43	29	16
We have more top performers / academics in our department relative to similar departments in the country	1	11	47	25	16
The MU trains and develops more employees to be top performers	1	9	39	33	18
The MU loses more top performers than other universities in the country*	23	40	30	3	4
The MU acknowledges exceptional performance more	1	9	24	33	34
The MU investigates ways of motivating higher levels of performance in their employees	2	6	27	31	34
The MU attracts more top performers as employees than other universities in the country	1	5	23	31	41
The MU pays better salaries to attract top performers	2	2	12	27	58
The MU pays better salaries to retain top performers	1	1	11	27	60
* Negative statement					

Constructive 'unease'

The importance of 'constructive unease' as a key element in change projects has already been discussed. To undertake change employees must see it as necessary and urgent and to have efficacy they must recognise the imperative to do things differently but also see sense in the proposed change plan. Employee responses, reflected in Table 11, indicate that only 32% felt the merger was conducted for sound reasons, and only 29% felt that there was clear urgency for the process. This suggests the absence of 'constructive unease' amongst the employees involved. Beyond this, 73% of respondents to Wannenburg's (2008) survey indicated that there was resistance to the merger in their departments. Responses from participants in the survey indicated that resistance emanated from: the timing of the process, the mission, vision and value statements of the merged university, the way in which the merger was managed, educational reasons, fear of the unknown, job insecurity, fear of loss of expertise, reduced resource allocations to departments, resistance to the leadership. This resistance was expressed, according to respondents, in complaints, a loss of work motivation, and increases in work-related errors, absenteeism and loyalty to the organisation.

Table 11: Constructive unease: harnessed urgency (reflected in percentages)

To create and harness urgency for the impending merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Reasons for the merger were clearly explained	8	45	12	23	13
The MU developed a clear Memorandum of Agreement to guide the merger process and behaviour of the relevant parties involved	5	37	32	18	8
The merger was conducted for sound reasons	6	26	17	25	27
The urgency of the merger was clear	5	24	16	38	17
Labour organisations successfully mobilised their members to participate in the merger	3	22	36	26	14
Management successfully mobilised employees to participate in the merger	4	20	24	28	24

Communicating the change process

One of the keys to effective management is regular communication. The data in Table 11 reveals that while 71% of employees perceived a regular flow of information only 32% felt the information was sufficient, only 23% that it was of the right kind and only 19% that it was trustworthy. About 80% felt efforts to communicate concerns about the merger were not heard, and that people were simply being asked to rubber-stamp decisions already made.

Table 12: Employee perceptions of communication and consultation during the merger (reflected in percentages)

During the merger process:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Information was supplied at regular intervals	3	68	13	12	4
Sufficient information was supplied	2	30	28	33	7
The right kind of information was supplied	3	20	28	37	11
People were merely asked to rubber-stamp decisions that had already been made*	36	43	16	4	1
Although efforts were made to communicate issues concerning the merger people felt they were not heard*	36	43	14	5	1
The information was trustworthy	1	18	31	30	20
Negative statements					

These findings are regarded as significant in the overall study and are explored below in the discussion of results.

Champions: the key element of leadership

Only about 30% of respondents felt top and middle management had led the merger process effectively (Table 13). The leadership and problem-solving capacities of task teams established to drive the process through more participatory processes were rated as only satisfactory for the most part (Table 14).

Table 13: Employee evaluations of management leading the merger (reflected in percentages)

During the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Middle management led the merger process effectively	3	28	36	22	11
Top management led the merger process effectively	3	26	30	28	13

Table 14: Employee evaluations of the performance of merger task teams (reflected in percentages)

During the merger:	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Task teams were introduced early enough in the merger to make a valuable contribution to the merger	4	32	32	23	9
The task teams had the necessary leadership skills to drive the process	3	21	37	27	12
All stakeholders were adequately represented in the task teams	3	21	36	26	14
Evaluation of task team performance	Excellent	Very Good	Satisfactory	Poor	
Setting goals	4	14	61	21	
Planning the work to be done	4	13	55	28	
Monitoring progress	3	11	54	32	
Delegating responsibility	4	9	57	30	
Achieving set goals	3	8	50	39	
Solving problems	2	7	36	55	

One respondent commented “If the merger is compared to other mergers in Higher Education in South Africa then it is clear that, from a systems and procedural perspective, it was managed well. Unfortunately the ‘people’ dimension of the merger did not feature as a priority and many staff members were alienated as a result of this”.

The proposal that leadership is key to effective organisational change is common across theories of organisational change. Kotter and Cohen (2002) propose that it is essential that a group sufficiently powerful to guide big change and which works well together be formed early to drive the process. It is this group which develops a vision and strategy for the change effort, communicates it for buy-in and empowers people to act. Beyond a managerial capacity to bring order to complex situations, this requires a capacity to see new organisational potentials and ways of operat-

ing to achieve these by motivating people and aligning their competencies to higher orders of performance. There are of course multiple theories of leadership (Wren, 1995) but in essence they are expected to generate a sense of shared mission and identity amongst an organisation's members, build organisational capacity, and mobilize individual commitment to deliver measurable results to the spread of stakeholder interests involved in an organisation (Ulrich *et al.*, 1999). Leaders by definition must have followers and responses here indicate a disconnection between those trying to manage the process and employees within the institutions.

DISCUSSION OF RESULTS

This research evaluated a higher education merger from the perspective of employees involved in the process, concentrating firstly on perceived outcomes of the merger, and secondly on the management of the process itself. In the first instance the government's stated goals for the merger were used for evaluative purposes. While a small majority agreed that the objective of a more demographically representative student body had been achieved, fewer than 25% agreed that staff profiles did so or that research and academic programmes were better resourced or designed to meet regional or national needs. While most agreed that the 'new' university had a clear mission, fewer than a third believed it had a clear implementation plan to achieve this, and even fewer that the institution's vision had been translated into clear measurable performance objectives or offered them certainty about how they could personally contribute to performance objectives. Most were uncertain about the merger university's financial future and only 25% agreed it had a clearer strategy to achieve financial objectives. Only 9% believed the merger had seen more funds directed to departments. No clear cost-benefit analysis was disclosed to institutions involved in the merger process. The process took place against a background of steadily reduced government spending on higher education even as increasing numbers of students lacked the capacity to pay fees. Matters were complicated through differing approaches to financial management. One of the merger universities (U1) adhered to a conservative no-debt policy, but the technician had followed a path of expansionism requiring new investment and loans. On top of this government pushed a model in which payroll costs would not exceed 60% of overall operating costs, with no indication of where this benchmark came from. The merged university entered existence with payroll costs at about 70% of operating costs and therefore faced immediate downward pressures on payroll. Human resources policies and remuneration differed considerably across almost every dimension, making for a complex harmonisation process, but limits on budget meant there could not simply be 'upward integration'. Matters were not improved when, on the eve of the merger, institutions negotiated different increases with their unions. The merged university faced its launch with a poor cash situation which would have consequences for its capacity to attract, retain and motivate high performing staff. By the end of 2008 harmonisation of compensation systems had still not been achieved. In this context the negative perceptions of employees reflected in this study are not surprising. Only a quarter of respondents agreed the merger had seen better support services; facilities for students or more efficient administrative services; improved quality of graduates or academic programmes; higher research outputs or improved community outreach.

The second part of the evaluation concerned the management of the process using an integrated framework drawn from the contributions of mainstream change management theorists and researchers. The structural and technical aspects of the merger process under investigation were achieved, and within the required timeframe. Where there were three individual higher education entities there is now one with one council, one senate, and a single system of financial management and administration. However, at the time of the study deeper levels of integration had not yet been achieved, for instance in the integration of academic programmes and the harmonisation of employment conditions. Hubbard (1999) argues that levels of integration matter. Some mergers leave entities almost autonomous in their operations and are successfully directed

at achieving financial synergies, but others seek functional or total integration with more ambitious transformation objectives. Higher levels of integration may achieve economies of scale in operations (Hayes, 2010: 400) but demand more contact between, and change within employees, negatively impacting commitment and resulting in raised turnover (Stahl, Mendenhall & Weber, 2005). Decisions about the extent of integration across academic tracks are likely to have an important bearing on future levels of satisfaction amongst academic staff. Basic personnel practices also make a difference: the nature of rewards and degree of job security, as well as career development prospects are important to overcoming resistance (Stahl *et al*, 2005).

The findings of this study reflect a problematic merger process from an employee perspective. Firstly, the findings indicate the challenges which had to be faced in mobilising employees to undertake the merger project – Anstey's (2006) state of 'constructive unease'. Responses reflect that in the case of many employees the early goal of 'turning the need for change into a desire for change' (Hayes, 2010) was not achieved. Responses indicate that employees in affected institutions were not convinced of the need for change. Less than a third of respondents felt the mergers were conducted for sound reasons or that there was clear urgency in the process. Research (Lines, 2004; Lines, Selart, Espedal & Johansen, 2005) suggests that imposed change damages trust and the willingness to participate constructively in transformation initiatives. Trust in management positively influences perceptions of decision-making quality and quality of participation in change projects. Risks of 'organisational silence' are raised in contexts where there is a breakdown in trust relations (Morrison & Milliken, 2000). Findings from this investigation reflect such problems – regular information flows did not translate into trust. About 80% felt they were merely asked to 'rubber-stamp' decisions already made and that they were 'not heard'. In the context of an imposed merger conducted under tight deadlines this was not surprising – those within affected institutions could shape the process but not stop it. Lines *et al* (2005: 239) point out that '*appropriate management therefore means attaining a position whereby trust is based on the ability to communicate to the participants that their interests and values are understood and taken seriously*'.

Tensions, it seems, were largely generated by two factors: the fact that the process was externally imposed and the design of the process. These made for a very difficult leadership situation within affected institutions. The stakeholder imposing the change, government, set deadlines and some policy guidelines for aspects of the process but did not propose a clear vision of the new 'comprehensive university' it was creating, or a process for the integration of academic tracks. Its support funding arrived late and management of the process was left to the institutions. This study shows many employees doubted the efficacy and urgency of government's restructuring plan. Leaders across institutions disagreed about aspects of process management amongst themselves but were simultaneously required to mobilise employees to deliver to the project. They could not negotiate integration of learning programs in isolation as uniformity with other national institutions was required to allow inter-institutional mobility of students. They had to negotiate details of the planning and implementation process 'as equals' as there was not a unified plan presented 'upfront' in the process. Rather the plan unfolded as the leaders worked through the various dimensions of restructuring. When employees asked difficult questions there were not always ready answers from government planners or amongst the leaders of the institutions themselves. In this context employee responses of low trust in communications are not surprising, nor the sense that they were not being heard. The fact is, however, leaders of the process often did not have answers to questions on the integration of academic tracks, the harmonisation of compensation systems and conditions of service, long term job security or institutional funding. They were, either trying to work things out as they went along, waiting for answers from government or pushing questions into task group processes where people had to problem-solve outcomes. The process had fixed ends but was in practice an emergent one. Each institution had to continue its existing services while designing the future. One of the sayings coined early in the merger by the management

group was ‘we have to drive on the bridge while we are building it’. It is in this reality that the disappointment in top and middle management, as well trade union and task group leadership should perhaps be understood.

Some 73% of respondents to the survey indicated awareness of resistance to the merger process within their departments. Resistance to change can be expected (Hayes, 2010). Restructuring disturbs personal and group comfort zones, and has implications for job security and career paths. The absence of a clear vision of the organisation of the future and a change plan does not engender confidence. Both the formal leadership and employees in the institutions involved were obliged to operate in a situation of uncertainty. Merger guidelines were clearer on structural outcomes and conditions for the process than how diverse tracks of education, or managerial approaches, human resource systems, or divergent organisational cultures were to be harmonised. The process was one which had three leaders in the first phase, and then two in the second phase, each heading organisations with different educational products and philosophies, with differing management approaches and decision-making systems. It was a process which demanded cooperative negotiation, but which did not promise a future for all, or indeed any, of them.

The merged university is under new management. A question going forward is whether employees within the now merged institution might become more motivated into the future, bearing in mind the low levels of positive response in this study to questions concerning organisational mission, vision, business objectives, internal processes and areas of employee competencies, and organisational culture and community. Up to 50% of mergers and acquisitions fail to meet the objectives set for them (Cartwright & Schoenberg, 2006). Issues of ‘strategic fit’ such as financial synergies, economies of scale, market access, penetration or protection, product extension and managerial expertise are important but so too are those of ‘organisational fit’ where issues such as IT system compatibility, and divergent cultures and managerial philosophy become relevant. The failure of the Daimler-Chrysler merger is a case in point (Stahl & Mehendal, 2005; Trompenaars & Prud’Homme, 2004).

CONCLUSIONS: INSIGHTS FROM THE INVESTIGATED MERGER PROCESS

The South African government has pushed through a major restructuring of the nation’s higher education system through a series of incorporations and mergers. This study explored this process through the experience of one of the new merged institutions. A brief background of the rationale for the process was provided along with a description of the way in which the process was structured by the institutions involved in the merger. This to provide insight into the ‘how’ dimension of the process and provide some insight into the complexity of the project.

This study indicates that the structural and technical aspects of a merger may indeed be accomplished to a level despite employee doubts over the efficacy of the restructuring plan, low trust in managerial communications and low regard for management leadership of the process. In Goleman’s (2000) terms the management style reflected in this instance could be considered of a coercive or pacesetter nature. The task was driven through on time but employees did not arrive in the merged structure feeling positively about the need for the project, or that it had delivered on its stated objectives. This study provides insight into the complexity of the task faced by leaders tasked with delivering an externally imposed merger within a tight timeframe whose efficacy is doubted by existing employees. The process required leaders of affected institutions to negotiate the process as equals, placing certain obligations and boundaries on their strategic choices, but leaving a great deal of uncertainty for them to deal with. Structural objectives were clearer than those regarding deeper integration of educational tracks or harmonisation of conditions of service. These translated into an inability to deal with tough questions from employees to ‘settle the nerves’

a little. Over and above this, leaders in key positions were tasked with designing and implementing a change process which not all of them would survive. The scenario was one in which cooperative endeavour was demanded in a process which by design saw them placed in a situation of some personal competition while dealing with a high degree of outcome and process ambiguity.

Brache (2002) has pointed out that restructuring is popular because it is highly visible, demonstrates commitment to change, forces people to abandon comfort zones, and can be rapidly operationalised. However, it may not be an appropriate change tool to deal with problems of weak vision and strategy, poorly designed business processes, employee incompetence, poor use of technology or a dysfunctional culture. In an earlier study of higher education mergers Jansen (2002) concluded that while the government stated goals of equity as its rationale for the process, the real imperative was cost reduction. However, outcomes on this front and as regards curriculum effects were dubious with students' interests and views largely ignored, while the impact of mergers had been "devastating for the emotional and professional lives of staff" (Jansen, 2002: 172). Merger processes in British higher education starting in 1992 were subject to harsh criticism in a survey conducted by The Economist (2004) as having given rise to mediocrity in the system.

In summary, it is difficult to create a sense of 'constructive unease' amongst employees who doubt the efficacy of a change plan. Secondly, such doubt erodes perceptions of the value of an organisation's mission and vision. Thirdly, it is important to create plans which help employees see what they must do to make a contribution to organisational goals. Fourthly the design of the process is critical. In this instance difficulties were created for leaders through an externally imposed process with tight deadlines but no clear implementation plan in a scenario in which they were obliged to cooperate as equals in bringing together several institutions with different products, managerial philosophies and administrative systems, knowing that not all would survive. The importance of a credible vision, clear goals and coherent strategy underpin the ability to communicate clearly and coherently, and to build trust with employees.

The findings suggest a low level of motivation in the immediate post-merger phase of the new university. However, the merger process is not finished, and significantly for the new management team, just as salient as the low positive responses to many questions were the 'neither agree nor disagree' responses. This suggests an openness to being 'convinced otherwise' amongst many employees and the prospect that a carefully directed plan of intervention might see a repeat survey return a far more positive set of responses as the new organisation settles down. An important conclusion reached by Stahl *et al* (2005) in their major review of research into mergers and acquisitions was that it is the management of the *postcombination process* which is in fact most critical in effective delivery to merger objectives. Here the most critical decisions affecting employee morale will perhaps be those around harmonisation of compensation and conditions of service, and the degree of integration of academic tracks.

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DIAMOND MINING AS A POSSIBLE STRATEGY FOR TOURISM PRODUCT DIVERSIFICATION IN BOTSWANA

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ABSTRACT

This paper explores the potential utilisation of diamond mining in tourism development in Botswana. It assesses the attractiveness of the country's diamond mining resources as a tool in diversifying the tourism industry, which inherently relies on nature-based attractions. Semi-structured questionnaires were electronically and manually distributed to 175 experts in the mining and tourism industries and academia at the University of Botswana. Interviews were also held with key informants from the Department of Mines and Botswana Tourism Organisation. Findings from this study strongly encourage the development of a diamond museum as the most viable tourism attraction for the country. Experts were also of the opinion that the security of diamonds is a major issue that should be seriously considered by government and policy makers if avenue is to be employed as a tourism diversification strategy. In general the main thrust of the development of diamond tourism attractions as espoused by experts should not only be meant to increase visitation and enrich visitation experiences, but should also broaden the scope of knowledge amongst the local populace. This study therefore has transformation implications for government, policy makers and society.

Keywords: Diamond tourism development; destination attractiveness; expert opinion

INTRODUCTION

Most research and reports on Botswana's economy are focused on diamond mining and its contribution to the economy (Matshediso, 2005; Kapunda, 2002; African Development Bank, 2009), developing tourism (Republic of Botswana, 2000; Republic of Botswana, 1990), agriculture and other sectors. However, such reports are often compiled in isolation from each other and lack the integration that this research intends to address. There is a lack of research into how the key economic sectors of tourism and mining can be integrated so that they complement each other. Modest mining tourism activity exists particularly at Orapa and Jwaneng Mines. These are some of Botswana's largest diamond mines (Tassell, 2007), yet very little potential has been realised in terms of mining tourism development. This is an anomaly considering that Botswana is the world's largest producer of diamonds in value terms (DeBeers, 2009) and is ranked third in volume terms after the Democratic Republic of the Congo and Australia (Newman, 2010). The quality of both the gems mined and the geological kimberlite structures at Jwaneng and Orapa are some of the best in the world (Cann, 2008). For instance Orapa Kimberlite is the second largest in the world (Cann, 2008). A full amalgamation of tourism activities into the mainstream diamond mining economic activity through diamond tourism will help towards economic diversification since mining tourism has the potential to integrate two different, yet potentially related economic activities, such as tourism and mining.

It is on this premise that researchers seek to fully understand the potential utilisation of diamond mining resources for tourism purposes. An expert evaluation of the attractiveness of Botswana's diamond resources as tourist attractions was considered as the main basis of this study. This research is therefore a supply side driven investigation into the potential utilisation of diamond mining as a tourist resource in Botswana. The attractiveness of mining tourism destinations is an important component of the success of mining tourism development as attractions are the core

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of the tourism experience (Gartner, 1996); they are also the major driving force of the tourism industry (Formica, 2000). The suitability of diamond tourism as an opportune path for economic diversification is based on the attractiveness of diamond mining tourism destinations and hence their overall ability to attract tourists. This should also act as an avenue for tourism product diversification in the country as destination attractiveness is a topic that also remains underexplored in mining tourism literature, especially in Southern Africa. This research aims to contribute to the limited amount of literature available. The report summarises recommended strategies that could be adopted to fully promote diamond tourism in the country.

LITERATURE REVIEW

A synopsis of the economy of Botswana

Botswana boasts one of the fastest growing economies in Africa, largely dependent on three economic pillars: natural mineral resources, tourism and agriculture sectors (Botswana Department of Wildlife and Tourism, 2003; Mbendi, 2007; Woods & Sekhwela, 2003). Minerals are a crucially important source of revenue for the country. In the 1960s, minerals grew from nothing to contributing around 60% of Botswana's total government revenue, declining to around 40% in 2005/2006 (Jefferis, 2009), thus completely altering the country's prior reliance on beef exports. Mining has had a substantial impact on the country's Gross Domestic Product (GDP) growth, the balance of payments, government finances, and provision of infrastructure and urban development (Newman, 2010). Botswana leads the world in producing gem-quality diamonds, accounting for one third of the annual GDP. Diamond mining also accounts for 60% of Botswana's mineral output and has contributed significantly to the legacy of the country. A number of towns, Selebi-Phikwe, Orapa, Jwaneng, Letlhakane and Sowa for instance, owe their existence exclusively to diamond mining or nearby mining activity (Jefferis, 2009).

On the other hand, tourism accounted for 3.4% (Table 1) by 2009 and 6.6% of the country's GDP by 2011 (WTTC, 2011). Tourism also contributed 3.5% to total employment in 2011 (World Travel and Tourism Council (WTTC), 2011). Of all subsectors of the tourism businesses in Botswana, accommodation creates most employment. This source of employment is important for marginalised communities especially in rural areas, where other sources of formal employment are scarce. Tourism significantly contributed to foreign exchange earnings of approximately P3 billion by 2009 (Table 1).

Table 1: Direct contribution of tourism to Botswana economy

Gross Foreign Exchange	P3 billion
Earnings	
Tourism Value Added	P1.9 billion
Tourism GDP	3.4%

Source: Botswana Department of Tourism (2009 & 2013) (<http://www.gov.bw/en/Business/Sub-audiences/Investors/Facts-and-Figures/>)

Although witnessing an upsurge in growth, Woods and Sekhwela (2006) argue that most of the revenue generated from tourism in Botswana is not retained in the country due to the fact that most of the tourism companies are owned by foreign investors who repatriate earnings to their countries of origin. Revenue generated from tourism does not always filter down to the poor communities living in remote rural areas.

Economic diversification through tourism

In spite of some of the challenges associated with tourism development, prospects of incorporating tourism as one of the country's diversification options are on the increase and have

become highly prioritised (African Development Bank / Organisation of Economic Cooperation and Development (AFDB/OECD), 2008; Jefferis, 2008; Republic of Botswana, 2000, [http://www.wavespartnership.org/botswana-natural-capital-diversification-tool_2013]). These efforts are strategically significant for countries such as Botswana with a limited economic base. These efforts are even more significant since Government's non-mineral revenue from diversified sectors would never exceed 25% of GDP, required for sustaining government spending (Ministry of Finance and Development Planning, 2007). It is these concerns that have prompted such research in economic diversification efforts on other economic activities such as financial, business services, manufacturing, non-diamond mining and tourism (Jefferis, 2008).

Botswana's rich cultural and historical heritage and abundant wildlife resources provide opportunities for investment in the tourism sector. The Government of Botswana, through the Department of Tourism, has also established a one-stop service centre, The Botswana Export Development and Investment Authority (BEDIA) to expedite processing of licenses, and permits (http://www.wavespartnership.org/botswana-natural-capital-diversification-tool_2013). This, together with the tourism sector's multiplier effect and increased local participation, provides the potential to diversify the economy away from reliance on other sectors. It has to be noted that economic diversification through tourism in Botswana can only be successful if the tourism product range is widened (Republic of Botswana, 2000), to incorporate *inter alia* food tourism, sport tourism and mining tourism (Chipfuva & Mahachi, 2010). Currently these attractions are limited due to the country's topography, which restricts expansion of the tourism product portfolio to natural attractions of scenery, fauna, flora and geology and to those of cultural, historical and archaeological appeal as asserted by the Republic of Botswana (2000).

Botswana has vast natural resources such as minerals, varied species of wild animals, natural vegetation, and a pristine inland delta that is unique. The Okavango is one of the largest inland river deltas in the world (Botswana's Department of Wildlife and Tourism, 2003: 10). This is a huge flood plain situated in Northern Botswana that has no natural outlets to the sea. It is a vast eco-system covering 1 500 sq km of African wilderness (Botswana Department of Wildlife and Tourism, 2003: 10). The Okavango Marshlands are major tourist attractions in Botswana. The Okavango Delta incorporates the Moremi Game Reserve, which is an unique African wildlife paradise and one of the finest remaining wilderness areas in the world (Botswana Department of Wildlife and Tourism, 2003: 14).

The other main attraction is the Tsodilo Hills located south of Shakawe village in the western part of Botswana. These majestic quartzite hills rise 420 metres above the surrounding countryside and, remarkably, are at the highest point in Botswana at an elevation of 1 394 metres (Botswana Department of Wildlife and Tourism, 2003: 16). The hills feature over 500 individual San rock art sites, which support the spiritual and historical significance of these enigmatic hills through the ages. The Hambukushu and San people who live at the base of these hills provide guiding information to the visitors. About 150 km south of Tsodilo Hills is where the range of Aha Hills is found, located in one of the most remote corners of Botswana against the Namibian Border.

The other key tourist attraction in Botswana is the Chobe National Park located in the northern region of the country. This is a wilderness area which is 11 000 sq km in size and offers enormous wildlife diversity. The Chobe and Savute Rivers attract huge concentrations of game, particularly elephant and lion in the highest densities in Africa, and are a source of water for the Chobe Region (Botswana Department of Wildlife and Tourism, 2003: 17).

Besides Chobe and the Okavango Delta, the other key tourist attraction in Botswana is the Kalahari region, situated across the western part of Botswana which occupies over half of the land area of the country (Johnston, 2001). Johnston (2001) further stipulates that there are three principal conservation regions located within the greater Kalahari region, namely: The Central Kalahari

Game Reserve, the Khutse Game Reserve in the central region and the Kgalagadi Transfrontier Park in the extreme south west corner of Botswana.

The Makgadikgadi and Nxai Pan National Parks are the largest salt pans in the world and are also famous tourist attractions in North-Central Botswana. Although Botswana offers partial development in cultural tourism, especially in arts and crafts, the key tourist attraction in Botswana is indisputably wildlife.

This study recognises the importance of the environment as an integral part of tourism development and this refers not only to the natural environment but also to the human environment. These elements constitute the primary resource basis for tourism and mining. Tourism, mining and the environment have a strong relationship and depend on one another. Whilst the environment provides the primary resources for the two sectors, the economic activities provide a means through which returns can be generated. The integration of tourism with mining in the form of diamond tourism is warranted in this case.

The North Group (<http://www.northgroup.biz/team/halsey.php>), define diamond tourism as:

'the economic activity that occurs when diamond products, services, heritage and promotion are linked with travel markets. At its core are tourist product offerings and services that either take place in facilities which promote and interpret one or more components of the diamond industry or involve companies dealing specifically with diamond or diamond related products'.

Diamond tourism is an emergent niche within industrial-based tourism (Frew & Shaw, 1995). Industrial tourism involves visits by tourists to operational industrial sites where the core activity of the site is non-tourism oriented (Frew & Shaw, 1995). In this research mining tourism is an industrial tourism niche activity because mining resources in Botswana are managed as part of the mining and quarrying industry (Central Statistics Office (CSO), 2010). Alternatively, industrial heritage tourism, an amalgamation of cultural heritage and industrial tourism, is the development of tourist activities and industries on man-made sites, buildings and landscapes that originated from industrial processes of earlier periods (Edwards, Llurdes & Coit, 1996). In this case mining heritage tourism as a subsector of industrial heritage tourism is distinct from industrial tourism in that, the mining site is no longer operational. Both industrial tourism and industrial heritage tourism based on diamond mining are potentially viable in Botswana.

In contrast to South Africa, where diamond tourism is prominent (Main, 2000), Botswana has until recently not been able to incorporate diamond tourism in its current tourism product portfolio. This is largely due to the protective nature of diamond operations in the country (Van Wyk, 2009) and the limited variety of prospective minerals (Matshediso, 2005). South Africa benefits more, since it has prolific mineral reserves which Main (2000: 3) described as a "veritable mineral treasure chest". South Africa also relies more on mining tourism because it has developed mining tourism in areas already enjoying tourist activity (Main, 2000). As such, the country has managed to develop and promote mining tourism through a number of general, special interest and educational tours. These include the Geological Kaleidoscope Tour, Gauteng's Historical Gold Tour, the Palaeontology-Anthropology Tour in Kimberley, the Eastern Bushveld Complex, Pilgrim's Rest and the Northern Drakensberg Escarpment and the Diamonds and Daisies Tour in Namaqualand (Main, 2000). These tours are based on two of South Africa's principle mineral resources: gold and diamonds. However, because Botswana's tourism sector is entering a particularly dynamic yet complex and demanding period, especially with the current global economic recession, integration would require flexibility, in order to adjust to change and achieve diversification efforts. Therefore, an investigation into the attractiveness of diamonds as tourist resources in Botswana, taking note of the challenges involved, has been embarked on in this study in order to advocate for the full promotion of diamond tourism.

Destination attractiveness

The ability of a destination to draw visitors depends on its attractiveness. Destination attractiveness is defined as a pulling force generated by all the attractions of a specific area in a certain period (Kaur, 1981, cited in Song, Qi, Qi, Wang & Liu, 2010). Attractiveness of tourist destination mainly refers to the mixture of tourist attractions which can meet the needs of the tourism market or of a tourist attraction group (Song *et al.*, 2010). Other authors (Gartner, 1996; Cooper, Fletcher, Fyall, Gilbert & Wanhill, 2008) have referred to attractiveness, as the pull factors of tourism supply.

Dickman (1997) identified five elements of a destination that appeals to visitors: attractions, access, amenities, accommodation and activities. In addition to the five, Weaver and Lawton (2002, cited in Johnston, 2010) argue that there are nine major pull factors, which include geographical proximity, accessibility to markets, availability of attractions, cultural links, availability of services, affordability, peace and stability, positive market image and pro-tourism policies. These elements have synonymously been referred to as the destination mix (Barrows & Hing, 2006; McKercher, 1999). Although all these factors are important in dictating the success of a destination, this research is however limited to diamond mining resources as attractions in Botswana.

As tourism is a product of supply and demand, Formica (2000) reiterates that there are two ways of examining a destination's attractiveness: by studying the attractions (supply) or by exploring the attractiveness perceptions of those who are attracted (demand). However, very few studies have managed to incorporate both options (Ferrario, 1979, cited in Formica, 2000; Formica & Uysal, 2006). In most studies, an evaluation of destination attractiveness is made from visitors' perceptions and points of view. Limited literature (Lee & King, 2006) exists on the evaluation of tourist destination attractiveness from the supply point of view, using an expert opinion survey, specifically for potential mining tourism destinations. This research fills an essential gap, in that no such research on an evaluation of mining tourism destinations has been undertaken in Botswana.

Diamond tourism attractions

Regardless of Botswana's dominance in the world diamond market, diamond tourism in the country has been relatively neglected. As a contrast, Table 2 reflects the dominance of South Africa's Cullinan and Kimberley mines of the diamond tourism industry, by the range of attractions offered and number of visitors per year. For instance, Kimberley (also known as the Big Hole) has a rich diamond mining legacy that dates back to the late 1800s. The transformation of the Big Hole, worth R50 million, into a tourism facility (World Diamond Council (<http://www.world-diamondcouncil.com/>), has expanded the significance of the mine as a diamond tourism destination in Southern Africa.

Table 2: Famous diamond tourist attractions across the world

Diamond mine/ Place	Type of operations	Types of attraction	Approx. no of visitors (annual)
Cullinan / South Africa	Operating mine	Tours to the operating part of the mine Surface tours offered daily Underground tours Motorised surface mine tours Plant mine tour Historical tours Historical tram rides Historical displays Diamond shopping tour	2.5 million

Diamond mine/ Place	Type of operations	Types of attraction	Approx. no of visitors (annual)
Kimberley Big Hole / South Africa	Disused mine	Guided underground tours Surface tours Visits to miners' huts Exhibition centre Pulsator building Real diamond display Diamond polishing and jewellery operations	100 000
Namaqualand / South Africa	Operating mine	Diamonds and Daisies Tour in Namaqualand	1 000
Argyle Mine / Australia	Operating mine	Guided Tours	8 – 10 000
Antwerp / Belgium	Cutting and polishing centre	Diamond-land Educational tours Diamond museum	100 000
Ramat Gan Museum / Israel	Diamond trade museum	Permanent and revolving exhibitions Lectures and seminars Simulations Demonstrations Films Discussions Hands on activities	25 – 30 000
Amsterdam / Netherlands	Cutting and polishing centre	Diamond factory tours	1 000 000
Amsterdam Sauer Museum of Rare Minerals and Precious Stones and H. Stern Museum / Brazil	Diamond trade museums	Exhibitions	10 000
Royal Canadian Mint / Canada	Minting company	Minting process	Not indicated

Source: Compiled from North Group (<http://www.northgroup.biz/team/halsey.php>)

It is significant to note that although diamonds are not the primary motivator for travel (North Group [<http://www.northgroup.biz/team/halsey.php>]), they are a deciding factor for destination choice amongst travellers and could therefore be used in attracting tourists to Botswana's premier attractions, especially if these are unique. Jwaneng Mine, for instance, produces rare cube-shaped diamonds. The mine, which produced 9.04 million carats in 2009 from 6.06 million tonnes in 2008 is the richest in the world in value terms (De Beers Group [<http://www.debeersgroup.com/>]). Botswana should therefore showcase its diamond attractions to tourists. If well-developed, diamond tourism could become a prime motivation for travel in Botswana.

Diamond tourism attractions fall into a number of categories, from diamond exploration to processing, in operational mines, non-operational mines and other areas of prominent diamond activity as depicted in Table 2. In Botswana diamond production is mainly concentrated at the Orapa Diamond Complex, which comprises of Orapa Mine, Letlhakane, Damtshaa and AK6 (in Boteti) (Tassell, 2007). Mining activity is also prominent at Jwaneng in the southern part of the country. Production at most of these mines is open cast. However as of 2000, after a major expansion of the open-pit mine, the Debswana Diamond Company (50% De Beers and 50% Government shareholding) shifted to an underground operation in some of the mines thus extending the life expectancy of the mine (Van Wyk, 2009). Total diamond production from the four main mines (Jwaneng, Orapa, Letlhakane and Damtshaa Mines) in 2008, was 32.6 million carats (Botswana Department of Mines [<http://www.mines.gov.bw/>]).

Diamond production equipment such as diamond ore crushers could be used as attractions as in the case of Welpa, Australia, where 1 100 tonne electric rope shovels act as mining tourism attractions (Buultjens, Brereton, Memmott, Reser, Thomson & O'Rourke, 2010).

Equipment such as laser diamond cutting machines used for processing diamonds and the process of diamond refinery can also serve as tourist attractions. Video narrations which outline diamond production and refinery techniques could be incorporated within the diamond mineral tour packages offered to potential mining tourists. Orapa Mine already benefits from weekly mine visits (Debswana Orapa, 2010). Other potential attractions that could be developed in existing mines are special exhibitions, hands-on activities at the mines, guest lectures, miners' home visits, diamond gift shops, cafes and restaurants at the mining site.

Although Botswana has no disused diamond mines, tourism can be centred on the development of museums, on mine surface tours and underground visits and interpretative centres (Garcia-Guinea, Harffy & Bateman, 1998). All these attractions and activities could be offered as special interest package tours focussing on geology and archaeology. They could be developed as educational interest tours targeting university students within the Department of Geology at the University of Botswana, and students at other universities within Southern Africa. General underground and surface tours could also be developed. The enclave nature of Orapa and Jwaneng Mines makes them ideal destinations for organised package tours.

Visitor accessibility and operational objectives

Presently one major challenge affecting development of mining tourism is accessibility to the actual mines. Although general mine visits are undertaken every Friday at Orapa (Debswana Orapa, 2010), mine facilities are out of bounds to the general public and anyone intending to visit must receive an invitation directly from Orapa. The host must also apply for permission to receive the visitor (Van Wyk, 2009). This is essential in protecting the diamond industry, but inhibiting if tourism is to be developed at these sites. As a result of such challenges, Orapa only receives approximately 10 visitors per month who come mainly for, *inter alia*, prospecting, recreation, scientific study, environmental monitoring, risk and insurance consulting or on government official visits, as indicated by respondents from Orapa. Therefore compatibility with overall site and management objectives is a major challenge that needs to be addressed.

The extent to which mining tourism can also be developed in operational sites such as Orapa is subject to a number of constraining factors one of which is the expected lifespan of mining sites. If mining tourism is to be fully developed within Orapa Mine for instance, the expected lifespan of the mine must be considered as well. Considering the non-renewable nature of mining operations, mining heritage tourism which involves visits to non-operational mining sites can still be developed beyond the expected life of the site. Tourism in the disused mine (once it becomes non-operational) can be centred on the development of museums, mine visits and interpretative

centres (Garcia-Guinea *et al*, 1998). According to Garcia-Guinea *et al* (1998), visitors to the disused Big Pit, once an important coal field in South Wales, view original buildings and also a museum (the Big Pit Mining Museum) which contains a reconstruction of a miner's home, a large number of tools and photos and some interactive CD-ROM displays. With reference to industrial heritage tourism, Botswana is creating a diamond mining legacy that will be available to future generations, through mining heritage tourism. In a way, mining heritage tourism will act to preserve and protect the unique historical development of diamond mines, mining and refining processes in the country. Since industrial heritage tourism, according to Cole (2004), attracts day visitors, it could become a significant impetus for the development of domestic and urban tourism in Botswana, which is currently lagging, as reiterated by Mbaiwa, Toteng and Moswete (<http://ubrisa.ub.bw/jspui/browse?type=author&value=Mbaiwa%2C+J.E.>). Again, however, this is subject to compatibility with Debswana's (through De Beer's) Closure Policy. The policy, which is aligned with the Anglo American Socio-Economic Assessment Toolbox and ongoing stakeholder engagement work, requires the allocation of closure budgets and ongoing risks review by senior management (Van Wyk, 2009).

As resident communities, especially mineworkers, can be employed as guides and demonstrators at facilities, the willingness of these local mine communities to incorporate tourism into their livelihood, amidst negative impacts of tourism development, should be considered. Tourism can impact negatively on the resident culture of a community, its social values and morals. Incorporating communities in mining operations through tourism will, however, act to boost community morale and involvement. Van Wyk (2009) suggests that the government should stop doing things 'for' communities but emphasise the notion of doing things 'with' communities. Institutional frameworks at community level can also be developed if resident communities are to be involved with tourists and tourism.

Literature has revealed that for mining resources to be viewed as attractions, they require transformation; financial transformation in the form of investment and societal transformation for the recognition of mining heritage amongst communities as tourist resources. The development of heritage tourism according to Ballesteros and Ramirez (2007) should rest on the ability to explore mineral resources for the purposes of tourism. This view relies on the value placed on their heritage by the local society. Does local society value the transformation of mineral resources into exploitative tourism resources? The conversion of mining sites involves a change in the perception of the resources from a productive raw material to a consumptive viewing of the past (Conesa [<https://sites.google.com/site/jcconesa>]). The option of developing diamond tourism should therefore be shared amongst existing communities.

One challenge that constrains the development of diamond tourism, Botswana not exempted, is the issue of security and safety. Similarly, Canadian mines have faced difficulties in retrofitting operations to deal with security, workplace disruptions and workplace safety (Action Plan for the National Diamond Strategy, 2004). In the case of Cullinan, an operating diamond mine in South Africa, visitors are not allowed in the diamond sorting areas for security reasons. In this case visitor accessibility is limited due to operational objectives. Additionally mines like Argyle, in Australia, expose visitors to monitored surveillance cameras and body searches where visitors sign a waiver of acknowledgement before the tour. Whilst tourists and travellers feel comfortable with heightened surveillance (Morgan & Pritchard, 2005), especially at sporting events, Patton (2000, cited in Morgan and Pritchard, 2005: 119) has suggested that "surveillance of individuals can impact on their sense of freedom and concept of self image, respect and determination, regardless of their actual behaviour or conduct". The development of diamond tourism is therefore prone to numerous challenges that should be addressed before this form of tourism is fully used as an option for tourism diversification.

METHODOLOGY

An expert opinion survey was adopted in this research as the main research design. Expert panel evaluation is the most common method used for evaluating destination attractiveness (Formica, 2000; Gartner, 1996). Liu (1988, cited in Formica, 2000) claims that the use of experts to measure destination attractiveness has several advantages over the investigation of visitors' opinion. Firstly, expert opinions are based on years of observations and a consistent interaction with visitors and are therefore more reliable. Secondly, they are more efficient than investigating visitors' opinion since experts can be surveyed in a relatively brief period of time whereas a large-scale sample is needed to conduct visitor opinion surveys. Due to their professional involvement and permanent presence at destinations and in destination management issues, experts have a solid knowledge of the entire portfolio of existing mining tourism attractions.

The methodology adopted in this research investigated the potential utilisation of diamond attractions and the challenges associated with the development of such a form of tourism in view of aspects of visitor safety, diamond security and compatibility with mining operations. In light of such issues, this research was based on both primary and secondary forms of data. Primary data was secured from questionnaires. To substantiate the research findings, interviews were also held with two key personnel in the mining and tourism industries: the Marketing Manager of Botswana Tourism Organisation and the Deputy Director of Operations and Development in the Department of Mines. Secondary data was obtained from documents such as the Botswana Tourism Master Plan of 2000, Department of Mines Annual Report of 2008, Anglo-American Company Fact Book of 2008, Botswana's Macroeconomic Outline and Policy Framework for National Development Plan 10 Draft of 2007, and various pieces of literature on mining and tourism.

Private and public sector representatives from both the mining and tourism industries were conveniently sampled for the questionnaire survey. Inferences were drawn specifically from Debswana, De Beers Botswana Pty Ltd, Department of Mines, the Diamond Hub, Teemane and SAFDICO Diamond Manufacturing Companies and Orapa Mine. Tourism experts were drawn from the Department of Tourism, Botswana Tourism Organisation (BTO), Hospitality and Tourism Association of Botswana (HATAB), member organisations such as tour operators, hotels and lodges. Academic experts from tourism, geology and environmental science were also drawn from the University of Botswana and Limkokwing University of Creative Technology. A total of 175 semi-structured questionnaires were emailed and hand delivered between January 2012 and November 2012. Twenty of these were specifically destined for Orapa and Jwaneng Mines.

Four types of questionnaires with three sections were designed. The first was for non-academic mining experts residing outside mining towns. The second one was for non-academic tourism experts, whilst the third one was for academic (in tourism, geology and environmental science) experts and the last one was designed specifically for Orapa and Jwaneng Mine Managers, these two being the two most prominent diamond mines in the country. The first three types of questionnaires were similar in the last two sections. What differed was the first section, on demographic information, in particular the position held at work, which was open ended for non-academic mining and tourism industry experts but semi-structured for academic experts. The fourth type of questionnaire was specially drawn for Orapa and Jwaneng Mine Management due to the nature of operations at the site. Orapa Mine for instance operates mine tours on a small scale. As such the questionnaire specifically sought to identify other attractions besides tours that the mine offers or could offer amongst other issues, in the second section.

Currently the country has not yet developed a framework for the evaluation of attractions, specifically diamond tourism attractions. Therefore the evaluation in this research was based on the experts' levels of agreement, on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), to statements developed in the second section of all questionnaires.

Table 3: Typology of mining attractions

Underground tours
Surface tours
Guest talks off site
Educational rooms / facilities
Hands-on activities
Films and videos plays
Special exhibitions
Gift shop
Cafe / restaurant
General amusements

Source: Cole (2004)

Cole (2004) divided mining attractions in the United Kingdom into ten categories as indicated in Figure 1. This model was modified in this paper to include tours to exploration sites, sorting sites, tram rides, diamond museum (instead of special exhibitions), lectures and seminars (instead of educational rooms / facilities), simulations and demonstrations but excludes guest lectures off site.

The third section of the questionnaires, which was open ended was used to reveal the feasibility of developing mining tourism in Botswana in terms of visitor accessibility, issues of safety and other challenges associated with diamond tourism development. The investigation of visitor accessibility is a crucial component of destination attractiveness (Formica, 2000). Some of the questions posed in this research regarding visitor accessibility were:

- Do operational objectives allow organised visitor activity?
- How safe would visitors be when visiting mines?
- Is the mining community willing to accept visitors having access to their lifestyle?

The IBM Statistical Package for Social Sciences, version 19 was used to analyse data quantitatively. Findings from the second and third sections of the questionnaire, analysed thematically, were merged with the first section and presented qualitatively.

DISCUSSION OF STUDY FINDINGS

Respondents' demographic profiles

With 106 returned questionnaires from the 175 sent, the survey yielded a 61% response rate, regardless of timely follow-ups through electronic mail on the University of Botswana's intranet, and continuous telephonic and email follow-ups. Of these respondents, 68% were male whilst 32% were female. The majority (41%) were aged between 30-39 years of age whilst 32% were between 40-49 years, 17% were above 50 years and 10% were below 30 years. Most of the respondents (56%) surveyed were academics. Most of the respondents (50%) have been in the employ of their organisations for more than 5 years, whilst 38% had worked for 2-5 years. The remainder (12%), have worked for less than 2 years.

Thirty percent of respondents held a master's degree and 29% of the respondents were bachelor degree holders, whilst 23% held diplomas, 11% held PhDs and 7% were professional certificate holders.

Development of diamond attractions

This research sought to identify the main diamond resources that could be integrated with tourism with the aim of attracting visitors. Based on the mean ratings (Table 3) and frequency of responses, findings are presented below.

Diamond museums

At a mean rating of 4.37 (Table 3), experts strongly viewed diamond museums as the most viable attraction that could be used to develop diamond tourism.

Table 4: Support of development of mining attractions by tourism and mining experts in Botswana

Type of Attraction	N	Mean	Std. Deviation
Diamond museum	106	4.37	.841
Surface tours to production site	106	4.29	.730
Films	106	4.23	.918
On-site gift shop	106	4.19	.841
Lectures and seminars on diamond production	106	4.16	1.015
Simulations	106	4.08	1.011
Tours to diamond sorting sites	106	4.04	.872
Cafe / restaurant	106	3.99	1.009
Demonstrations	106	3.91	1.028
General amusements	106	3.89	1.166
Tram rides	106	3.86	1.009
Underground tours	106	3.73	1.083
Tours to exploration site	106	3.51	1.165
Hands on activities	106	3.50	1.347

The majority of respondents surveyed (84%), supported the development of a diamond museum. One respondent further enhanced their answer by stating that a diamond museum would be the most viable project that would attract tourists and “*sustain the economies of the diamond towns after mining has ceased*”. According to another, a diamond museum would not only “*boost domestic tourism*” but it would also allow Botswana to “*have knowledge of their minerals and how they are mined*” as stated by two other respondents. In some cases, it would be advisable to use a disused mine for tourism activity as suggested by one respondent from the Department of Tourism. For those in support, 88% were of the view that this would minimise the security risk associated with diamonds.

Although the concept of a diamond museum is not new to Botswana, plans of its construction should seriously be implemented. A diamond museum would not only attract tourists, but would also preserve the legacy of the country which has inherently relied on diamonds for over four decades.

Obsolete mining machinery, equipment and artefacts can be exhibited in educational rooms or as part of an organised exhibition event. Mines could develop thematic exhibitions which are centred on diamond mining science, technology or trade. Diamond production equipment such as diamond ore crushers also serve as attractions. Laser diamond cutting machines used for processing diamonds and the process of diamond refinery can serve as tourist attractions. Mining tourism can also be incorporated in non-operational diamond mines, in the form of diamond museums, when these are no longer in use.

Surface and underground tour packages and tram rides

Diamond tourism could be used to supplement current tourist excursions to the Orapa Game Park and the Jwana Game Park (Jwaneng) through special interest educational tours along the fields of geology and archaeology developed into surface tour packages for tourists. Diamond

tourism engages tourists in an educational experience about the diamond mining process (Frew & Shaw, 1995). The enclave nature of Orapa and Jwaneng Mines for instance, makes them ideal destinations for organised package tours. As such tours can be used to develop educational diamond tourism targeting university students within the Department of Geology at the University of Botswana, engineering students from Botswana International University of Science and Technology (BIUST) and students at other universities within Southern Africa. Tours to diamond exploration, production and sorting sites could richly enhance students' academic experiences. However, it is imperative to note that unless the tourist attractions are significantly unique, and unless travel serves specific interests as in educational tourism, mining tourism attractions have to be developed to complement the main attraction in Botswana.

Most experts (88%) supported the full development of tours to the production site (mine), compared to tours to the sorting sites (88%), underground tours (when available) (63%) and exploration sites (59%). The introduction of tram rides was supported by 68% of the respondents; however, one respondent suggested that they be introduced "*over less sensitive parts of a mine or over disused areas*".

On-site gift shops

Although retail trade in rough diamonds is prohibited by section 32 of the Precious and Semi-Precious Minerals Act Chapter 66:03 (Department of Mines, 2008), products of diamond beneficiation in Botswana can be made accessible to the general public in gift shops, not only located at popular shopping malls, but at the mining sites as well. This is in support of the call for Southern African Development Committee (SADC) governments to develop the capacity to have "control of mineral resources in processing, manufacturing and marketing the minerals that are currently being undertaken beyond national borders" (Van Wyk, 2009: 76). The gift shops where jewellery is sold become an attraction in themselves. Seventy-six percent of all the experts, at a mean rating of 4.19, were of the opinion that gift shops at the mining sites could be developed for diamond tourism. Of these, 53% indicated that mine management would allow such an activity, whilst 26% indicated that mining activities would not be disrupted. Another 11% indicated that there would be no danger to visitors' safety. The remainder (10%) were of the opinion that this would not disrupt any mine administration.

So whilst it might not be possible to promote travel solely based on diamonds as wildlife is regrettably the main tourist attraction to the country, prospects of availing diamond sales facilities within the major tourist destination centres in Botswana could be maximised. This initiative would boost revenue generation from tourism but efforts should be made to ensure that sales are transparent and security is heightened.

Reasons cited by those who disagreed with the development of on-site gift shops (2%) were that this would be too risky for the security of diamonds (100%). One respondent clearly stated that "*as a global producer of diamonds, there should be a diamond sales facility, but in tourist areas to facilitate the sale of diamonds on a small, efficient scale, not at the mines as this poses serious security risk*".

Films, lectures, seminars and demonstrations

Eighty five percent of the respondents supported the development of films related to diamond exploration and production. Eighty one percent and 72% of the respondents were also supportive of lectures and seminars and demonstrations respectively. However one respondent believed that "*these would be more suited to educational rather than leisure tourists*". The Deputy Director of Operations and Development at the Department of Mines also indicated that demonstrations of diamond production or diamond related activity would not be a prudent use of equipment,

which is usually expensive. However, the historical development of Orapa Kimberlite Pipe, as discovered by Dr Gavin Lamont and the geologists, Manfred Marx and Gim Gibson when re-told to communities, could preserve the historical legacy of Orapa Town and its famous mine. Video narrations and films, which are less costly than demonstrations which outline diamond production techniques, could be incorporated within the diamond mineral tour packages offered to potential mining tourists.

Hands-on activities and diamond production simulations

Diamond mining processes could be developed as tourist attractions in the form of hands-on activities. Botswana engages in extensive mineral exploration activity that can also form the basis of mining tourism. Previously, exploration was based on the use of soil sampling and the detection of indicator minerals, whilst new technology has involved the use of airborne gravity detection techniques which measure variations in the earth's magnetic field caused by mineral deposits (Jefferis, 2009). Although it could be costly to demonstrate prospecting activity outside normal operations to tourists, the new technology has encouraged further prospecting, increasing the chances of further significant mineral discoveries and increasing the opportunity of creating a niche activity for potential mining tourists at a premium cost. The diamond beneficiation project, which is expected to boost diamond exports and add impetus to economic growth (AFDB/OECD, 2008), can also attract tourists. Beneficiation is a process of promoting, developing and implementing value-adding diamond related activities (DeBeers, 2009). These activities include the sorting, valuing, cutting and polishing of rough diamonds which visitors could be involved in.

Five percent of all respondents supported the promotion of hands-on activities. Of the remainder, most (71%, n=20) were not in favour of such an activity, citing the risky nature of diamond mining. Although hands-on activities were not favoured, simulations could be used as an alternative to engage tourists in diamond-related activities. Seventy eight percent of the experts were supportive of the introduction of simulations. However one respondent suggested the introduction of simulation halls within the mining towns.

Safety of visitors is also a challenge if any hands-on activities are to be embarked on. It is understood that visitor safety policies are in place within the mines. However these policies should be tailored to tourists' expectations. For instance, whilst surveillance is prudent in order to protect diamonds from theft, such a measure is controversial in tourism psychology and should be undertaken with full disclosure to visitors.

Cafes, restaurants and general amusements

Whilst cafes or restaurants and general amusements do not form direct diamond tourism attractions they are important in enhancing travel associated with diamonds. A well developed restaurant concept in conjunction with a tourist destination could be used to attract tourists. Seventy one percent of respondents supported the development of cafes or restaurants close to diamond mining sites. Amusement parks could also be developed in the mining towns as espoused by 69% of the respondents. The Deputy Director of Operations and Development at the Department of Mines also supported the development of amusement parks in the townships amongst the populace.

CONCLUSION

In light of the findings, and in view of respondents' opinions in this study, it emerged that a diamond museum would be the most appropriate tourist attraction for Botswana that would accord communities financial and societal transformation. It is for relevant stakeholders and policy makers to consider this finding. Significant to note, however, is the risky nature of Botswana's diamond industry, warranted by the high value of diamonds it produces. As such, the development of diamond museum facilities and associated exhibitions should follow strict adherence to safety and security policies.

This is a preliminary study that should open up further research in areas related to industrial tourism as an economic diversification option for the country. As this research is limited to a supply side analysis and expert opinions, further research on demand side characteristics for mining tourism should be investigated. This will also help develop domestic tourism which is currently underdeveloped. This research is therefore significant in the development of domestic tourism in the country and international niche related travel.

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DEVELOPING LEADERS THROUGH THEIR UNIQUE HISTORIES: A LEADERSHIP DEVELOPMENT INSTRUCTIONAL MODEL (L-DIM)

E.A. Harewood¹

ABSTRACT

Leaders are faced with many challenges and at the same time they are expected to lead sometimes without any acknowledgement of their unique histories which can give them perspective about themselves. In some situations leaders find themselves in situations where the results are not helpful and can lead to derailment. Therefore, this article focuses on developing leaders through their unique histories using the Leadership Development Instructional Model (L-DIM). The L-DIM is designed to trace histories and to examine how the strengths and weaknesses embodied in those histories can assist or impede leaders. Thus, the Leadership Development Instructional Model (L-DIM) will be used as a leadership development intervention to help leaders better understand themselves through their histories and to trace how these might have evolved and influenced their chosen leadership definition, leadership philosophy and behavior and leadership style that ensue from these.

Keywords: Leaders' history; leadership development; leaders' mindsets; Leadership Development Instructional Model (L-DIM), leadership definition; socialization

INTRODUCTION

When organizations fail, or operate marginally, who or what should be blamed for such failure? Quatro, Waldman and Galvin (2007) seemed to think the answer lies partly in the way in which leadership development activities have been assessed for efficacy. As a result many failed approaches to leadership development continue to be tried without knowing the efficacy of these activities. In fact, many "leadership developments and practices" have traditionally been quite narrow, with a decided focus on the analytical realm of leadership (Quatro *et al*, 2007). As a result, "occupational frauds, the most costly form of fraud, are most often committed by executives and upper management" (Legault, 2012: 1). This may be as a result of using the wrong leadership development methodologies instead of those that would deepen leaders' understanding of themselves and would prime leaders for leadership in a world full of complexities. They would become more flexible and resilient but with the right set of compasses needed to make good decisions.

Bauer (2010: 13) established that "estimates vary depending on the organization, but the cost of a single failed executive level manager can be as high as \$2.7 million" which can cripple any organization. Romanowska, Larsson, Eriksson, Wikström, Westerlund and Theorell (2011: 78) held that "leaders and managers have serious responsibilities for the wellbeing of organization and people" so constant changes in the leadership can adversely affect organizations' capacity to fulfill their mission and vision and achieve or maintain a competitive position.

The importance of leadership to organization is undeniable, that is why selecting, developing and retaining suitable leaders is given so much attention in today's volatile global environment (Murphy & Ensher, 2008). Du Toit, Veldsman, and Van Zyl (2011); Legault (2012) provided corroboration for this statement by stating that the complexities in organizations today especially with the globalization effects and the need for rapid and continuous change calls for leaders who

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are well-developed cognitively, analytically and have the rudimentary measurable skills that can steer their organization for a long time. But in retrospect, the failure of some leaders was due to too much emphasis on the “*instrumental knowledge and cookbook methods that give leaders a false sense of self-confidence and a dangerous feeling of being able to manipulate and control reality and human beings within standard procedures; the human qualities of compassion and empathy may disappear when such models are applied*” (Romanowska *et al*, 2011: 78).

Leadership research and review of literature on managerial derailment seem to support the idea that negative personality traits are catalytic of leaders’ failures (Harms, Spain & Hannah, 2011; Legault, 2012). Therefore, a deeper assessment of prospective leaders can properly map their strengths, weaknesses and areas for future development. This can help recruiters make the right recruitment decisions and aid training and leadership development professionals in targeting their intervention to the specific developmental areas.

Du Toit *et al* (2011: 1) reported that the “incidences of derailment and burnout are increasing... mainly due to the more demanding nature of the position and the inability of boards to select the right people to fill these positions”. Therefore, there is an urgent need to select more qualified candidates for leadership roles as the evolution of a leaders’ life can lead to all kinds of behaviors that can sometimes produce negative outcomes, including derailment if problems are not identified, addressed or proper coping mechanisms are not developed to manage the known derailers. Romanowska *et al* (2011: 79) pointed to “laissez-faire leadership [which] has strong negative effects on workplaces and is clearly the worst leadership style with regard to poor mental health among employees”. For example, if leaders with laissez-faire inclinations are missed in the vetting process, the organization will suffer as a result and these leaders may not even be aware of the manner in which they are behaving. These leaders may be interfering with the Esprit de Corp of the organization and in some situations such leaders may not get the correct kind of intervention to resolve those challenges. This can encourage behaviors in others that are difficult to remedy and may lead to severely damaged individuals who live these behaviors in the organization. This behavior can then be transferred to leadership roles and remain unresolved.

Hogan, Curphy and Hogan (1994: 6) established that “psychologists have known for some time that measures of cognitive ability and normal personality, structured interviews, simulations, and assessment centers predict leadership success reasonably well”. Still, Bauer (2010: 1) pointed out that “in Fortune 500 companies alone, about 500,000 managers take on new roles each year, and overall, managers begin new jobs every two to four years... half of all senior outside hires fail within 18 months in a new position”. This is despite the expenditure on leadership development of between 36 and 60 billion USD annually worldwide (Romanowska *et al*, 2011). Riggio (2008: 383) thought that reasons for spending so much on leadership development include “the perception that leaders play an essential role in the operations of organizations and that leadership skills are more abstract (in comparison to training “line” workers), complex, and difficult to learn”. No wonder Pordeli, Sepehri, Baker and Burke (2008: 11) indicated that “looking for new hires and finding the right candidates with suitable skills and appropriate professional experience has always been a challenging experience for the recruiters and HR departments”. These issues add a level of complexity to leadership development that suggests that an alternative leadership development model is fitting to develop leaders to lead beyond the current situation and that they learn to lead with a futurist mindset. This can only happen by identifying leaders’ strengths and weaknesses and which can be the starting point for development of leaders.

Legault (2012: 1) stated that “the problems facing organizations today call for a new kind of leadership. Recent leadership literature proposes new leadership approaches to better meet today’s

global challenges". The "changes in global culture, development in the world of ideas, and the transformation of consciousness are forcing leaders to redefine their roles, learn new skills, and develop new capacities" (Burn, 2011: 111). Therefore, "the leaders of the future will have to be extraordinarily mature to be able to cope with the demands placed upon them" (Du Toit *et al*, 2011: 1). Hence, the need for intentional and targeted succession planning and congruent leadership development interventions is crucial for organizations to flourish and to have the right kind of leaders in place for the changing times. This can only happen by reframing the leadership development models so that they are designed to map the strengths, weaknesses and the developmental gaps of leaders in an attempt at developing the whole leaders for the changing operating environment. A developing leader "is adaptive and mediated by emotion. Instead of an over-arching, singular executive self, wholeness stems from contactful, affiliative dialogue among disparate aspects" (Elliott & Greenberg, 2007: 241), by making contact with all aspects of who these leader are.

Brungardt (1997: 81) asked: "Are leaders born or made? If the answer is made, then can leadership be taught and learned"? Still, not everything leaders were taught or learned is suited and Kits de Varies and Engellau (2008) argue that many management scholars studying the behavior of people in organizations not only don't know where to look, but often don't know how. "Far too often they miss things that are hidden in plain view" (Kits de Varies & Engellau, 2008: 3). However, what is certain is that the cost of each failure is enormous and leads to: major impacts, huge discontinuities and wasted investment. The process of leaders' life transitions has such tremendous ramifications, that there is a need to understand why such situations happen so regularly and how companies and leaders can minimize the risk of derailment. The answer to why leaders fail so regularly rests with the leaders themselves and these should be explored to help leaders lead more authentically and effectively by deepening their knowledge of themselves. In so doing leaders are better positioned to search for, and leverage, revealed strengths to increase efficiency and effectiveness. By heightening their knowledge of their weaknesses they can lessen these by learning how to control them or even eradicate those behaviors that can potentially lead to organizational dysfunction and derailment.

Structure of the paper

Leaders who fail to behave in ways reflective of their personality and which can limit or derail their careers. These flaws include arrogance, aloofness, perfectionism, insensitivity, selfishness and betraying the trust of others. People tend to do things in the same way they experience them, thus creating similar results. Thus, if leaders have had healthy or marginally healthy interaction with the early leaders in their lives, it is possible that those patterns would be repeated and if the unhealthy ones are not corrected, these can create all kinds of dysfunctions in organizations. That is why it is so important to understand some of the less obvious factors that make up leaders in their most authentic form. This paper takes a multidisciplinary approach to developing leaders by including aspects of history, education, leadership, psychology and business to explicate the origins of leaders' leadership definition and philosophy.

It is believed that helping leaders to lead with a deeper level of self-knowledge will provide the basis for greater understanding of their strengths and weaknesses through their unique histories which can help individuals overcome many personal challenges. This will better equip them to manage their individual propensities in varied leadership-followership situations and may even heighten their overall leadership competencies. This paper is divided into five sections which examine: 1) the trajectory of a leader's life; 2) leaders' histories; 3) leaders' mindsets; 4) definition of influences on their leadership philosophy; 5) instructional intervention; 6) some concluding remarks for how leaders can learn more about themselves, and the associated consequences, by tracing their histories.

THEORETICAL FRAMEWORK

Tracing a leader's life

Heifetz and Linsky (2004: 33) stated that “leadership often involves challenging people to live up to their words, to close the gap between their espoused values and their actual behavior”. But this does not all happen at once but takes place over time as leaders deepen their understanding of themselves and their propensities in context. In fact, Day and Sin (2011: 545) state that “the development of leaders and their respective leadership skills, competence, and effectiveness evolves over time, possibly traversing much of the adult lifespan”. Therefore, tracing the developmental progression and the unique propensities of leaders to revert to their original sources can assist leaders in strengthening their strong points and mitigating their weak areas with greater self-knowledge and focus. This “would involve maximizing gains and minimizing losses, resulting in an overall positive trajectory; however, if losses exceed gains then the overall trajectory would be negative” (Day & Sin, 2011: 545). An in-depth knowledge of all the things that make leaders who they can be is an important area of comparative advantage for organizations as a leadership development strategy as interventions can be more targeted and better tailored.

Lichtenstein, Uhl-Bien, Marion, Seers, Orton and Schreiber (2006: 2) insisted that “leadership is more than a skill, an exchange, or a symbol – leadership emerges through dynamic interactions” between leaders and followers which can produce very diffident outcomes of relational interactions among agents”. This interchange between leaders and followers reveals all kind of behaviors, some of which produce unhealthy results which can be major derailers as leaders bring everything about themselves to their leadership role and in some cases some interactions can be toxic.

Harms *et al* (2011: 495) contended that “scholars have also begun to recognize the importance of character flaws as determinants of both leader performance and responsiveness to developmental interventions”. Burke (2006: 91) believed that “leaders that fail behave in ways reflective of their personality that limit or derail their careers”. Some of these flaws as arrogance, aloofness, lack of support for subordinates, perfectionism, insensitivity, selfishness, betraying the trust of others, extreme ambition, emotional instability and poor relations (Shafer, 2009; Burke, 2006). These inconsistent character traits can weaken any leader, hurt and discourage subordinates, and hinder the progress and proper positioning of any organization. If these derailers can be traced to their source, targeted interventions can be applied that can avert derailment. Still, derailed leaders can also turn their careers around and “get back on track if they are willing to make an honest self-appraisal of both their strengths and weaknesses” which can best be achieved by tracing the leader's journey to their leadership role, including their socialization journey (White, 2009: 5).

Some leadership development experts view leadership development as a “steady process, but one that is punctuated by these “high-impact experiences” that lead to accelerated leader development” (Riggio, 2008: 386). Still, “the best leadership laboratory for learning adaptive leadership is life itself. Leadership development at its best happens when the reader discovers the many opportunities to exercise adaptive leadership in the different areas of his or her life” (Gyuroka, 2009: 147). Leaders are only seen as leaders if they know themselves, their strengths and weaknesses, but more importantly they are able to fit who they are as leaders correctly into the leadership context and this can only happen through adaptive leadership approaches. It is in doing so that leaders are recognized and respected as leaders because of their deeper understanding of themselves. White (2009: 5) pointed out that “not only can strengths become weaknesses, but when... [applied] in different cultural situations, they are simply inappropriate and counter-productive”.

Heifetz, Grashow and Linsky (2009: 2) pointed out that “the skills that enabled most executives to reach their positions of command – analytical problem solving, crisp decision making and the articulation of clear direction – these can get in the way of success”. Therefore, under-

standing leaders' strengths and weaknesses might be the best way to appropriately develop leaders because if leaders know what they possess before taking on their leadership role, they can be developed in more targeted ways to suit the needs of the role and the context. This kind of leadership development can allay derailment and provide organizations with suitable leaders who can steer the organization to a long healthy future. Leaders bring many attributes to their roles and knowing what these things are can be a real comparative advantage for organizations, especially in times of great economic uncertainty where what is needed is unpretentious leadership.

Brill and Worth (1997: 9) held that “today, the function of leadership continues to be a primary concern of every major organization, many of which spend vast sums of money training executives to become effective leaders”. The complexities of globalization are making leaders' lives more challenging and stressful and further marginalizing the working class (Sperry 1993; Lorde, 2005). Added to these, “humanity is facing life-threatening situations such as climate change, terrorism, economic instability, religious conflict, food insecurity and water shortage” and requires solutions outside of the traditional political, economic and military domain (Burn, 2011: 107). All these events present a different set of testing for leaders and they must be adequately primed if they are to be suited to attend to these issues with foresight, compassion, resolve, and with the least amount of stress along with a greater level of self-awareness and self-management acumen which requires a more holistic style of leadership development.

The authors Lichtenstein *et al* (2006: 2) ask: “If leadership is not “in” a leader or “done by” a leader, how are we to insightfully conceive exactly what constitutes leadership and where it originates from?” Peacock and Holland (1993: 367) stated that “life reveals histories and culture as live” yet there are limits as to what stories reveal (Vinegar & Danes, 2007). Kierkegaard is quoted by Billow (2011: 297) as saying that “life can only be understood backwards, but it must be lived forwards”; therefore, there is a natural curiosity for one to know the composition of one's life histories and how these have shaped leadership disposition. Billow (2011: 298) further emphasizes this point when he quotes Boon (1962) who “reasoned that we share a particularly human need, to learn about the psychic world: to achieve awareness of our psychology and the psychologies of others”.

All elements of leaders' life encounters make up leaders' histories and must be harnessed if they are to fully develop into the leaders they are capable of becoming. McAdams and Olson (2010: 519) held that in “taking a life-course developmental perspective on personality... [and] psychological individuality, from the temperament traits that arise in the first months of life, to the self-narratives that adults construct to make meaning out of their lives” can be traced. Tracing leaders' propensities can also be useful for helping leaders develop from these experiences which can heighten their level of compassion, apathy, ethical fortitude and overall authenticity which can have a positive impact on followers' mental and overall well-being and lessen the incidence of derailment among leaders and the desire of followers to leave the organization (Romanowska *et al*, 2011).

Elliott and Greenberg (2007: 244) acknowledged that “emotion is central to human function, dysfunction and change, and thus an appreciation of the forms, structure, and variety of emotion processes is an essential basis for practice” of leadership. Gherkin (2009: 222) seemed to think that a fundamental “problem with most management education today is that it is primarily oriented toward analytical conditioning. Thinking is rewarded more than intuitive development. Quantitative analysis is often more valued than qualitative observation”. Billow (2011: 298) supported the idea that future leaders need to be more aware of emotional experiences and have an awareness of concrete objects that are achieved through the sense impressions, because lack of such awareness implies a deprivation of truth and truth seems to be essential for psychic health”. Kits de Varies and Engellau (2008: 5) believed “that underlying mental activity and behavior needs to be understood

in terms of conflicts, defensive behaviors, and emotions” so by facilitating the tracing of leaders’ histories, they can be more suitably developed into the leaders they are capable of becoming.

Garot (2007: 50) maintained that for “over fifty years, social scientists have increasingly turned from essentializing identity as a fixed characteristic to understanding identity as performance... identity is increasingly recognized not as an obdurate quality but as a resource whose relevance is strategically, contextually determined”. All through life, people’s existence is punctuated by a series of events and these consequences help shape and provide insight into a person’s identity which if understood can serve as foundational content in leadership development activities (Garot, 2007). Some of these experiences can be planned for and others are not anticipated; some are good, others bad or indifferent. Prus (2008: 71) said “because human group life revolves around activities, it is especially instructive to attend to the things that people do and the ways in which they do these things”. Therefore, it is fitting to account for “anticipations, deliberations, acts, interchanges, obstructions, and adjustments” in attempting to capture and understand a leader’s path to their leadership role as part of crafting a developmental plan (Prus, 2008: 71).

Muehlenbein and Flinn (2011: 153) acknowledged that “the interactive development of human life history traits may be understood by considering the context in which they could have evolved”. Skinner (2005: 255) echoed similar sentiments when he said that “the accumulation of behavior is made possible by the growth of a social environment which forces modern [persons] to respond to differences which only very slowly gained control of the behavior of his ancestors”. The behavior amassed through socialization experiences does not end with the specific socialization encounter; in fact it persists beyond that experience and in many ways influences leadership behavior. In some situations, certain leaders may have various bio psychosocial vulnerabilities that may become major impediments that require not only understanding, but immediate redress (Sperry, 1993). Sperry (1993) who quoted Speller (1989) established that alcoholism, drug abuse, depression, bipolar disorder, and schizophrenia, workaholic, stress-related disorders, work dissatisfaction, under-employment and success addiction as the most common forms of impairment among leaders.

Reese (2003: 3) points out that leaders sometimes fail because they “mismanage the personal transition of family and new community, generally by throwing themselves feverishly into their new job, and end up with combinations of stress and dislocation in their lives” among other things. All these noted operant dysfunctions originated somewhere so by understanding their origins leadership development interventions can be more impactful, effective and leaders can be more effectual and less stressed. Behaviors of any kind generate an effect on both the originating and outside environment long after the applied stimulus. Thus, leaders who may have had dysfunctional interactions or might have received all kinds of inaccurate messages in their socialization journey tend to produce similar effects in subsequent interactions, sometimes unknowingly (Chiesa, 1992).

Leaders’ histories

If life is to be lived forward and understood backward there are aspects of the past that can inform what is happening in the present and these should be consulted in order to deepen one’s understanding of the phenomenon or behaviors they display. Whether leaders are born or made, they all have their own unique histories and embodied in those histories are strengths and weaknesses, some of which may be latent and toxic or harmless and useful (Marques, 2009). Curran, Seashore and Welp (1995) referenced Bates (1991) who presented the concept of the unknown self using the Jungian notion of shadow to enable people to claim their shadow.

Marques (2009: 309) believes that “leaders are made by life and the experiences he or she obtained while growing up”. In fact, “parents are the most important part of the child’s life and can determine, to a large extent how the child turns out” (Sahgal & Pathak, 2007: 266). The

messages received from parents, teachers and other caregivers can be the cornerstone of what defines a leader. This can be good, bad or indifferent given what was experienced in the formative years so it is important to trace behaviors to examine the evolution of these behaviors and to find where they fit or don't fit so that the appropriate development intervention can be explored to further develop healthy behavior or correct incongruent behavior. Shamir and Eilam (2005) took the position that by empowering leaders to trace histories, they are able to construct, develop and revise their stories which can provide a meaningful system from which they can begin to own the lost part of themselves which creates a platform for greater authenticity.

Mettälä (2012: abstract) postulated that both rationality and emotionality coexist in organizational interchanges, therefore "there is an increased awareness of the importance of engaging the whole person with cognitive, affective and experiential elements, rather than one part in learning situations". Baddeley and Singer (2007: 177) referenced Erik Erikson (1959, 1963, 1968, 1982) who "understood that the construction of a coherent and purposeful self-concept, or what he called identity, is a psychosocial process". Therefore, it is only by examining the "biological, psychological and social dimension of leaders that one might truly begin to systematically and meaningfully understand the makeup of a leader's identity which is important in helping leaders become fully developed. Fully developed leaders may have a less negative effect on the workplace because they have a deeper sense of who they are and their behaviors are viewed as more emotionally responsive as they deal with uncertainty, ambivalence or anxiety" (Romanowska *et al*, 2011: 78).

Turner (2010: 20) in studying 376 coaches and the strategies employed in their interventions "felt an exploration of unconscious processes could lead to an understanding of the origins of behavior habit." Still one interviewee felt that discussing the past was a trap and was irrelevant in leadership development relationships. McAdams (1998: 1126) said that "since the time of Freud, psychologists of many different stripes have endeavored to collect and analyze the stories people tell about their lives in order to help people understand themselves better, to relieve suffering or alleviate symptoms, and to enhance the collective, scientific understanding of human behavior and experiences". Still, the recollection of stories and experiences are only relevant in the manner in which people remember them.

Prus (2007: 379) wrote that "the newly emergent work on memory offers some highly potent sociological, historical and cross-contextual dimensions that extend well beyond the confines of more individual and psychological conceptions of memory". Still, further enquiry will show that the use of memory in social sciences has an unmistakably fragmented, undeveloped quality. MacAdams (1998: 1126) cited Cohler (1994) and Polkinghorne (1988) who both argued that "human actions are rendered sensible to the extent that such actions can be assimilated into a narrative that can be told and understood in a particular social and cultural context". Therefore, leaders' understanding of their socialization experiences mirrored against others can lead to heightened sensitivity toward those who follow their lead but it can also deepen leaders' understanding of themselves and the needs of the environment in which they operate.

Turner (2010) reported one coach as saying that leaders' past histories can be potential triggers that may influence the way leaders and followers engage, react, and the derivatives that ensue from those interactions sometimes go beyond words. "The underlying feelings and motivations that inform the person's actions in the here-and-now' could relate to the recent or distant past" (Turner, 2010: 20). Brown, Collins and Duguid (1989: 36) argue that conceptual tools reflect the cumulative wisdom of the culture in which they are used and the insights and experience of the individual". That is why Osorio (2012: 23) deemed "the touchstone of all teaching is the interest it arouses... to start always from the learners' is the best way to engage her or him in learning", therefore developing leaders from their life stories is a fitting proposition as the stories are theirs

and they are free to reveal them over time. Hill (2005: 70) established that “people have an innate ability to discern meaning from stories and that when this is recognized this helps them to make those tacit skills explicit, and in so doing allows these investigative strengths to become rigorous investigative practice”. This can be used to further explore aspects of a person’s own life content. As leaders revisit their own histories, it is important that these stories be authentic and transparent as these self-interrogations will be used as important pieces of data in developing an individualized leadership development plan for each leader as each person’s life journey would be very different (Hill, 2005). Zuber-Skerritt and Farquhar (2005: 4) see this process as “[affecting] the whole person largely through one’s perspective of self: mind, soul, spirituality, ethics, values and worldviews, and hence actual behavior”.

Elliott and Greenberg (2007: 244) said that “growth is supported by innate curiosity and adaptive emotion processes, and tends toward increasing differentiation and adaptive flexibility”. Therefore, by the time leaders become leaders or are labeled leaders they would have had many experiences – from good to bad, some growth forming, some strategically positioning, others growth producing; some stagnating, some dysfunctional and others derailing. All these experiences inform how leaders will eventually lead and how what they expect of their followers. In some situations, leaders might lead using influences from these events and the outcomes might be analogous to those they gained through their encounters. These events are part of the leaders’ socialization journey and will inform their decisions, their interactions and the outcomes they produce.

Dai and De Meuse (2007: 2) defined socialization as the “process in which an individual acquires the attitudes, behaviors, and knowledge needed” to function successfully in any organization. In life, socialization runs on a continuum and it tells important stories about a person’s journey: 1) Who they are? 2) How they have become who they are? Where they have been? 3) The kinds of experiences they have had? 4) Who they are connected to? 5) The strength of those connections? 6) How defining are those experiences? 7) How are those experiences being lived out? All events are important but each will have different meaning and different levels of significance to the insider as well as the outsider at different times in the exploration process (Counsell, 2004). Each step in the exploration process is punctuated with some kind of learning, sense-making, the creation of new life scripts and should be explored as an aspect of learning to lead or developing leaders as leaders’ histories tell the past, inform the present and provide important details for charting a future state. Chiesa (1992: 1289) felt that it was important to consider causal thinking by using the chain metaphor since this metaphor “embraces the relational nature of causation without necessarily invoking force or agency on the part of the linked chain”. Stringer (1999) is quoted as saying that “accounts of this type of [exploration] must be evocative and empathetic with a focus on the daily lives of the [leaders]. Individuals identify issues and interpret them within their own unique framework” (Turton, 2005: 38).

Cunningham (2004: 24) defined history, in part, as “an attempt to understand how people thought and felt in the past”. People’s thoughts and feelings are connected to their entire life history or overall life content which has been amassed throughout their lives and continue to take on new meaning today as part of their overall socialization process. Therefore, how someone was socialized is important in understanding their predispositions, the things they are passionate about, interests, religious faith, successes, parentage, educational preparation, relationships, failure, style, travels, books read, behavior, high and low points and many other things. Therefore, “just as the ideology of science privileges the voice of the expert, this ideology of personal experience enhances the authority of the [leader] who underwent the event firsthand” (Cunningham, 2004: 68).

Helping leaders put their displayed behaviours in some historical context is an important aspect of developing awareness about blind spots, areas of success, challenges, leadership style/

behavior, strengths and others definers or attachments. Assisting leaders link their life content with the predispositions can raise them to a level of awareness that can be transforming, not just for the leaders, but for those who interact with them as well as the organization as a whole. Additionally, this knowledge can also provide a level of awareness that can be developmental if taken for the value it provides. Blind spots have been shown to create all kinds of challenges for leaders so the new knowledge can be used to take corrective steps when these are warranted. Harry Truman is quoted as saying that "the only thing new in the world is the history you don't know" (Siegel, 1993: 239). Therefore, efforts to unearth unknowns and even blind spots in leadership can be very therapeutic and a developmental process for leaders and can be an important leadership selection and derailment prevention tool.

Muehlenbein and Flinn (2011: 153) said that "life history traits may be linked with our remarkable cognitive and social abilities compared to other species: humans have very large brains that have complex and lengthy patterns of psychological development". George Santayana held that "we must know history in order not to be condemned to repeat it" (Siegel, 1993: 239). All human beings have their unique way of responding and interpreting the world around them based on some developed rules or life scripts. These rules make up leaders' life histories and form the schema that helps leaders to organize existing information to form new schemas.

Bandura (2000: 75) insisted that "social cognitive theory adopts an agentic perspective in which individuals are producers of experiences and shapers of events". Pinker (2004) held that leaders have no nature, all they have is history. Some of these historical events have launched leaders forward; some aspects of leaders' histories have stagnated them; and in other cases unknown or unacknowledged histories have derailed leaders. Some leaders' histories are deeply held belief systems that shape their leadership thinking and behavior and should be explored.

Leaders' narratives tell many stories of leaders' lives and how those stories have influenced their leadership definition and leadership philosophy. These are important elements in leadership development because they provide insights into: 1) How the adopted leadership philosophy has evolved over the years; 2) In what way the deeply held beliefs guide leaders in their daily leadership role? 3) What are they learning from their preferred leadership philosophy? Answers to these questions play an important role in identifying the origins of leaders' default style or behavior and developing leaders to function in an evolutionary global environment where issues of diversity, social exclusion, disparaged workplace, gender inequalities, shrinking and more demanding jobs, increased workers' insecurities, marginal job creation, and increases in the number of working poor, among other issues, are requiring leadership (International Labor Organization (ILO), 2006).

Avolio and Gardner (2005: 318) stated that "leaders' life stories provide insight into the meanings they attach to life events to guide followers, and in turn to develop themselves over time through reflection". Burnes (2004: 309) argued that "change is a constant feature of organizational life and the ability to manage [these] is seen as a core competence of successful organizations". Thus, tracing those factors that have influenced leaders' histories is important since these can influence not only how leaders would respond to the noted global challenges, but how they might handle setbacks, leadership development interventions to alter faulty mindsets, enhance different mindsets, and leverage useful mindsets while developing and embracing new ones. "A Leader's life story reflects the degree of self-knowledge, self-concept clarity, and person-role merger he or she experiences, and provides followers with cues for assessing leader authenticity" (Avolio & Gardner, 2005: 318).

Leaders' adopted mindsets

Like religious experiences, familial and other relationships, education is an important element in one's socialization and in forming mindsets. In fact, the intended aim of education, according to Connell (2008: 103) is "to promote in [learners] habits or critical reflection as well as to shape

beliefs and attitude about what constitutes the good life in society, which will eventually influence how [learners] act". Still, Mak (1999: S623) thought that "there is no difficulty in observing a human action, but it is not easy to find out what the thinking is inside a human brain". Thus, it is fitting to accept that people have their own unique way of thinking and being, accentuating their culture, their thoughts, judgments about themselves, about others and situations in organizations, and leaders must be primed to understand, not only the origins of their own thinking, but be able to respond and lead pointedly in these diverse situations, as well (Eraut, 2004).

Bandura (2000: 75) insisted that "people are partly a product of their environment, but by creating, and transforming their environmental circumstances they are producers of their environments as well". In fact, Gyuroka (2009: 147) took the position that "like an organization, a leader is a complex unit with competing values, interests, preferences, tendencies, aspirations, and fears". Consequently, the way leaders interpret and respond to the world is shaped by their unique theoretical framework acquired through formal and informal education, other socialization experiences and through their overall life content. The assumptions of the ways in which leaders conceptualize their environment depend on their own unique personal theories and this should be explored through self-reflection leadership development exercise. Pinker (2004: 2) maintained that "learning itself must be accomplished by innate circuitry, and what is innate is not a set of rigid instructions for behavior but rather programs that take in information from the senses and give rise to new thoughts and actions". Understanding the origins of leaders' thoughts and philosophy of leadership is an important aspect of helping leaders develop more intentionally so they can function in a diverse global operational environment with greater self-knowledge and self-management knowhow.

Leadership Development Instructional Model (L-DIM)

Riggio (2008) held that the focus of leader development was to assist the leader to develop their capacity to lead through the acquisition of skills, self-awareness, and motivation to lead. This usually occurs by using 360-degree feedback, action learning, traditional training models, or developmental assessment centers. These approaches only respond to obvious behaviors observed by the leaders, peers, reports and supervisors, but does not include the leader's history which can provide valuable pieces of information to assist in targeting the interventions to meet the leaders' specific developmental.

Sahgal and Pathak (2007: 269) believed that "leadership is continuous learning. One has to be humble enough to learn". This can take from a day toy ears according to Harms, Spain and Hannah (2011) especially from past experiences that continue to shape current behavior and may even produce more negative consequences than positive ones. "Leader development involves changes in the perceptions, motivations, competencies, and patterns of behavior of individuals in leadership positions in order to help them function more effectively" (Harms *et al*, 2011: 497).

Romanowska *et al* (2011: 79) insisted that "an alternative vision of leadership education is needed because established leadership training could, if it is not balanced by efforts to strengthen ethical, aesthetics and emotional abilities, encourage an unproductive and unhealthy organization climate". Avolio and Gardner (2005: 317) acknowledged "that through increased self-awareness, self-regulation, and positive modeling, authentic leaders foster the development of authenticity in followers. In turn, followers' authenticity contributes to their well-being and the attainment of sustainable and veritable performance". Turner (2010: 13) said that "in everyday life the understanding of unconscious processes is about awareness of things 'below the surface' in all human interaction. This might be the reaction to a person or a situation, why something repeatedly happens or the cause of a limiting self-belief".

All leaders have a life script. Frederick Perls (1967, 1973) used the concept of life script which in the fixed gestalten traditions is an earlier age as they are lived out years later (Erskine, 1995). Leaders' default leadership approaches is believed to have originated through their varied social-

ization experiences, starting with encounters at home, school/college, work and other encounters. In other words, the past influences the present as well as the future and in some way past experiences could be major blocks to meaningful growth and development in leaders. These encounters have major implications, not only for the leaders, but for those who follow their lead and those for whom they work.

Mirvis and Ayas (2003) acknowledged that a fundamental role of leaders is to inspire and help followers develop so that by knowing their own life histories, leaders can then help followers determine their personal, social, and moral identities, more so if leaders have resolved their own identity issues. Thus, “through such stories, the leader reveals his or her character and, in turn, helps followers to discover and develop their own identities” (Mirvis & Ayas, 2003: 47) more so because “leader schemas were not independent of, but rather intimately connected to, self-identities, or follower’s schematized views of themselves” (Islam, 2011: 6). Still, Turner (2010: 13) reported that “transference arises spontaneously in all human relationships just as it does between the patient and the physician”. The Leadership Development Instructional Model can be helpful in revealing blind spots and assist leaders in better understanding their origin and the associated transference and counter transference issues connected with deeply held beliefs about leadership.

Randall and Coakley (2007) maintained that “adaptive leadership is based on the premise that leadership is more of a process rather than individual personal capabilities (Heifetz & Linsky, 2004: 33). This process requires people to focus on the specific problems at hand and to modify the way they have worked in the past”. Leaders need to be suitable for the context and the assigned task for which they are selected, but before they are placed, it is important that they develop a level of awareness about themselves and others and the environmental experiences that might have influenced their definition of leadership and their philosophical approach to leadership. Therefore, it would be helpful to support leaders in tracing the origin of their leadership definition and the leadership philosophy that guides how they lead. The instructional design is grounded in a constructivist philosophy and is based on a Life Story Telling (LST) approach which uses a series of opened-ended questions designed to help leaders selectively reconstruct their life in relation to how it might have shaped their leadership philosophy and/or leadership definition. People share events which are relevant to their understanding of how they became the type of leader they are today or aspire to become in the future (Winston, Philip & Lloyd, 2007). Shapiro (2011: 68) contended that leaders’ stories are “the conscious and unconscious representation and performance of intricate personal motives and dominant meta-narrative influences. Overall, this complexifying of narrative is beneficial as it reduces readers’ and listeners’ naive assumptions about reliability and authenticity”.

Leaders’ life stories play an important role in heightening leaders’ “self-knowledge, self-concept clarity, and person-role merger and are captured by leaders’ life-stories” (Shamir & Eilam, 2005: 395). Personality tends to be stable in adulthood, so as part of the L-DIM process, leaders will complete the NGO Personality Inventory to discern where they fit into all five of the major dimensions of normal personality (Costa & McCrae, 1988).

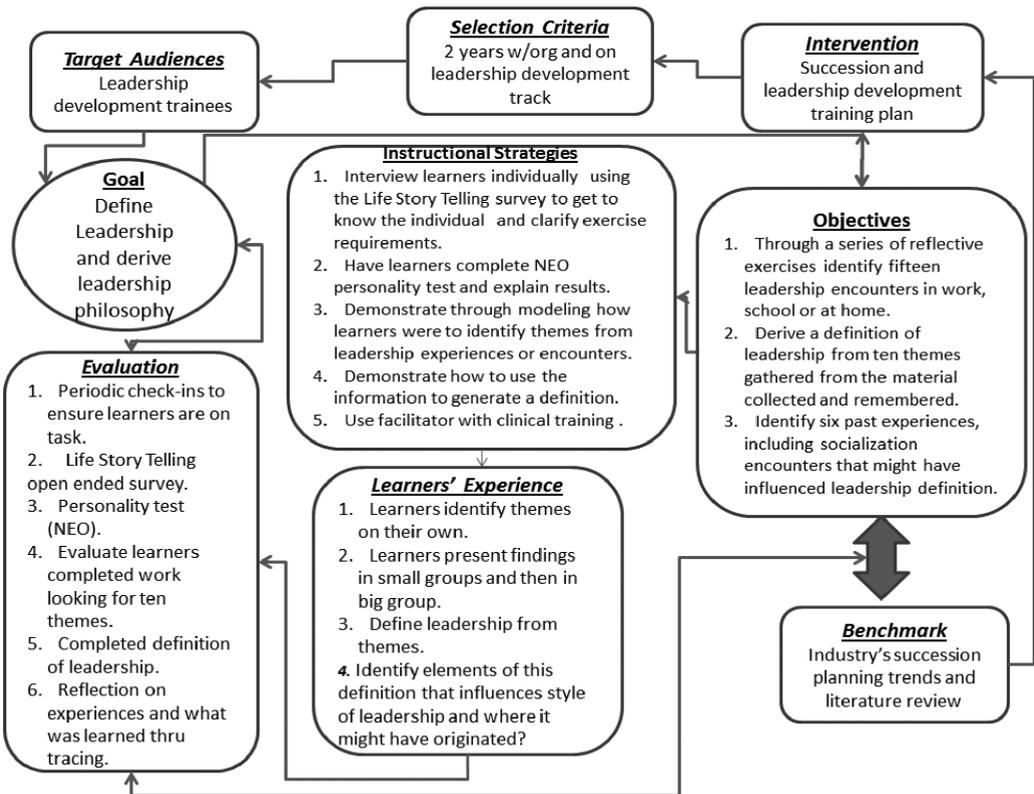
Reiches, Ellison, Lipson, Sharrock, Gardiner and Duncan (2009: 1) took the position that “life history contains a series of paradoxes not easily explained by classical life history theory”. On this premise, the goal of the intervention is to help leaders trace histories and attempt to link those with the leaders’ definition of leadership and their leadership philosophy by zooming and refocusing (Mogan-Fleming, Riegle & Fryer, 2007). It is believed that the construction of leaders’ life stories will reveal what they know about leadership as learned from their parents and other caregivers (Vinegar & Danes, 2007). Shamir and Eilam (2005) went a step further by arguing that life-story provides feedback for followers about their leaders’ level of authenticity.

Mirvis and Ayas (2003: 46) suggested that leaders’ life-stories as “reflective dialogues about life

and its lessons are a form of socialization”. Thus, the Leadership Development Instructional Model (L-DIM) provides a structure for facilitators to help leaders trace the origins of their chosen leadership definition and leadership philosophy. The model is grounded in the Life Story Telling framework coined by McAdams. The model is designed with developing leaders in mind. L-DIM uses the understanding of leaders’ past experiences to help piece together an understanding of where their particular leadership style came from and to begin shaping a future state by leveraging their assumed leadership definition and leadership philosophy. It requires participants to trace their life histories and to see how these elements might have influenced their chosen leadership definition and leadership philosophy. Since everyone has a history, it is fitting to use the instructional design to help learners find meaning in those histories and to see the influence these have on the way they lead and why. As leaders are able to retrace their histories through the interview with the facilitator, the personality test, and feedback from their peers and the facilitator, the results are then benchmarked against more common industry benchmarks on leadership definition and leadership philosophy to help further develop the leader.

DeRue and Wellman (2009: 859) conducted a study “based on 225 on-the-job experiences across 60 managers and their results demonstrate that the relationship between developmental challenge and leadership skill development exhibits a pattern of diminishing returns. However, access to feedback can offset the diminishing returns associated with high levels of developmental challenges”. Therefore, the purpose of this Leadership Development Instructional Model (L-DIM) is to help leaders understand the origins of their behavior and histories that influence how they lead and to explore the derivatives of their chosen leadership definition and philosophy and use this information for further targeted leadership training and development activities.

Figure 1: Leadership Development Instructional Model (L-DIM)



Source: <http://www.researchgate.net/publication/237195417>

Table 1: Scaling of L-DIM

Leadership Development and Succession Planning	Sequencing of Instructional Events
Rationale for Intervention	Decision for leadership development and succession planning based on organizational needs, consulting literature and benchmarks.
Selection Criteria	Selection criteria must be clear. Participants should be required to have at least two years with the company and already be on a leadership development path since they should have some background on the company.
Target audience	Target audience should be from different functional groups in the organization and selected for leadership.
Goal(s)	Decide broad goal (s) for intervention.
Objective(s)	Formulate objectives for the intervention by revisiting the rationale for the intervention and looking at benchmark data and literature for leadership development standard and outcomes.
Instructional Strategies	Decide on instructional strategies. Ground strategies in predefined theory suitable for the type of intervention. Tie strategies to benchmark, goals and objectives.
Learners' Experiences (Tasks)	Identify learner's experiences (tasks) to be derived from the intervention. Revisit benchmarks, literature, goals, objectives and instructional strategies.
Evaluation	Decide on the evaluation strategies. Revisit rationale for intervention, goal (s), objectives, learners' experiences (tasks), literature and benchmarks.

Source: <http://www.researchgate.net/publication/237195417>

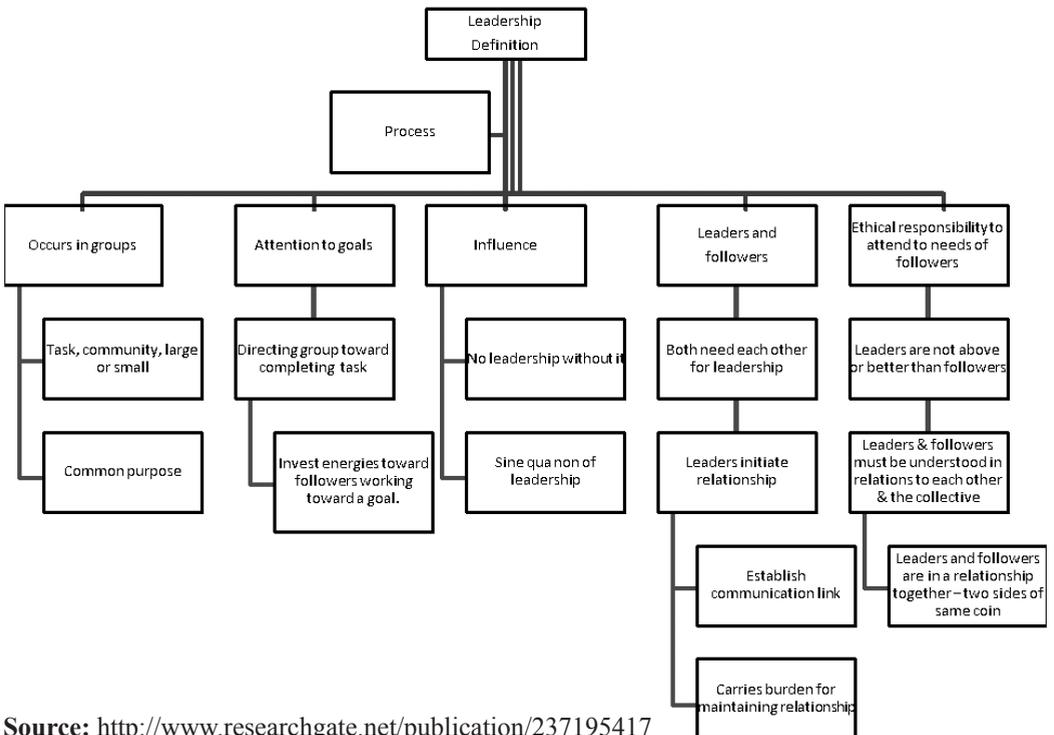
Defining leadership

Baddeley and Singer (2007: 197) made a case that *“parent-child conversations, self-defining memories, life story interviews, collections of couples' memories, analyses of autobiographical and biographical documents, and the study of life review and reminiscence have all yielded invaluable information about the role of different facets of identity in self-understanding, meaning making, social communication and generativity”*. In spite of this, Shamir and Eilam (2005: 395) took the position that *“all definitions are arbitrary,”* as a result, there is no right or wrong definition (McAdams, 2008). Still, definitions give meaning to things, events, processes, practices, standards, and so on in leaders' life. However, it is only in operationalizing a definition can it become useful, provide a better understanding of its character and examine the merits and demerits of the said definition. Then, the functional leadership definition used by leaders is a product of the meaning leaders ascribed to leadership so by tracing the elements that formed leaders' chosen definition it is easier to discern how they have become the leader they are, the leader they can become and their overall leadership definition and philosophy. What leaders know and what they can do with what they know is presumed to be a product of the structure and practices of their educational and other socialization experiences. However, *“situations might be said to co-produce knowledge through activity”* (Brown, Collins & Duguid, 1989: 33). DeLeeuw and Mayer (2008: 223) said that *“germane or (generative) processing encourages deep cognitive processing such as mentally organizing the material and relating it to prior knowledge”*. Tracing the origins of leaders' definition and philosophy of leadership has these qualities.

Densten and Gray (2001: 119) stated that “as an area of higher learning, leadership draws from numerous academic fields (e.g. psychology, sociology, and history) and real life sources (e.g. work, family, and social experiences) and therefore requires integration of knowledge with experience”. Therefore, definitions have enormous implications in saying what something is and what it is not, what the thing constitutes how it functions, its merits and demerits, its history among other things and what such integration of discipline can facilitate. Knowing these answers provides meaning and makes the definition operational and usable in its intended context. Frankl (2006: 99) believed that the striving to find meaning in one’s life is the primary motivational force in [leaders]... This meaning is unique and specific in that it must and can be fulfilled by [the leader] alone; only then does it achieve a significance which will satisfy [the leader’s] own will to meaning”, thus establishing sets ways of being, doing and ascribing meaning to events.

Mak (1999: S623) defined mind-set as “a series of mental models. It is the direction of one’s thinking”... and “what we know or what we believe affects the way we see things. As a result our mind-set will influence our action” and the ways we organize what we know and what we believe. Discerning how leaders define leadership and derive their leadership philosophy can be derived by using what Novak (1990) and; Ruiz-Primo, Schultz, Li and Shavelson (2001) called concept mapping. Concept mapping has its genesis in a study conducted by Connell University to study changes in students’ learning of science over a 12 year span. The intended purpose of concept mapping is to put ideas that have been generated in a picturesque form and linking the relationship between the ideas (Trochim, 1989). Thus, the diagram below is an attempt to replicate the essence of a concept map by unraveling the definition of leadership offered by Northouse (2007: 3). In this definition, leadership is described as “a process whereby an individual influences a group of individuals to achieve a common goal”. The author elaborated on the above definition which is interpreted in the concept map below to provide a framework for how leaders can organize the recollection of their thoughts about their leadership definition and leadership philosophy.

Figure 2: Leadership definition



Source: <http://www.researchgate.net/publication/237195417>

Concluding remarks

Kaiser and Hogan (2007: 173) maintained that “discretion increases with each level in organizations so that top executives have the most discretion and the greatest opportunity to make an impact on organizational performance”. It does depend on what strengths and weaknesses leaders bring to the situation and their ability to leverage or mitigate these which will determine whether the impact is negative or positive. Romanowska *et al* (2011: 79) thought that “reduction of complexity of real life and alienation of employees may result in ‘laissez-faire’ leadership and bureaucratic workplaces in which phenomena such as impersonality/formalism, avoidance/passivity, control and relativism could develop”. That is why White (2009: 1) insisted that “growing’ leaders, rather than ‘mining’ leaders, is a longer process, but it has been demonstrated to provide more effective leaders, better succession, less derailment and more engaged and fulfilled managers and executives”. Therefore, tracing a leader’s journey to their leadership role or position has a greater chance of capturing the good, bad and indifferent attributes of leaders that can be the starting point of deepening self-knowledge which can be the bedrock for developing suitable leaders. Although this process can be long and invasive, it can help to identify leaders’ strengths and weaknesses which can be used to develop the leader for their respective leadership roles and for life. Leaders with deepened self-awareness are better positioned to manage those predispositions that can lead to derailment. Also, by leveraging their strengths they can mitigate the effects of potential derailers.

Billow (2011: 297) held that leaders “may learn only retrospectively what has been going on mentally, when the derivatives emerge into precociousness or consciousness. By that time, words and actions have produced ‘enactments’”. Where unconscious mental and emotional processes are “deemed to exist, there are different interpretations of what the unconscious is” (Turner, 2010: 13). Hill (2005: 70) believed that tracing the stories of a leader “combines description along with explanation. As soon as events have happened and are told in retrospect then the story contains both the reconstruction of the events along with first reflective explanations of those events”. This process, not only places leaders in charge of their own life-history-telling activities, but helps them to develop tools to deepen their self-awareness which leads to averting the effects of destructive weaknesses that may be ingrained and can lead to derailment.

Lichtenstein *et al* (2006: 8) *creates a new avenue for improving ethical and behavioral standards in an organization, for it is much easier to identify a set of appropriate rules for interactions between individuals than it is for someone to distinguish between appropriate and inappropriate leadership behaviors*. Therefore what leaders know about their propensities can be leveraged and/or managed especially if there are attributes that can lead to derailment or can enhance leadership-follower relationships. Leaders “can successfully formulate and internalize an integrative life narrative – complete with setting, character, plot, and themes – that synthesizes the reconstructed past, perceive present and anticipate future” (McAdams, 2008: 1127). The knowledge leaders attain enhances their skills level and heightens their value to an organization (Human Capital Media, 2012). Dai and De Meuse (2007: 3) stressed that “...knowledge about the personal backgrounds of particular organizational members can help newcomers learn what types of behaviors are appropriate or inappropriate in specific interactions and circumstances”. When [leaders] come to know and accept themselves, including their strengths and weaknesses, they display high levels of stability, as opposed to having fragile self-esteem. These leaders “are also relatively free of the defensive biases displayed by less mature persons and consequently more comfortable forming transparent, open, and close relationships with others” (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008: 93).

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FACTORS INFLUENCING TESTING FOR HIV AMONG URBAN-BASED PUBLIC SECTOR EMPLOYEES IN BOTSWANA

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ABSTRACT

This study aims to identify the factors influencing participation in HIV testing of urban local government employees in Botswana using components of the Health Belief Model (HBM) as the theoretical framework. Data was collected from a random sample of 200 using a self-administered questionnaire. About 65% of the respondents reported having tested for HIV with the rate of testing for females and males being approximately 72% and 56% respectively. Separate prediction models with the HBM variables were determined for females and males. Perception of susceptibility and benefits explained 43% of the variance for males but had limited predictive value for females where factors other than those identified or measured in the study influenced the testing decision. Barriers, which primarily measured stigma and discrimination and operated differently for females and males, did not make a significant contribution to the prediction models. The results suggest that barriers functioned both as an outcome and an inhibitor of the testing decision. The conclusion reached was that the constructs of the HBM had limited explanatory value. Different research approaches are required to interrogate the complex social and cultural issues influencing the experience of stigma and discrimination. The practical implications indicated that interventions should target promoting a realistic awareness of risk and reducing the fear of stigma and discrimination.

Keywords: HIV VCT participation; Health Belief Model; predictive factors

INTRODUCTION

It is accepted, for the purpose of this article, that in developing countries HIV and AIDS cannot be defined as merely a “health” issue then it could be construed as a developmental issue with micro and macro-economic consequences. HIV and AIDS disproportionately affect the productive adult population impacting through increased morbidity and mortality compromising productivity and service delivery. The effective management of the epidemic begins with identifying the disease at individual, group and national levels (Nattrass, 2004; Barnett & Whiteside, 2002). Thus internationally extensive campaigns have emphasised the importance of “knowing one’s status” as the first step in the control of the HIV epidemic. Testing for HIV and AIDS, voluntarily or routinely, is considered to be the first step in prevention and treatment regimes and the entry point for behaviour modification and the control of disease and mortality. Regular testing is considered to be an essential health decision in an environment with a widespread generalised HIV epidemic (Fako, 2006; Weiser *et al*, 2006).

Despite the publicity surrounding the disease and the extensive awareness campaigns, the rate of testing for HIV has remained low. This is major concern globally and particularly in Sub-Saharan Africa, the epicentre of the disease. According to Obermeyer and Osborn (2007), testing in the high-prevalence countries of Sub-Saharan Africa has a median of 12% for men and 10% for women.

Research into factors influencing testing behaviour has implicated various socio-demographic and psychosocial factors. In many studies stigma, discrimination, fear of lack of confidentiality, fear of the loss of intimate relationships and social support, lack of accessibility of health facilities, and treatment availability have been cited as barriers to testing (Fako, 2006; Hutchinson & Mahlalela,

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2006; Kakoko, Lugoe & Lie, 2006; Weiser *et al*, 2006; Wolfe *et al*, 2006; De Paoli, Manongi & Klepp, 2004; Skinner & Mfecane, 2004; Solomon, Van Rooyen, Gray, Stein & Nott, 2004; Flowers, Knussen & Church, 2003; Van Dyk & Van Dyk, 2003).

A further well-documented barrier is gender power inequalities where in many societies the constructs of masculinity and femininity affect aspects such as sexual practices, access to information, healthcare and coping strategies, and economic and social support systems. In Africa, social norms for men often tolerate multiple sexual partners and create expectations of invulnerability which influence health-seeking behaviour while the stigma of HIV often affects women who are accused of spreading the disease (Nyblade, 2006; Phaladze & Tlou, 2006; Abdool Karim & Abdool Karim, 2005; Ntseane & Preece, 2005; Skinner & Mfecane, 2004; Walker, Reid & Cornell, 2004; McDonald, 1996).

It is generally accepted that Botswana has a heterosexually-driven HIV epidemic and that overall prevalence rates are amongst the highest in the world with females being disproportionately infected. Stigma and denial, gender inequalities and socio-economic determinants were considered influential factors in the spread of the HIV epidemic. The Botswana government has been active in promoting HIV prevention and treatment campaigns through the extensive public health system where, by 2001, 94% of the urban population was within an 8 km radius of a health-care facility. Free anti-retroviral treatment has been available since 2002; VCT testing was offered in all public health facilities by 2003 and routine testing was introduced at the beginning of 2004 (Central Statistics Office, 2001, 2004).

According to the 2003 national survey conducted in Botswana, the population testing rate was 25.4% overall, and 30.3% and 19.5% for females and males respectively. While the HIV testing rates were high compared with other parts of Africa, the Botswana government was concerned that the results were too low, with the testing rates for males being of particular concern (Central Statistics Office, 2004; Leko, 2004).

A limitation of HIV testing research is that many of the targeted populations have been vulnerable groups such as mining communities, truck drivers, sex workers, and pregnant women utilising the public health system (Obermeyer & Osborn, 2007). Both UNAIDS and the International Labour Organisation have identified the need to investigate and understand the epidemic in different social and cultural contexts and workplace settings (UNAIDS, 2007; Kakoko *et al*, 2006). Therefore, the primary objective of this study was to examine the socio-demographic and psychosocial factors implicated in the decision whether to test or not among a group of Botswana local government employees. The public sector, as well as local and central government, accounted for 20.7% of total employment and the sector had implemented "HIV in the Workplace" programmes since 2000, thus playing a significant role in mainstreaming HIV and AIDS prevention and care internally to employees. The employees, resident in an urban area where the overall rate of testing was 21.8%, were well-resourced in terms of information regarding HIV and AIDS and had access to medical aid and care (Central Statistics Office, 2004).

The study was intended as the initial step in the design of an intervention to improve HIV testing rates within the group of employees. Research has shown that the success of interventions can be improved by using health behaviour theory to guide the design, however, this theory has not been utilised (Bos, Schaalma & Pryor, 2008). The cognitive Health Belief Model (HBM) was selected as the theoretical framework for construct development. This framework postulates that certain motivational conditions precede action to prevent or control health conditions, namely that susceptibility and the serious consequences of the disease and a course of beneficial action will reduce the susceptibility or the severity should be high and the anticipated negative consequences (barriers) of taking the action should be outweighed by the benefits gained from the action (Glanz, Rimer & Lewis, 2002).

The objectives of the study were to determine the socio-demographic and psychosocial factors that discriminated between testers and non-testers and to determine the value of selected HBM psychosocial variables to explain and predict testing behaviour. Given the gendered nature of the epidemic, further objectives were to examine if there was a difference in the psychosocial variables discriminating between testers and non-testers and to determine the value of these variables to

explain and predict testing behaviour for males and females.

The study confirmed the gendered nature of testing behaviour in Botswana. The dominant findings verify some of the basic assumptions of the HBM but refute others. In particular, the study suggests that barriers to testing raise questions about the complexity and difference of the experience of stigma and discrimination among females and males. The value of the HBM to explain and predict testing behaviour and the need for alternative research approaches to explain testing behaviour that is embedded in complex and diverse cultural traditions will be discussed.

METHOD

In 2006 a self-administered questionnaire in English and Setswana was distributed to the 1 008 employees of a local town council in Lobatse, Botswana. A random sample of 200, stratified by gender and employment, was selected from the 389 returned questionnaires.

The development of the questionnaire was guided by the conceptual framework of the Health Belief Model. Four psychosocial concepts were selected. Perceived susceptibility (the belief regarding the chance of getting HIV) was measured as a single item asking the respondents to identify if they needed to test and designated "need". Perceived benefits (the belief that testing would be effective in reducing risk or seriousness) was measured as six items identified from the literature as the opportunity to obtain the relevant counselling, plan for the future, protect sexual partners and obtain treatment (Family Health International, 2002). Perceived barriers (the belief in the tangible and psychological costs of testing) were measured as eight items, six specifically related to stigma and discrimination which had been identified as key barriers to testing within Botswana. One item dealt with the fear of knowing one's status; the second item dealt with the fear of dying; three items dealt with the fear of lack of confidentiality and possible social stigma and discrimination; the last three items dealt with examples of discrimination by postulating various situations of possible social and economic exclusion. The fourth concept was calculated as the difference between benefits and barriers and designated "positivity". All items were measured on a 5-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree) and summated (averaged) scores derived from these items were treated as continuous variables.

The socio-demographic variables selected were gender, education level, occupational level, age and marital status. The outcome (dependent) variable HIV testing was determined from the response to a single question with a yes or no option.

Exploratory factor analysis indicated one factor for the six items of benefits (eigenvalues greater than 1.0) with acceptable reliability (Cronbach's alpha 0.879; split-half reliability 0.755; all factor loadings > 0.400; average inter-item correlation 0.586). Analysis for barriers indicated one factor (eigenvalues, screeplot analysis) also with acceptable reliability (Cronbach's alpha 0.942, split-half reliability 0.888; all factor loadings > 0.400; average inter-item correlation 0.681).

Descriptive statistics were used for socio-demographic and psychosocial variables and testing behaviour scores. Chi-square tests of independence were used to determine whether the socio-demographic variables were related to HIV testing. Student t-tests were conducted to determine the statistical significance of the difference between the mean scores for the psychosocial variables. The level of statistical significance was set at $\alpha = .05$. Cohen's *d* and Cramér's *V* statistics were used to determine the practical significance for t-test and chi-square test results that were found to be statistically significant.

Pearson product moment and Spearman rank order correlations were used to test the association between psychosocial variables and the association between psychosocial variables and testing respectively.

Logistic regression (logit) was used to examine the value of psychosocial variables in explaining and predicting testing behaviour. The overall fit of the logistic regression model was assessed using four criteria. The model fit was estimated using the likelihood value -2 Log Likelihood (-2LL). The smaller the value of -2LL, the better the model fit (-2LL=0 indicates a perfect fit). The statistical significance of the change in the -2LL from the base to the proposed model was determined using a chi-square test. The area under the curve (AUC) further estimated model fit with AUC values

between 0.70 and 0.87 regarded as good, AUC between 0.87 and 0.90 well-discriminating and AUC greater than 0.9 excellent model fit. Pseudo R^2 measures were used to assess the amount of variation accounted for by the logistic model with $R^2=1.0$ indicating a perfect fit. A classification matrix with proportional chance and maximum chance comparison standards was used to assess the predictive accuracy. The significance of individual independent variables on the dependent variable was tested using the Wald statistic.

RESULTS

Sample composition

The sample profile was 60% females and 40% males; 10% were under 24 years of age, 70.5% were between 25 and 44 and 19.5% 45 and over; 41% had a primary, 35% secondary and 24% tertiary education; 48% were married or in a cohabiting relationship and 52% single; 22% held management positions, 29% supervisory and half (49%) were industrial (blue collar) workers. Of the sample 65.5% had had an HIV test.

Psychosocial statistics

The means and standard deviations for the psychosocial variables were *Need*: $M=3.66$ $SD=1.47$; *Benefits*: $M=80.27$ $SD=21.51$; *Barriers*: $M=60.00$ $SD=31.24$ and *Positivity* $M=20.27$ $SD=36.65$.

The influence of socio-demographic and psychosocial variables on testing

The results shown in Table 1 summarise the socio-demographic and psychosocial variables found to discriminate between testers and non-testers.

Table 1: Socio-demographic and psychosocial statistics for testers and non-testers

Variables		n	Tested		Not tested		Inferential statistics
			n	%	n	%	
Total		200	131	65.5	69	34.5	
Gender	Female	120	86	71.7	34	28.3	$\chi^2=5.05$ $df=1$ $p=.025$; $V=.160$
	Male	80	45	56.3	35	43.7	
Age	<25	20	13	65.0	7	35.0	$\chi^2=1.042$ $df=3$ $p=.791$
	25-34	71	45	63.4	26	36.6	
	35-44	70	49	70.0	21	30.0	
	45+	39	24	61.5	15	38.5	
Education	Primary	82	47	57.3	35	42.7	$\chi^2=5.363$ $df=2$ $p=.068$
	Secondary	70	47	67.1	23	32.9	
	Tertiary	48	37	77.1	11	22.9	
Marital status	Married	72	52	72.2	20	27.8	$\chi^2=2.995$ $df=2$ $p=.224$
	Single	104	66	63.5	38	36.5	
	Cohabiting	24	13	54.2	11	45.8	
Job band	Management	44	36	81.8	8	18.2	$\chi^2=6.703$ $df=2$ $p=.035$; $V=.183$
	Supervisory	58	36	62.1	22	37.9	
	Industrial class	98	59	60.2	39	39.8	
			Mean	SD	Mean	SD	
Need			4.12	1.12	2.77	1.63	$t=6.903$ $df=198$ $p<.0001$ $d=0.97$
Benefits			84.96	15.64	71.38	27.65	$t=4.44$ $df=198$ $p<.0005$; $d=0.66$
Barriers			65.29	28.80	49.95	33.38	$t=3.39$ $df=198$ $p=.001$ $d=0.50$
Positivity			19.56	32.82	21.42	43.23	$t=-0.32$ $df=198$ $p=.748$

Gender and occupational level discriminated with small practical significance ($0.10 < V < 0.30$), the need to test with high practical significance ($d > 0.80$), and benefits and barriers with moderate practical significance ($0.50 < d < 0.80$). While the need to test and the benefits met the basic assumptions of the HBM, that is the higher the need to test and the greater the perceived benefits the higher the rate of testing, the results for barriers were in contradiction since testers perceived higher barriers than non-testers.

Gender differences in the influence of psychosocial variables on testing

The results in Table 2 show the influence of psychosocial variables on testing.

Table 2: Psychosocial statistics for testers and non-testers according to gender

Variables	Females				Inferential statistics	Males				Inferential statistics
	Testers n=86		Non-testers n=34			Testers n=45		Non-testers n=35		
	M	SD	M	SD		M	SD	M	SD	
Need	4.04	1.27	2.97	1.75	t=3.70 df=118 p=.000 d=0.75	4.29	0.76	2.57	1.50	t=1.717 df=78 p<.0001 d=1.50
Benefits	85.32	16.78	76.83	24.81	t=8.48 df=118 p=.033 d=0.44	84.26	13.32	66.07	29.53	t=3.682 df=78 p=.000 d=0.83
Barriers	63.22	29.99	31.98	29.29	t=31.24 df=118 p=<.0001 d=1.04	69.24	26.22	67.41	27.55	t=.302 df=78 p=.763
Positivity	22.09	35.45	44.85	33.45	t=-3.22 df=118 p=.002 d=0.65	15.02	26.87	-1.34	39.62	t=2.198 df=78 p=.031 d=0.49

The need to test and the benefits discriminated between testers and non-testers of both genders and followed the logic of the HBM. However, barriers exhibited different patterns for females and males and did not follow the logic of the HBM; female testers had significantly higher concerns than non-testers whereas male testers and non-testers exhibited similar levels of concern. This affected the results for positivity; for female testers positivity was less for testers than non-testers while positivity for males followed the logic of the HBM in that the outcome was greater for testers than non-testers.

An inspection of the eight individual items of barriers showed the same pattern as the factor; there was a significant difference for females between testers and non-testers for each item and there was no significant difference between male testers and non-testers on any individual item.

Relationships among variables

The correlation among variables is shown in Table 3. The correlation of the psychosocial variables with testing shows differences for the gender sub-groups which impact on the results for the total sample. Practically significant correlations were found for both need and benefits with testing for

the male sub-group but only for barriers with testing for the female sub-group. The result for females is counter to the basic assumptions of the HBM.

Practically significant correlations were found between need and benefits for both sub-groups and consequently for the total sample. However, a significant correlation between barriers and need was found only for females. As anticipated a high degree of collinearity was found between positivity and benefits and positivity and barriers.

Table 3: Correlations among the psychosocial variables

	Testing		Need		Benefits		Barriers	
	Total	Female	Total	Female	Total	Female	Total	Female
Testing								
Need	<u>.385</u>	<u>.260</u>	<u>.385</u>	<u>.555</u>	<u>.227</u>	.133	<u>.225</u>	<u>.429</u>
Benefits	<u>.227</u>	.133	<u>.327</u>	<u>.310</u>	<u>.327</u>	<u>.338</u>	<u>.202</u>	<u>.297</u>
Barriers	<u>.225</u>	<u>.429</u>	<u>.202</u>	<u>.304</u>	.071	.118	.071	.118
Positivity	-.064	<u>-.288</u>	.020	<u>.151</u>	<u>.526</u>	<u>.435</u>	<u>-.811</u>	<u>-.719</u>

Statistical significance* (□□□05; □□□01): $r > .139$ for $n=200$; $r > .179$ for $n=120$; $r > .220$ for $n=80$

Practical significance*: $r > .300$

Pearson product moment correlations between need, benefits, barriers and positivity

Spearman rank order correlations between variables and testing

Table 4: Logistic regression model fit statistics

Gender	Model	Variables	Wald Test		-2 LL	Chi ²	R ²	Cox & Snell	Nagelkerke	AUC
			Chi-square	p-value						
Female	1	Need	11.436	.001	131.11	$\chi^2=11.95$ df=1 p=.001	.084	.095	.136	0.653
	2	Benefits	4.138	.042	138.75	$\chi^2=4.30$ df=1 p=.038	.030	.035	.051	0.579
Male	3	Need Benefits	8.423 0.970	.004 .325	130.13	$\chi^2=12.93$ df=2 p=.002	.090	.102	.147	0.661
	1	Need	19.854	<.0001	76.97	$\chi^2=32.68$ df=1 p<.0001	.298	.335	.450	0.777
2	Benefits	9.146	.002	96.54	$\chi^2=13.107$ df=1 p=.000	.120	.151	.203	0.676	
3	Need Benefits	16.826 5.487	<.0001 .019	69.76	$\chi^2=39.89$ df=2 p<.0001	.364	.393	.526	0.857	
4	Need Positivity	18.413 8.112	<.0001 .078	73.48	$\chi^2=36.16$ df=2 p<.0001	.330	.364	.488	0.830	

Logistic regression analysis

Logistic regression was used to test the influence of the psychosocial variables separately for the gender sub-groups given the differences in the testing patterns for the gender sub-groups and subsequent impact on the total sample. All four psychosocial variables were considered for inclusion based on the results of t-tests as shown in Table 2. Need and benefits were included in both the female and male models; however, barriers were excluded from the analysis for both groups since the relationship was counter-intuitive for females and did not discriminate for males. Positivity was included for males. The results are shown in Tables 4 and 5.

Females

The need + benefit model had the smallest -2LL value and this improvement in model fit was statistically significant. The R^2 values indicate that this model accounts for approximately 10% of the variation in the dependent measure. The AUC value (0.661) was below the 0.7 value considered acceptable. The comparison standards for the classification matrix were 74.2% for proportional chance and 89.6% for maximum chance criterion. The overall hit ratio for the need+benefit model just meets the proportional chance criterion but there is a problem with the group-specific ratio for non-testers where the hit ratio is only 32%. The Wald test for the statistical significance of the co-efficients shows that benefits did not make a significant contribution to the model.

Males

The need + benefit model also obtained the smallest -2LL value and this increase in model fit was statistically significant. The R^2 values indicate that the model accounts for approximately 43% of the variation in the dependent measure. The AUC value (0.857) could be considered well-discriminating. The comparison standards for the classification matrix were 63.5% for proportional chance and 70.3% for maximum chance criterion. The overall hit ratio for the need + benefit model exceeds both the proportional and maximum chance criteria. The group-specific hit ratios meet the proportional chance criterion. The Wald test for the statistical significance of the co-efficients shows that both need and benefits make a significant contribution to the model.

Table 5: Logistic regression classification matrix

		Percentage correctly classified			Comparison standards	
		Need	Need + Benefits	Need + Positivity	Proportional chance criterion	Maximum chance criterion
Females	Non-testers n=34	35%	32%	n/a	74.2%	89.6%
	Testers n=86	89%	93%	n/a		
	Total	74%	75%	n/a		
Males	Non-testers n=35	65%	62%	65%	63.5%	70.3%
	Testers n=45	91%	88%	91%		
	Total	80%	77%	80%		

DISCUSSION AND CONCLUSIONS

In this study there were discrepancies found in the gender and occupational levels between testers and non-testers. The literature reports fewer women than men were tested (Obermeyer, Sankara, Bastien & Parsons, 2009; Obermeyer & Osborn, 2007; Solomon *et al.*, 2004), however, these results were consistent with BIAS and other studies in Botswana which found that females and management respondents had higher testing rates (Central Statistics Office, 2004, 2009; Fako, 2006; Weiser *et al.*, 2006).

Research has established a gendered response to health care in Botswana; women utilise public health facilities more than men and men might perceive the use of the health care system as an expression of vulnerability and favour more traditional health care (Phaladze & Tlou, 2006). Therefore, a possible reason for the disproportionate amount of females than males testing was the introduction of routine testing in 2004. While this study did not establish whether the decision to test was client- or provider-initiated, it did identify the provider used. Approximately 50% of both female and male testers had tested in the dedicated HIV testing centres, Tebelopele, implying that at least half of testing decisions had been client-initiated. This suggested that the higher number of females testing in the sample was unlikely to be attributable to provider-initiated testing alone.

According to the review of the HBM in Glanz *et al.* (2002), barriers, perceived susceptibility and benefits were important predictors of health-seeking behaviour. In this study the results for needs and benefits were consistent with these findings as these two variables discriminated between testers and non-testers, and for both genders. In the above context, results on testing behaviour in Africa have revealed contradictory results for perceived susceptibility. In certain studies, they were consistent with a higher testing rate (Weiser *et al.*, 2006; De Paoli *et al.*, 2004); other studies showed no relationship (Solomon *et al.*, 2004); whereas Kakoko *et al.* (2006) and Vermeer, Bos, Mbwambo, Kaaya and Schaalma (2009) found the reverse. A possible explanation is offered by Glanz *et al.* (2002) who highlight that one of the major problems with research on the HBM is the inconsistent measurement of constructs, making comparisons across studies very difficult.

The influence of barriers, measured primarily as stigma and discrimination, was not anticipated. Gender analysis established that, for females, barriers were significantly higher for testers than non-testers and that there was a positive correlation between barriers and testing, whereas male testers and non-testers experienced similar levels of concern and no correlation was found between barriers and testing. These findings were contrary to the basic causal assumption of the HBM and the findings of a substantial body of work on stigma and discrimination in Africa and elsewhere (De Wit & Adam, 2008; Pulerwitz, Michaelis, Lippman, Chinaglia & Diaz, 2008; Obermeyer & Osborn, 2007; Link & Phelan, 2006; Weiser *et al.*, 2006; Kalichman *et al.*, 2005; Awad, Sagrestano, Kittleson & Sarvela, 2004; De Paoli *et al.*, 2004; Skinner & Mfecane, 2004; Solomon *et al.*, 2004; Van Dyk & Van Dyk, 2003). Given the well-documented gendered nature of stigma and discrimination in African society it was surprising that this study did not find significantly heightened concerns among female rather than male testers ($t=1.979$ df 129 $p=.258$).

In an attempt to explain the relationship between barriers with testing in the study, we derived two additional hypotheses based on the work of Brunswick and Banaszak-Holl (1996) who concluded in their study of the HBM that attitudinal variables operated as effects of risk behaviour rather than predictors of risk avoidance. The first hypothesis was that barriers were an outcome of testing behaviour and would therefore have a positive relationship; the second was that barriers were an outcome of need and would therefore have a positive relationship.

In this study a significant positive association with barriers was observed for females with both

need ($r=.297$) and testing ($r=.429$). Thus it is proposed that for females there was some evidence that levels of barriers were outcomes of the testing decision and the perception of the need to test. For males there was no significant association of barriers with either need ($r=.078$) or testing ($r=.060$).

There was the possibility that barriers could be both a predictor and an outcome of testing and in view of the suggestion from the work of Deacon, Stephney and Prosalendis (2005) that concerns regarding stigma and discrimination could lead to lower perceptions of personal risk (need to test). It was therefore concluded that more than one mechanism operated in our sample; one where barriers were the outcome of perceptions of the need to test and the testing decision and the other where it was the predictor of testing and lowered the perception of the need to test. For females, barriers were predominantly an outcome; for males both mechanisms operated, resulting in similar levels of barriers for testers and non-testers and no significant association for testing and need to test.

The results of the logistic regression analysis showed that the explanatory and predictive value of the two psychosocial variables, need and benefits, was low for the female sub-group but more acceptable for the male sub-group. The results for variance explained for the male sub-group (approximately 43%) compared favourably with results cited in the literature for HBM constructs. Taylor *et al* (2006) cited two reviews: one estimating that the HBM constructs explained 24% and another explained 15-27% of observed behavioural variance. Flowers *et al* (2003), using descriptor and HBM predictor variables, explained 28% of variance while the study by Vermeer *et al* (2009) found 31% of variance explained with HBM psychosocial variables.

In conclusion: the study confirmed the Botswana national gender differences in testing rates but was unable to explain the differences adequately. Two of the HBM constructs, perception of susceptibility and benefits, discriminated between testers and non-testers overall and for the gender sub-groups. However, they were of limited explanatory and predictive value particularly for the female sub-group. The third construct, barriers, operated differently for the gender sub-groups and counter to the assumptions of the HBM, leading to the hypothesis that within the sample barriers functioned both as an outcome and inhibitor of the testing decision in varying degrees and as such had no value in the model in predicting testing behaviour.

The predictive power of the HBM might have been improved if the other constructs of cues to action and self-efficacy had been included in the study. Nevertheless, as indicated by other researchers, the HBM caters for factors within the rational and volitional control but it is limited in providing insight into social, economic and cultural contexts that often have complex impacts on health behaviour decision-making (Vermeer *et al*, 2009; Taylor *et al*, 2006). The complex mechanisms involved in the experience of stigma and discrimination in the lives of the sampled population and the identification of the other factors influencing the testing decision would require further investigation using different research approaches.

The results obtained did have implications for intervention design, confirming that a realistic awareness of risk and the appreciation of beneficial outcomes were important considerations particularly relevant for the male sub-group. Further, since the levels of concern regarding the negative outcomes of testing were high amongst employees, interventions aimed at the reduction of stigma and discrimination and at addressing other fears would be relevant.

Finally, the testing rates reported in this study were considerably higher than those for the general population resident in the same urban area, indicating that HIV testing had relevance for the group investigated.

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VALUE OF INTERDISCIPLINARY RESEARCH: A MODEL OF INTERDISCIPLINARITY BETWEEN LEGAL RESEARCH AND RESEARCH IN ORGANISATIONS

L.E. Golzio & R. Troisi¹

ABSTRACT

Interdisciplinarity continues to be a goal, an aim of many scientific reviews and the subject of a significant number of scientific papers, however, its boundaries and modalities remain unclear, as do the advantages of incorporating contributions from different fields of knowledge. At present, guidelines on interdisciplinarity take the form of single forums based on opinions, logical conclusions, and normative perspectives rather than empirical, longitudinal or large-scale studies. The aim of this paper is to deepen the notion of interdisciplinarity in research by addressing the following questions: i) What is the proper meaning of “interdisciplinarity”? ii) Who are the role players involved in this research, and how do their different objectives and approaches differ? The paper then analyses a more specific topic that deals with the features of academic interdisciplinary research. Four criteria are proposed to explain the research: the objective of the research, the methodologies used, the topic analysed, and the output of the research. Furthermore, a model of interdisciplinarity between legal science and organisational science is proposed, based on an epistemological comparison between the two research fields, which is structured on the four criteria described above.

Keywords: interdisciplinary, interdisciplinarity, transdisciplinarity, normative perspectives, knowledge, epistemology, phenomenon, discipline, science, system, research hypothesis, theory.

INTRODUCTION

For the purpose of this article, it is accepted that the terms “interdisciplinarity” and “transdisciplinarity” have become common usage for international scholars, both in research and education. An emphasis on interdisciplinarity is now commonplace and research proposals in the EU consider interdisciplinarity a preferential factor. Equally important is the reference to interdisciplinarity in many universities around the world where it has become something of a mantra in doctoral schools, both in their research projects and in the training courses offered. However, it often seems to be conceived of as research and education about a set of exclusive categories in one field of knowledge, which is then added to one or more sets of exclusive categories from other fields. At present, guidelines on interdisciplinarity take the form of single forums based on opinions, logical conclusions, and normative perspectives rather than empirical, longitudinal or large-scale studies. This lack of clarity may stem from the existing research on interdisciplinarity. In research theory, science is still typically separated into distinct disciplines. Scientific specialisation is the consequence of the development and in-depth examination of scientific knowledge and also the need for increasingly sophisticated analytical tools. It is also the consequence of the internal dynamics of self-promotion and growth especially in terms of the power of the different scientific fields. Contact between and hybrids formed among different fields are new subjects of interest. This interest stems from two likely causes:

- i) A theoretical assumption of knowledge that tends toward the idea of unity, in which the topics analysed are multifaceted and cannot be understood by only considering the functioning

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of their individual parts, and ii) a practical explanation according to which cooperation among different fields can lead to conceptual, methodological and epistemological exchanges or integrations and, in some cases, to the birth of new fields of knowledge. Given these conditions, this paper aims to deepen the notion of interdisciplinarity by posing the following question: i) What is the proper meaning of “interdisciplinarity”?

- Who are the role players involved in this kind of research, and what are their different objectives and consequent approaches? The paper then analyses a more specific topic that deals with the features of academic interdisciplinary research. Four criteria are proposed to explain this kind of research: the objective of the research, the methodologies used, the topic analyzed, and the output of the research. Furthermore, the researchers suggest a model of interdisciplinarity between legal science and organisational science based on an epistemological comparison between the two research fields that is structured on the four criteria described above.

The article is organised as follows: Section 1 provides a brief review of the theoretical underpinnings of research as a whole. Section 2 describes the interdisciplinarity in research, its characteristics, and its *modus operandi*. Section 3 analyses the interdisciplinarity in “fundamental” research, focusing on criteria that may support scientific co-operation and integration and on the advantages of this kind of cooperation. Section 4 describes i) fundamental interdisciplinary legal research and in other fields, in general; ii) fundamental organisational research and other fields, in general; and iii) a proposed interdisciplinary model uniting legal research and organisational research. Section 5 concludes with a discussion of the key findings.

SECTION 1: RESEARCH AND THE THEORY OF RESEARCH

Before analysing the research features and, in particular, the interdisciplinary research features, an overview is presented of the theoretical meaning of research to illuminate its historical evolution. An attempt is made to show how the “connected” notion of science has changed along with its mode of production: the emphasis is that interdisciplinarity in research has a cultural theoretical rationale in that it considers reality to be an objective phenomenon and thus views specialised research as a part of the total reality.

Throughout history, different theories pertaining to research have been developed. These theories reflect a number of fundamental theoretical paths.

The first path considers research to be a tool for associating isolated items and connecting them to form a single, coherent whole, which is a given system of knowledge, for example, science (Dewey, 1939). More specifically, this idea of a system is founded on the concept of theorems that test propositions via the rules of inference which allows for precise deductions from these theorems. This definition of research is strictly formal and emphasises the deductive method: science guarantees its own validity by demonstrating its propositions and connecting them in a uniform system.

The second path considers research as a mere method – a research guideline or a research technique (Perelman & Olbrechts-Tyteca, 1969). In this model, the techniques involve both the inductive method and the deductive method: the general is induced from the concrete, and vice versa. Science is the knowledge of phenomena and an analytical and interpretative process about them.

The third path takes a critical stance toward science. Science grows through an unending process of trial and error: this process is research. The suggestion is that all scientific theories are, by nature, conjectures and thus inherently fallible and that refutation of old theory is the fundamental process of scientific discovery. Should any new theory withstand more of such refutations than its prede-

cessor, it would have a higher verisimilitude and, therefore be closer to the truth (Popper, 1959).

The fourth path hinges on the complexity theory. The natural sciences present the idea that knowledge is not simple but is, rather, the outcome of combinations of different scientific approaches, all of which are necessary to describe a phenomenon, which is a part of the reality. Substantially different fields of research have to work together to define the subjects of knowledge in a scientific way. A phenomenon should be seen in its entirety, with single parts working together to constitute the whole. Different disciplines have to work together to outline objects in a specific way (Van Dijkun, 2001). Moreover, a phenomenon under consideration has to be seen as part of a greater system in which causes and effects are regulated by feedback cycles. One can use the methods of the natural sciences to explain complexity, but to determine the complexity of a system is a task that must be achieved through the cooperation of different disciplines. In this paper, the theory of complexity is particularly valuable insofar as it provides the rationale behind the interdisciplinary model of research. Interdisciplinarity appears to be the most functional form of research if the objective is to understand a phenomenon as a whole. As previously stated, this theory originates from the natural sciences and, in some hypotheses, explores the way in which scientific methods can be used in the social sciences despite the epistemological distance between these fields. Thus, it is possible to consider the cultural value the complexity theory contributes to interdisciplinarity research within the social sciences, in which there are “neighbouring disciplines”, from an epistemological point of view, that share a similar or identical aspect of the knowledge.

SECTION 2: INTERDISCIPLINARITY IN RESEARCH: THE FEATURES

In this section, the notion of interdisciplinarity in research is discussed and an attempt is made to answer the following questions: i) What is the proper meaning of “interdisciplinarity”? and ii) Who are the role players involved in this kind of research, and what are their different objectives and approaches?

- In answering the question “what is the proper meaning of ‘interdisciplinarity’”? an attempt is made to distinguish interdisciplinary research from what it is not. Interdisciplinary research is a process of harvesting, capitalising on, and leveraging multiple kinds of expertise (Klein, 2008). It is a robust process of integration or, at the very least, of cooperation (Rosenfield, 1992), wherein scholars from different research fields work together for long periods of time to develop new conceptual and/or methodological frameworks that can, in turn, create new shared theoretical approaches. Interdisciplinarity in research is not fully achieved by simply comparing different research results. Research involves comparing a set of conceptual categories of a single field of knowledge to one or more sets of conceptual categories of other single fields of knowledge. Knowledge specialists are tasked with addressing a problem and offering separate solutions. Such cases involve simple coordination between disciplines rather than true interdisciplinarity.
- An interdisciplinary group, or research team, is composed of members with different scientific competences: they join together to solve “complex” problems. As stated above, the complexity theory is the cultural rationale underpinning the integration of theoretical knowledge; no science or research field can be considered the only point of view from which to understand reality and its phenomena because no research field can piece phenomena together in terms of comprehensive knowledge. Interdisciplinary research implies clarity on the part of the single discipline; when the logical and methodological frameworks of the single discipline are clearly identified, one can clearly identify the possible interactions with other disciplines that can contribute to the understanding of the analysed phenomenon as a whole. If group members are primarily scholars from universities or research centres, interdisciplinarity will be as widespread and complex as the epistemological distance between the disciplines involved. The more the

problem deals with “neighbour disciplines” that fall under similar epistemological points of view, for example, disciplines within the social sciences that share methodologies or analysed phenomena, the clearer and more efficient the results will be for the scholars involved².

When group members are primarily scholars, the interdisciplinary objective is a classic epistemological goal: the production of new or wider knowledge of a particular phenomenon, the test of a hypothesis, the answer to a research question, or the development of a new theory. This is the kind of interdisciplinarity on which the present paper focuses. In contrast, if the group involves stakeholders from non-specialised or predefined organisations, research must pursue the concrete objective of solving specific problems by generating practical output – best practices – as techniques that, when combined and applied to a specific process, give rise to technology. This distinction between different forms of interdisciplinarity in research is linked to the guidelines of EU reports regarding the state of the European doctoral school³. It is well known that doctoral schools must be founded on scientific research programs. In this regard, the most significant recommendation of the EUA report was to rethink the model of doctoral research adopted in European universities. The report upheld the principle that the essential and predominant component of doctoral research is *scientific knowledge*.

Research, in fact, may be carried out for various purposes, may adopt the methodological approaches of various disciplines, and, on the basis of its aims, may be classified as fundamental or applied. Fundamental research pursues the advancement of knowledge and the theoretical understanding of phenomena and relations between the variables at work by means of specific processes.

Fundamental research is exploratory and does not focus on practical ends, even though the outcomes may be applications that were not initially planned. Pure research is fundamental because by generating new theories, it supplies inputs for further research, in many cases of an applied nature. Applied research is carried out in the hope of finding practical solutions to specific problems. The application of scientific knowledge to the solution of practical problems takes place through the design and implementation of various techniques that, when combined and applied to a specific process, give rise to technology (Arthur, 2009). The main aim of applied research is the exploitation of knowledge for practical purposes. The specific aim of the academic research determines the nature of the research methodology, which can be classified as mode 1 (fundamental research) or mode 2 (applied research), as shown in Table 1.

Table 1: Alternative modes for the production of knowledge

Research components	Mode 1	Mode 2
Outcome	Discovery	Application
Perspective	Mono or interdisciplinary	Interdisciplinary
Process	Homogeneous, hierarchical, linear	Heterogeneous, non-hierarchical, non-linear
Institutionalisation	Specialised organisations, (Universities, Research Centres)	Non-specialised or non-predefined organisations

Adapted from Gibbons *et al* (1994)

²We will discuss below the “strangification” phenomenon (Wallner & Peschl, 1991) that occurs when disciplines are too far from each other and the methodologies and concepts used are difficult to understand because they are related.

³EUA, 2005. *Doctoral Programmes for the European Knowledge Society*. Brussels: EUA.

This distinction is very important for the present paper because distinguishing fundamental from applied research sheds light on criteria (the objective, the methodology, and the output) that are useful in describing the research in general and specific terms.

SECTION 3: INTERDISCIPLINARITY IN FUNDAMENTAL RESEARCH

This section explores interdisciplinarity in fundamental research by considering its features, outputs and advantages. Fundamental research is focused on, taking into account that the boundaries between fundamental and applied research can be less defined than those theoretically upheld in the EU report. Interconnections between fundamental and applied research have been described by numerous authors and are supported by empirical evidence, although the exact nature of these interconnections is not yet clear (Golzio, 2011).

Carrying out interdisciplinary research first requires a comparison and then an epistemological integration, which can differ among disciplines, which is more easily achieved for neighboring disciplines. Drawing from the EU report quoted above, four criteria are identified which can be useful in comparing the disciplines involved and which make interdisciplinary research possible:

- the epistemological objectives,
- the analytical methods,
- the investigated phenomena (not present in the EU report but essential for this kind of research), and
- the outputs of the interdisciplinary research and finally, we describe the advantages of interdisciplinary research.

A) The epistemological objectives. As we are considering fundamental research, the involved disciplines can all have the general objective of enhancing knowledge and theoretical understanding of phenomena by testing hypotheses. The research hypotheses can be two-fold:

- a1) Hypotheses that belong to one discipline and that are enriched by concepts coming from one or more other disciplines.
- a2) New hypotheses formulated considering the contributions of all the disciplines involved.

B) Methods of validating hypotheses can come from one discipline or be integrated, in two different ways.

The body of knowledge in a discipline is the set of hypotheses empirically observed and tested with methodologies particular to the discipline. Thus, in interdisciplinary research, it is possible to consider two kinds of analytical methods linked to the two types of research hypothesis:

- b1) a research hypothesis with an epistemological nature typical of a single discipline is tested with one or more methods typical of other disciplines.
- b2) a research hypothesis is shared and tested by the methods of the involved disciplines in either a separate or integrated manner.

C) The investigated phenomenon can be one of the following types:

- c1) The investigated phenomenon can come from the two or more disciplines involved. When the understanding of phenomena deals with the subjects of the research in each of the single disciplines involved, interdisciplinary research can be useful. For example, a survey within the social sciences, which involves two or more social disciplines about the same phenomenon (e.g., the sociology of organisations, the psychology of organisations, and the economics of

organisations) initially requires a comparison of the central bodies of theories in the paradigms involved, tested as hypotheses. One can assume there should be some common ground in the theories given that they have familiarity with the same phenomenon. This enhanced understanding of the phenomenon in question should be reflected in the ease with which existing paradigms and, as a consequence, theories can be modified and integrated.

c2) The investigated phenomenon is typical of just one discipline involved.

The further disciplines are from one another, the greater the strangification effect there will be (Wallner & Pechl, 1991). This is likely to occur when disciplines have to work together to understand a phenomenon that is new to some of them and only known under a particular approach by one or more of them. Unlike the type of phenomenon described in c1 there are no common points of reference or common language to address the lack of familiarity with the same phenomenon.

Difficulties in accepting shared paradigms or discrepancies in the meaning of concepts are likely to arise. The social sciences have developed specific tools to reduce the costs of strangification. An effective way to understand the language of each discipline may be via the translation of terms to an intermediary language, or natural language, metaphors or an artificial language, such as mathematics or logic.

D) Different forms of interdisciplinarity: the outputs.

The combination of the above sub-criteria should gauge the degree of interdisciplinarity. We consider two possible models of interdisciplinarity⁴. The first model involves a single research hypothesis whose cultural domain is still contained within one discipline, and the second model describes a full interdisciplinarity that involves new hypotheses, as a result of the integration of the knowledge on shared phenomena, tested using a method from each of the disciplines involved, that is, two or more methods, or with an integrated method. A further step should be the establishment of a new discipline with its own theories and methods based on the newly tested hypothesis.

Table 2: Paths of interdisciplinarity in fundamental research

Fundamental research	Shared Hypothesis	Mixed methods (more than one method or one integrated)	Investigated phenomenon is shared (comes from all of the disciplines involved)	Output: strong interdisciplinary /full integration: new discipline
	Hypothesis from one discipline	Imported method (from another discipline)	Investigated phenomenon is from one discipline	Output: weak interdisciplinarity

E) The advantages in the interdisciplinary fundamental research have been shown by Nissani (1997). In the following table, we add two further advantages (f, g) and distinguish between them depending on the two forms of interdisciplinarity.

⁴As described above, they are the outputs of a specific combination of the described sub-criteria that are considered as alternatives, or they may be considered as two extreme points on a continuum in which intermediate models are possible.

Table 3: Advantages of interdisciplinary research

Advantages	Strong Interdisciplinarity	Weak Interdisciplinarity
Growth of knowledge: creative ideas can grow in a single discipline but often arise from the permutation of ideas from two or more disciplines		X
The oversight of interdisciplinarity: mistakes in a single discipline can be more easily identified in a comparison between disciplines		X
Involvement of topics in the interstices among disciplines: some knowledge problems are neglected in the boundaries between disciplines	X	
Problem solution: many problems can be understood by the gathering of methodologies from multiple disciplines thus overcoming tunnel vision	X	X
Unity of knowledge: analysis of phenomena is completed and satisfied by the different perspectives as "pieces in a panoramic jigsaw puzzle"	X	
Integrations and hybridisations among disciplines are the basis of new disciplines (e.g. biochemistry, neuroscience, informatics)	X	
The removal of the ideological manipulation that can affect a single discipline	X	X

SECTION 4: LEGAL RESEARCH AND RESEARCH IN “ORGANISATIONS”: WHEN INTERDISCIPLINARITY IS BETWEEN ONE OF THESE DISCIPLINES

This section examines the features of interdisciplinarity involving fundamental legal research and fundamental organisational theory research and an interdisciplinary model between these two fields of research is proposed. The choice of these two fields is based on the idea that many phenomena are subjects of research in both disciplines; for example, economic organisational forms are related to the types of business organisations; human resource management is related to the legal topic of labour contracts and labour relations, in general; legal merit pay is an organisational incentive. The dialogue between the two disciplines should be facilitated by incorporating the knowledge of the same phenomena using different approaches. Interest is further strengthened by the “scientific” peculiarities of legal research, which is always connected to a source of law⁵, which is – in a classical definition – a system of rules and guidelines that are enforced through social institutions to govern behaviour. If we focus on substantive rules, a general mode of behaviour is guaranteed, allowed, or forbidden, and the related research will be interested in the analysis of the mode rather than the analysis of the concrete behaviours connected to the rule. Furthermore, the particular features of fundamental legal research described below attract some criticism from scholars in other fields regarding the classification of legal research within the set of sciences. For the purposes of this article, the question of whether legal research is scientific research can be disregarded. With regard to Popper’s idea of science as the falsification of hypotheses or the common idea that science is simply the sum of tested hypotheses, legal research does not seem to be a science

⁵This is particularly true for the civil law system, which is considered the point of reference of this article.

(Popper, 1959). However, we believe that complexity theory provides an important theoretical rationale from which to consider legal research as a form of science. As stated previously, complexity theory views knowledge as a result of the combination of different kinds of knowledge or different points of view, all of which are necessary to describe a phenomenon as a whole. The way of describing phenomena in legal research, which is not supported by an empirical investigation, does not correspond to the idea of scientific methods and scientific analysis.

The methodologies employed by legal research represent a different point of view, that is, a different way to describe a phenomenon. If a phenomenon should be seen as a whole, constituted by parts working together, then omitting the legal contribution may result in an incomplete description of the phenomenon. In addition to the above, it is held that in social sciences one usually examines hypotheses that are about expectations and not about the unqualified falsification of particular phenomena (Frey & Irlé, 1993). Finally, the question for some scholars could become semantic rather than a substantial question. Siems (2009) holds that the use of conventional science is not necessarily better than any other type of research.

THE FEATURES OF FUNDAMENTAL LEGAL RESEARCH

In this section, we analyse the epistemological features of fundamental legal research and how it contributes to fundamental interdisciplinary research.

As fundamental legal research is of interest, the focus is on doctrinal research, the legal research pursued by scholars that concerns the formulation of legal ‘doctrines’ through the analysis of legal rules. The point of reference is the civil law system, where the rules are found within statutes and codes, the sources of law⁶. Doctrines examine and interpret the text of the rules so as to fully understand their meaning or to describe the relations between rules by weighing their internal consistency with the legal general categories or with the fundamental principle. A number of contributions to fundamental legal research stem from doctrinal research, which provides significant support for legal operators in analysing the possible meanings and implications of the rules as well as the legal consequences of the different interpretations and the courts can benefit from doctrinal studies when they apply the findings. It is common to find in the body of a judgement expressions such as “according to the prevailing doctrinal interpretation”, “in line with the prevailing doctrinal interpretation”, “as it has been stated in the doctrinal interpretation” and similar expressions.

If we consider the criteria described in Section 3, the discipline of the law differs from the social sciences for three reasons: i) The objectives of legal research: although legal research aims at enhancing knowledge, it is substantially different from social sciences research in that it considers questions about the exact meaning of the law using general categories or according to its internal consistency with the legal system. By contrast, a typical question in the social sciences may concern the causal relations between the observed variables. ii) Methodologies: no empirical investigation is required in the field of law. Its own method remains a logical exercise of the humanities rather than an attempt to achieve a certain result through the formal application of a scientific analytical tool. iii) The investigated phenomena: the phenomena in question are only the point of reference for a law. As for substantive rules, rules are the subject of the analysis rather than the behaviours that stem from their application. There is no attempt to explain, predict, or even to understand human behaviour. The sole function of legal research is to prescribe this behaviour (Chynoweth, 2008). Legal scholars usually deal with multifaceted, rather than distinct problems and endeavour not to explain the individual components of individual occurrences, but to develop a holistic comprehension of their overall complexity (Becher, 1987).

⁶These sources of law are formulated as abstractions or general principles and are distinguished as either substantive rules or procedural rules. Substantive rules will form the focus.

INTERDISCIPLINARY FUNDAMENTAL LEGAL RESEARCH

Even if “doctoral research” is restricted to examining and finding answers with an internal consistency within the principle and the categories of the legal system, it is possible to consider a notion of interdisciplinarity in legal research. Accordingly, we examine the following cases by taking into account the criteria described in Section 3.

Case 1) i) Objective: the research aims to integrate and enhance the knowledge of different disciplines. The questions are as follows: is it possible to integrate or to complete doctrinal interpretation with extralegal topics? ii) Methods: no particular methodology is required, as this research deals with a completion of the doctrinal interpretation founded on knowledge that is gained – and, in most cases, tested – in other disciplines. iii) Phenomenon: the subject of the research remains the law. For example: an unclear or ambiguous legal ruling can often be more easily interpreted when viewed in its proper historical or social context (Chynoweth, 2008) or when it is integrated with technical knowledge required in some specific fields. Finally, in many legal systems in the area of civil law, “general clauses” exist that need to be integrated with extralegal criteria that will depend on the concrete case. “Good faith, proportionality and professional diligence”, are examples of criteria where accurate interpretation is important, as they represent an important connection between law and phenomenal reality.

Case 2: i) Objective: the research aims to evaluate the effectiveness of a particular piece of legislation in achieving particular goals or to examine the extent to which it is being complied with e.g. to understand its capacity to incentivise desirable behaviours or dissuade prohibited behaviours. ii) Methods: the methodology is scientific: an empirical investigation is required to test extralegal effects that stem from a legal topic and integrate them⁷. iii) Phenomenon: the core question concerns the law but not exclusively. Justice and internal consistency are positioned alongside effectiveness. The subject of the analysis, particularly in the case of substantive rules is both human behaviours and the law, which are related.

Case 3: i) Objective: the aim is to understand the role of the law as part of a larger system. ii) Methodology: the extralegal nature of the topic leads to a scientific methodology that is required in most of the scientific fields that are involved in the research (Boland, 1989). iii) Phenomenon: the research is about an extralegal phenomenon, and law is only a variable that, in connection with the others, can facilitate a better understanding of the phenomenon as a “whole”. For example, it is well known in the field of research that institutions are the sum of social relations, the political sphere, the legal system, and a culture or religion that sets a standard of behaviour for society. The research topic is not legal, and “formal” law is just one of the factors that can direct behaviour in a given society.

Table 4: Fundamental legal research and interdisciplinarity

Objective	Phenomenon	Method	Type of interdisciplinarity
Enrichment of law interpretation	Legal: law, a rule or a part of legislation	No method	Weak interdisciplinarity
Knowledge of law and of its effectiveness	Legal: law	Scientific method	Weak interdisciplinarity
Knowledge of the role of law in a multi-faceted phenomenon	Extralegal: the phenomenon as a whole	Scientific method	Weak interdisciplinarity

⁷The recent growth of the empirical legal research, which is founded on quantitative methods (surveys, experiments, case studies), has been well documented.

FUNDAMENTAL RESEARCH IN THE THEORY OF ORGANISATION

The epistemological features of fundamental research in the theory of organisation are examined because they provide the cultural basis for understanding how this kind of research may be involved in fundamental interdisciplinary research.

We categorise this research according to the epistemological criteria described in Section 3. i) Objectives: the starting point is a question or a relevant problem in the theory of organisation supported by the literature to define what is simply examined about a phenomenon and what is not and to avoid duplicating hypotheses that have already been tested. ii) Methods: the methodology is recognised as scientific. The hypothesis has to be tested through the collection and analysis of data. The analytical interpretation can support the hypothesis, can suggest a different relation from the hypothesis, or can deny the validity of the hypothesis. The analytical tools are particular to this field. In particular, the case study is an intensive analysis that can involve either a single or multiple settings (Yin, 1984), which can be particularly useful when a phenomenon is “under examined” and the scholar is attempting to provide an in-depth description of all aspects of a situation. The analytical tools may be prospective, in which criteria are established and cases fitting the criteria are included as they become available, or retrospective, in which criteria are established for selecting cases from historical records for inclusion in the study. Case studies use descriptive and exploratory information, including interviews, questionnaires and personal observations. The evidence may be qualitative e.g. words, quantitative e.g. numbers, or both (Eisenhardt, 1989). The advantages of case studies depend on the available information and how it can reveal unexpected relationships; among the disadvantages of case studies the principle reason is that they are not always applicable to other situations. iii) Phenomenon: the analysis is within the boundaries of the theory of organisation e.g. defines the organisation as a particular type based on its variables, its coordination mechanisms, and its environment.

INTERDISCIPLINARY RESEARCH AND THE THEORY OF ORGANISATION

Regarding fundamental legal research, two possible ways are proposed to involve the theory of organisation in interdisciplinary research.

Case 1): i) Objective: the objective is to enhance knowledge by combining ideas or topics from other fields. ii) Methods: empirical investigation allows for the inclusion of mixed methods, both qualitative and quantitative, from the disciplines involved. Given that an organisation is a multi-faceted phenomenon, a combination of quantitative and qualitative approaches may provide a better understanding of research problems and complex phenomena (Creswell & Plano Clark, 2007). iii) Phenomenon: topics are organisational but not exclusive to the theory of organisation. It is emphasised that the theory of organisation is traditionally founded on interdisciplinarity. The initial works in this field considered organisation as a discipline that uses concepts and rules derived from the fundamental sciences: economics, psychology, sociology. A period of fragmentation of the research on interdisciplinarity followed, emphasising a deep connection to each of the fundamental sciences which leads to distinct subsets of disciplines. This distinction does not deny the interdisciplinarity inherent in research in the theory of organisation and its topics because different conceptual perspectives and methodological tools can be used to improve the knowledge about organisation.

This applies if an accepted notion of the organisation as a “socio-economic” institution ruled by market exchange for economic production is presumed (Rugiadini, 1979). The organisational theory of systems describes the firm as a socio-organisational system that is open to and connected with its own environment and whose effectiveness depends on the degree of consistency of all its internal variables: strategies, structures, operative systems, reward systems and behaviours. All of

these variables can be examined from different scientific perspectives.

Case 2: i) Objectives: the objective is the enhancement of knowledge about the role of the organisation in a complex system. ii) Method: testing the hypothesis with mixed methods – both qualitative and quantitative – from each of the disciplines involved. iii) Phenomenon: the topic does not belong to the theory of organisation. Organisation is simply a factor that works together with the others to understand the existence, survival, and success of a whole phenomenon (e.g. topics such as development theories, the third sector, or organised crime, which are traditionally examined under different scientific perspectives).

Table 5: The theory of organisation and interdisciplinarity

Objective	Phenomenon	Method	Type of interdisciplinarity
Enhancement of the knowledge (new hypotheses to test)	Organisational topic not exclusive	Scientific (mixed method)	Strong interdisciplinarity
Enhancement of the knowledge (with tested hypotheses)	Organisational topic not exclusive	No method	Weak interdisciplinarity
Understanding of the role of the organisation in a complex system	Topic extra-organisational	Scientific method (mixed method)	Strong interdisciplinarity

WHEN INTERDISCIPLINARY RESEARCH INVOLVES LEGAL RESEARCH AND THEORY OF ORGANISATION RESEARCH

Following the suggestions of Tables 4 and 5 in the previous section, we try to show the nature of and possible cases for interdisciplinary research between legal research and theory of organisation research, adding another element dealing with the results of the research. We then identify the specific advantages of this kind of research.

SECTION 5: DISCUSSION OF THE KEY FINDINGS.

Three cases are considered:

Case 1): Objective of the research is a deeper interpretation of law or an examination of the law's effectiveness by using organisational scientific contributions. Methodologies: if the organisational contribution has simply been tested, a new empirical investigation is not necessary; if organisational contributions refer to some particular case of the law's effectiveness and are therefore useful in creating a new hypothesis, empirical investigation is necessary using the analytical tools usually employed in the field of the theory of organisation. Phenomenon: a law that prescribes behaviours that are relevant to organisational topics, e.g. the fields of the companies and the related field of the business contracts, or human resources and the employment relationship⁸. Output: as it is fundamental research, it could be very useful in signalling, through its suggestions, actions that are necessary in a given case. In fact, this kind of research can demonstrate that a law "does not work well" and should be modified in its formulation or eliminated or that a new law

⁸Nevertheless, the common perception among scholars in organisational studies is of the lack of dialogue between the two disciplines.

should be written. Moreover, the case studies in their frameworks are somewhat analogous to the judicial cases: in the civil law system, both can represent a concrete experience to relate to the law. The case study methodology would allow for a better understanding of the meaning and space of the law and, through its integration with the legal research, would provide interpretive support for the courts in applying the law to a concrete situation.

Case 2: The objective of the research is to enhance the knowledge of an organisation through the role of law within the organisation. Methodology: an empirical investigation is required, preferably case studies. Phenomenon: Two examples are proposed to clarify the kind of phenomena analysed. Certain scholars view organisations as the nexus of contracts (Alchian & Demsetz, 1972), which implies that the firms are nothing more than a collection of contracts among different parties – primarily shareholders, directors, employees, suppliers, and customers. Legal research would be relevant for integration in identifying the nature and features of the contracts and the related incentive mechanisms and enforcement tools depending on the nature of the specific relations, going beyond the typical realm of organisational studies focused on the agency and its internal relations versus the legal authority. Another theory (Grandori, 2001) defines organisation as a nexus of unit boundaries and coordination mechanisms. The design of organisational units can be seen as the allocation of rights, including the right to use resources, the right to make decisions, the right to monitor activities, the right to appropriate the residual economic results derived from economic activities, and the right to transfer the above rights to another role player in the organisation. Legal research could integrate the content of the rights by classifying them in their general categories and, by suggesting different rights more appropriate to a given situation, suggest new elements for new organisational configurations. Output: As fundamental research, this approach can suggest how to establish effective praxis, or it could provide guidance for organisational analysts or management. In this way, the well-known “relevance lost in translation” that makes research a pure theoretical exercise could be overcome. By providing meaningful guidance to analysts and management, this approach examines the rights, the contracts and their legal effects as actually described in the codes and not as abstract typologies. This could be a good way to bridge the gap between scholars and practitioners or, in different terms, between theory and concrete reality.

Case 3: Objective: the objective is to understand the role of the law and the role of organisations in a complex system that is the subject of analysis. A complex system: As stated, complexity means that a phenomenon works as a whole, and the description of a single part must be integrated with the explanation of the other parts. Methodology: the method is scientific. Empirical data has to be examined using the analytical tools of the relevant disciplines. Phenomenon: the research is about a phenomenon both extra-legal and extra-organisational. The law and the organisation are two variables that, in connection with others, allow us to understand the nature of the complexity of the phenomenon. An advanced idea of complexity and of interdisciplinarity would deal with a phenomenon that cannot be categorised under the traditional sciences as a natural or artificial system or a system of human activities. For example, problems tied to conflict and aspects of security constitute a particularly complex area in which different aspects interact, including global perspectives on the environment and the development of social inequalities. The destructive effects of technologies e.g. weapons of mass destruction, the growth of international terrorism and its organisational peculiarities, and prevention policies are additional examples of problems relevant to this approach. Output: from this perspective, the observation of real problems cannot be separated within the boundaries of the single disciplines. The systemic validation of the hypothesis can create a new discipline that is, for some topics, the outcome of the integration of knowledge from the original disciplines involved. The scientific answer offered is innovative and unconventional.

Table 6: Interdisciplinarity between research in organisations and legal research

Objective	Phenomenon	Method	Type of interdisciplinarity	Output
To deepen interpretation based on the theory of organisation	Legal topic: the law and the prescribed behaviour	No method	Weak interdisciplinarity	Suggestions for modifying and applying the law
To understand the effectiveness of the law based on the theory of organisation	Legal topic: the law and the prescribed behaviour	Scientific method (case studies)	Weak interdisciplinarity	Suggestions for modifying and applying the law
To deepen the organisational knowledge through the role of the law in the organisation	Organisational topic	Scientific method (case studies)	Weak interdisciplinarity	Suggestions to operators for best practices
To understand the role of the law and the organisation in a complex system	Extralegal and extra organisational topic	Scientific method	Strong interdisciplinarity	New discipline

ADVANTAGES OF INTERDISCIPLINARY RESEARCH

The following are considered to be the advantages of integration between legal and organisational research. Firstly, the methodology of the research on organisations would enrich the legal research on the scientific method and fill a recognised gap. As stated, the framework of case studies and their aims are quite close to judicial cases. An intensive analysis of one case is a more accessible tool and is closer to the language of legal research than strictly quantitative analytical tools. Analytical arguments are essential for “protecting” the research from ideological manipulation, which is a major risk for the humanities and legal research but less of a risk for the scientific disciplines. In addition, legal research follows the new laws that prescribe new models of behaviours by looking at new cases coming from the evolution of social reality. In this regard, legal research seems to keep up with the times better than research in organisations. In fact, many critiques of organisational science stem from its slowness and consequent conservatism. The integration between the two disciplines can mitigate critiques such as the conservative nature of organisational research (Mitroff & Pondy, 1978) and the “incredibly long periods of time” required to adequately assess organisational phenomena (Cummings, 1978).

Integration between the two disciplines also impacts on research outputs. Interpretation of laws could be enriched, suggestions could be made regarding revision of laws, and new laws could be instituted regarding organisational topics. In addition, the involvement of legal research in organi-

sational topics could mitigate critiques about the organisational model of knowledge being too far removed from practical solutions (Starkey & Madan, 2001). This research would be integrated with the analysis of rights, contracts and their effects as prescribed in a code, thereby bridging the gap between who “studies” the knowledge and who should use this knowledge. Finally, the impact of strangification must be considered. This impact may depend on the sharing of phenomena on which complementary knowledge has been developed and strengthened with the familiarity of using cases in the legal field.

CONCLUDING REMARKS

A radical change in international and national research is in progress based on the increased consideration of the importance of interdisciplinary research which may result in a total strengthening of the research features described in this article. Rather, interdisciplinarity has connoted the combination of specialised contributions put together under separate points of view. It is important to emphasise that a change in the way scholars conduct their research can affect university training courses and governance structures of research activities. The impact of such a change in viewpoint would be especially great in the countries where different disciplines typically have their own courses, departments, structures and conferences. Strengthening interdisciplinary research may help reverse the division of academic discipline into isolated intellectual silos (Genn, Partington & Wheeler, 2006). As explained above, one discipline connotes one self-contained and isolated domain with its own scholars. Interdisciplinarity may lead to new domains with an enlarged community of scholars and may impact education by ushering in new training courses.

Scientific specialisation is the consequence of the development and in-depth examination of scientific knowledge. At the same time, it is the consequence of the need for increasingly sophisticated analytical tools. This specialisation is also the consequence of internal dynamics of self-promotion and growth especially in terms of power of the different scientific fields. Interdisciplinarity in research can reduce this kind of imbalance because by applying analytical tools, new or different from the accepted tools, in the single area thereby reducing the ideological manipulation that can occur in a single discipline. We do not wish to understate the role played by traditional disciplines; however, it seems necessary to fashion a new scientific culture that can understand an increasingly complex and rapidly changing universe.

GLOSSARY

Phenomenon: an observable occurrence, a part of reality.

Discipline: a particular branch of scientific knowledge.

Science: the body of knowledge and the way of pursuing knowledge.

System: a complex phenomenon or a sum of complex phenomena.

Research hypothesis: what one is expecting to positively test.

Theory: the research hypothesis which has positively tested an explanation of a phenomenon.

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A, B, C OF THE ZIMBABWE ECONOMY

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Abstract

This study reviewed the performance of the Zimbabwe economy since the attainment of independence in 1980, sectors of the economy and economic infrastructure. The research showed that Zimbabwean economy performed well from independence to around 1997. From 1998 to 2008 the economy witnessed a pervasive economic meltdown due to poor macroeconomic economic policies. Over this period, the economy declined by about 50 percent. The study shows that Zimbabwe is a diversified economy with services contributing more to GDP yet, at the same time, brings poultry foreign exchanges. The country also witnessed massive deterioration in economic infrastructure over the past fifteen years. However, irrespective of the dismal economic performance, the country still shows great potential for growth due to vast mineral resources and excellent human capital. Government must put in place credible policy frameworks which are aimed at propelling the economy to greater heights.

Keywords: Zimbabwe, Economy

INTRODUCTION

The Zimbabwe economy has gone through leaps and bumps since the country attained its independence in 1980. The performance of Zimbabwe economy was erratic owing to inconsistent macroeconomic policies and hostile political environment especially in the last decade.

This article entails the review of macroeconomic environment, economic structure, economic performance and economic infrastructure. With a view to unravel the state of affairs of the Zimbabwe economy, macroeconomic environment and the economic structure will be discussed in this study.

The main objective of this study was to clearly outline the state of affairs of Zimbabwe economy, its evolution since the attainment of independence in 1980 and discuss components which make up the economy of Zimbabwe.

The important findings from this study will help various stakeholders to make informed decisions. These stakeholders include investors, government, business community and civil society.

The relevance of this paper hinges on the fact that despite having been extensively featured in the media yet literature on documentation of Zimbabwe economy is very limited. Previous researchers concentrated on the turmoil in Zimbabwe. This study brings in another dimension which covers both the economic turmoil and challenges and opportunities in Zimbabwe.

Bolnick, Greenbaum and Pokhrel (2007) carried a detailed research on the Zimbabwe economy prior to 2007. Although they covered a number of issues, they left out sectoral analysis which is important to aforementioned stakeholders. In addition, the paper is outdated. Events which unfolded after 2007 and led to the abandoning of the Zimbabwean dollar and adoption of the multicurrency system are not covered.

RESEARCH METHODOLOGY

The major important source of data in this study was secondary data. This included national documents such as national trade policy, industrial policy, national budget and monetary policies.

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Annual reports by different ministries, chambers of various industries and the Central Bank were important sources. Secondary data was chosen because it was less expensive, yet insightful. The availability was effortless, rapid and resulted in unforeseen discoveries. The reliability, accuracy and integrity of secondary data are uncertain (Collis & Hussey, 2003). To mitigate this, there was the adoption of multiple-source secondary data, where an amalgam of documentary and survey data were considered. The other limitation was access to some of the internal reports as they were treated as confidential. Regardless of this, secondary data proved to be an important source of data for this research.

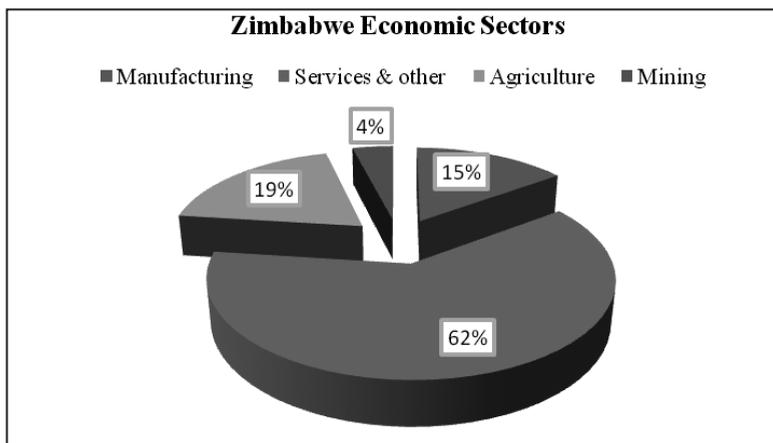
RESEARCH FINDINGS

This section entails reviews of macroeconomic environment, economic structure, economic performance and economic infrastructure.

The structure of the economy

Zimbabwe has a relatively diversified economy with good infrastructure, strong manufacturing and agricultural sectors, a vigorous financial services sector, and extensive mining (Ministry of Industry and Commerce, 2012a).

Figure 1: Sectoral contribution to GDP



Source: Reserve Bank of Zimbabwe (2012)

Historically, the agricultural sector is the backbone of the economy. The sector contributes about 19 percent of GDP (Ministry of Finance, 2011). The sector contributes a third of the foreign exchange earnings and provides about 23 percent of formal employment (Ministry of Finance, 2011). The sector is strongly linked with other sectors of the economy, as it provides essential raw materials which contributes more than 70 percent of the raw materials used in the manufacturing industry (Ministry of Industry and Commerce, 2012a). As a result, a good performance in the agricultural sector is usually mirrored in the rest of the economy. Major activities are crop farming, beef, dairy, timber, dairy and horticulture. The sector's major exports are tobacco, cotton, horticultural produce, sugar, tea, coffee and beef (Ministry of Agriculture, Mechanisation and Irrigation Development, 2011).

The manufacturing sector is the second largest sector after agriculture. The sector contributes about 15 percent to GDP. It accounts for 15 percent of formal employment. The sector is well diversified and possesses strong linkages with other sectors of the economy. Major exports in the sector

include ferro-alloys, cotton lint, steel, and pure manufactures (Ministry of Industry and Commerce, 2012a).

Mining accounts for about 4 percent of GDP, about 4.5 percent of employment. It is one of the major foreign exchange earners, contributing about a third of the total foreign currency (Chamber of Mines, 2011). Zimbabwe has over 60 minerals in 60 percent of her land (Ministry of Mines and Mining Development, 2011). On the minerals in the table above, Zimbabwe is second in the world after South Africa in terms of quantities (Ministry of Mines and Mining Development, 2011). The mining sector therefore stands to be one of the major sectors of Zimbabwe's economy and stands to contribute significantly towards economic development of the country.

Service is the largest sector that includes education, health, tourism, banking, insurance, telecommunication, power and energy, and transport (Ministry of Finance, 2011).

Zimbabwe's tourism contributes about 6 percent of GDP. The sector represents about 2.2 percent of formal employment. Historically, it contributes about 10 percent of foreign exchange earnings. Zimbabwe offers renowned recreational sites that are both natural wonders of the world and World Heritage Sites. The recreational sites include Victoria Falls, Lake Kariba, Great Zimbabwe Monument, Eastern Highlands and Wildlife.

Zimbabwe has a sophisticated and developed financial market. The financial sector is made up of banking, insurance and a stock market which is the third largest in Africa after Johannesburg Stock Exchange and Cairo Stock Exchange (Reserve Bank of Zimbabwe, 2007).

The education sector is a key role-player in the economy as it develops human capital. For the purpose of this article, it is accepted that Zimbabwe literacy levels are comparatively high compared with the rest of Africa. This provides necessary human capital needed for economic development.

Zimbabwe is exceptionally blessed with over 60 minerals (largely untapped). These minerals include gold, platinum, nickel, diamonds, iron ore, coal and copper. Zimbabwe has 13 million tonnes reserve of gold, 16 million tonnes of diamond, 2.8 billion tonnes of platinum, 930 million tonnes of chromite, 30 billion tonnes of iron ore, 4.5 million tonnes of nickel and 5.2 million tonnes of copper (Reserve Bank of Zimbabwe, 2006). Current extraction rate is in the region of 7 tonnes per year, according to Chamber of Mines (2011).

The mining sector represents a huge scope for trade and investments. Most of these minerals are needed in the automobile industries. Zimbabwe is not benefiting from the commodity boom due to low capacity utilisation, viability problems and policy flaws (Chamber of Mines, 2011).

Economic performance

Upon attainment of independence in 1980, the economy performed fairly well in the 1980s. The economy registered positive growth rates, except in 1984 when it slumbered due to a drought. In the 1990s the economy had mixed fortunes.

The period from 1998 – 2008 saw Zimbabwe's worst ever economic terrain, it ever witnessed before. The economy performed dismally and over the period it is estimated to have contracted by 52 percent (Ministry of Finance, 2011). The period was characterised by a highly unstable macroeconomic environment. The country experienced severe shortages of basic utilities including electricity, fuel, water, most basic food and non-food commodities and a massive decline in agricultural production (Ministry of Industry and Commerce, 2012a). The shortages were as a result of non-availability and delays in input deliveries to farmers as well as recurrent droughts, foreign currency shortage, quasi-fiscal operations and loss of skilled labour (Ministry

of Industry and Commerce, 2012a). Price controls and an overvalued exchange rate regime, low capacity utilisation, transport problems and the negative publicity the country was facing contributed to the general decline of the economic activities.

According to Ministry of Industry and Commerce (2012b), the following factors contributed to this mediocre economic performance:

- Weak world commodity prices on Zimbabwe's primary exports especially gold, tobacco, nickel and asbestos;
- Land reform and creation of cell phone farmers;
- Diminishing business confidence in the wake of infringement on rule of law and corruption;
- Zimbabwe's military involvement in the war of Democratic Republic of Congo which increased the deficit and damaged the prospects of International Monetary Fund disbursements and inflow of donor aid;
- Militancy in the labour union movement adding to cost pressures;
- Continued depreciation of the Zimbabwean dollar;
- High real interest rates which led to high input costs which undermined the usual positive impact of good rains on the economy;
- Sudden slowdown of the South East Asian economies and the global economic recession which has also spread to other regions, including Zimbabwe, has not escaped the scratch ravage;
- Consumer demand became almost nonexistent due to ravaging inflation;
- Acute shortage of foreign exchange considerably hindered the economy's capacity to import essential inputs leading to contraction of production capacities. It was exacerbated by massively increased fixed costs resulting from inconsequence of the hyperinflation; and
- The country's operational efficiencies were substantially jeopardised by recurrent interruptions in essential utility supplies especially electricity, water, coal, fuel, deteriorating rail and road services.

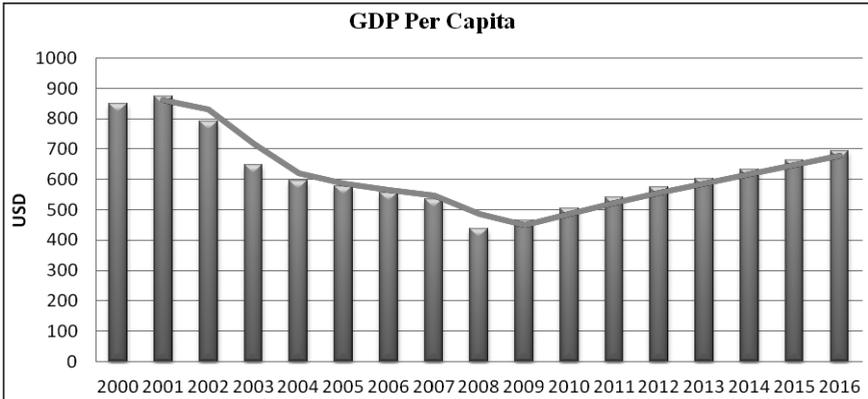
After embracing Short Term Economic Recovery Programme (STERP) early 2009 the economy realised a dramatic fall in inflation to single digit levels and stabilised at a rate below 5 percent by end of year (Ministry of Finance, 2011). Capacity utilisation in the manufacturing sector increased from about 10 percent to 43.2 percent and GDP per capita increased from US\$403.1 in 2007 to US\$499 in 2010 (Ministry of Finance, 2011). Implementation of an austerity budget and monetary policies under STERP have brought about macroeconomic stabilisation and improved the socio-political system.

Other policies measures adopted under STERP include adoption of a multicurrency regime, cash budgeting by the fiscus as well as other liberalisation measures, such as the removal of price controls and quasi-fiscal operations (Ministry of Finance, 2011).

Income per capita

Income per capita is average household income. Per capita income is often used as a measure of the wealth of the nation's households. It can be used to compare nations' wellbeing. Zimbabwe's income per capita had been falling over years which are as a result of the pervasive economic collapse. Income per capita fell from around USD 900 in 2001 to around USD 400 in 2008 (see Figure 2). Although it began to peak up from 2009, it is growing at a sluggish rate. IMF (2011) forecasted the upward trend to reach USD 700 in 2016. The future of the economy is gloomy.

Figure 2: GDP per capita trends

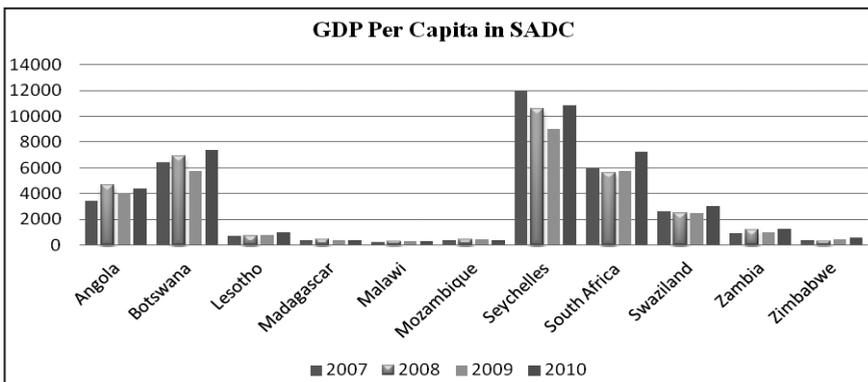


Source: IMF Report (2011)

According to Confederation of Zimbabwe Industries (2012), one of the major challenges in Zimbabwe is constrained demand caused by low incomes. Low incomes can have a two-prong effect on the local industry. Firstly, because incomes are low, there is naturally low demand and companies’ sales are low. Secondly, low incomes results in low and transitory savings which makes it difficult for local banks to give local industry long-term loans. As a result of low incomes, coupled with liquidity, challenges have made it virtually almost impossible for local companies to raise production capacities to competitive levels. On average, capacity utilisation is approximately 47 percent (Ministry of Finance, 2011). Zimbabwe companies cannot compete with foreign companies. As a result, Zimbabwe has become a retail economy (Confederation of Zimbabwe Industries, 2012).

On regional comparison, Zimbabwe is the worst performer. It compares well with Malawi, Madagascar and Mozambique (see Figure 3). Income per capita is far below its major trading partners such as South Africa and Botswana (by more than 10 times). Its northern trading partner, Zambia, is doing favourably well. An economy with weak incomes will certainly see its households consuming more of basic commodities at the expense of other commodities due to constrained optimisation. According to Confederation of Zimbabwe Industries (2012), constrained income has seen many companies in Zimbabwe producing below capacity because of weak demand. Because of low capacity utilisation, Zimbabwean products have been uncompetitive in the regional markets.

Figure 3: GDP per capita from selected SADC countries



Source: World Bank (2011a)

Current account

For the purpose of this article, it is accepted that current account is the sum of the balance of trade that is exports minus imports. A current account surplus increases a country's net foreign assets by the corresponding amount. On the other hand, current account deficit decreases the country's net foreign assets by the same amount.

Since independence (1980), Zimbabwe's trade performance was poor. Zimbabwe managed to register positive current account in 1988, 1997, 1998 and 1999 only. Going forward, the future is very bleak as the country is expected to realise a continuous increase in current account deficits up to 2016 (IMF, 2011). According to World Bank (2011) Zimbabwe is number 133 in world rankings Current Account Balance (US Dollars) performance in year 2010.

The development of the negative current account is worrisome for a country which virtually imports 100 percent of its fuel, 40 percent electricity, essential drugs and equipment for industrial re-tooling (Ministry of Industry and Commerce, 2012b). To make matters worse, the country has become a retail economy.

Zimbabwe remains susceptible to the vagaries of the adverse external macroeconomic environment, particularly within the aegis of the multiple currency system which is typified by limited macroeconomic policy instruments (Reserve Bank of Zimbabwe, 2012).

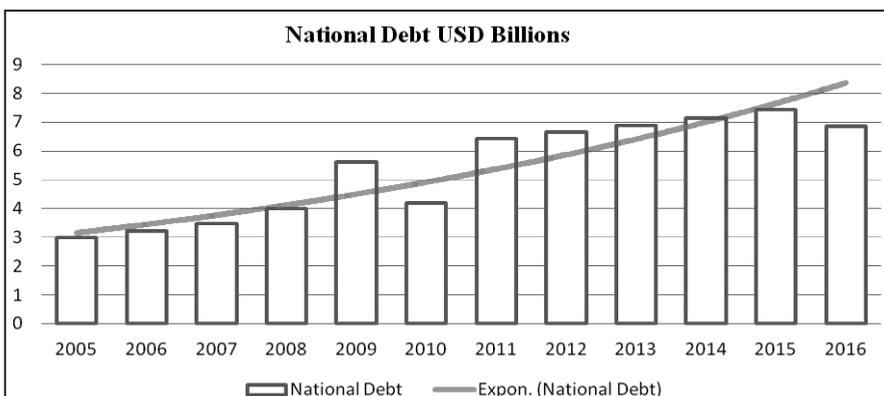
Because of the multicurrency system, the country has virtually lost monetary policy autonomy, making it difficult for the country to intervene with appropriate stimulus packages in the event of exogenous shocks. As a result of the absence of adequate foreign exchange reserve buffers to respond to exogenous shocks due to negative current account, the economy is in a bad state (Reserve Bank of Zimbabwe, 2012).

The negative current account poses a serious threat to industrial production and competitiveness of its products. It is prudent for the country to have foreign exchange reserves which can be valuable in times of exogenous shocks and also to meet the foreign exchange requirements. Because of negative current account, the Zimbabwe economy grappled with liquidity challenges since the adoption of the multiple currencies. As a result, industrial productivity has been low, rendering produced goods uncompetitive due to high cost per unit.

Government debt

Gross government debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future (IMF, 2011). Debt liabilities include special drawing rights (SDRs), currency and deposits, debt securities, loans, insurance, pensions and standardised guarantee schemes, and other accounts payable.

Figure 4: National debt



Source: Ministry of Finance (2011) & IMF (2011)

Over the years Zimbabwe debt has been increasing at an exponential rate (see Figure 4). In 2005 the debt was USD 3 billion. It increased at a steady rate to USD 6.9 billion in 2011. According to IMF (2011), the national debt is expected to maintain an exponential increase to USD 7 billion in 2016. According to Johnson (2012), increase in national debt has ripple effects such as:

- Reduction in government expenditure which can cause stagnation of the economy;
- Capital flight as a debt-ridden country tends to raise taxes in order to repay the debt and at the same time meet national obligation; and
- Increase in the debt due to the compounding effect of interest rate.

Zimbabwe debt has been on the upward trend due to interest rates (Ministry of Finance, 2011). Zimbabwe seems to be having limited options on debt management because of limited foreign exchange. As a result, the debt is likely to maintain an upward trend (IMF, 2011).

In recent years, government assets have been attached by creditors. The debt overhang scares away investors, especially in cases where national assets are being attached. In December 2011, the national airline was impounded in London because of a USD 1.2 million debt it owed an United States firm. The airline is now grounded. Efforts to look for a strategic partner are in vain because of the debt problem.

According to Confederation of Zimbabwe Industries (2012), Zimbabwe's USD 6.9 billion debt owed to local, regional and international institutions is blocking companies from accessing external credit lines due to the country's high credit risk profile.

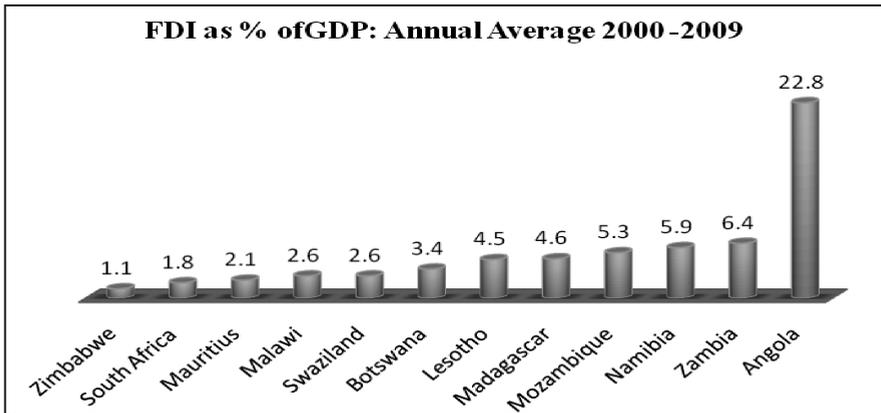
In the wake of the choking liquidity and capital constraints, the budget has failed to come up with a stimulus financial package. The local industry requires at least USD 2 billion to retool (Ministry of Industry and Commerce, 2012b). The Ministry of Industry and Commerce, in its recent Industrial Development Policy, outlined that government will establish an industrial development bank. The bank's mandate is to provide concessionary loans for retooling and working capital requirement (Ministry of Industry and Commerce, 2012b). It is interesting to see going forward how the cash strapped economy will capitalise this bank to meet industrial requirements.

The debt overhang has over the years constrained both government and industry to attract both foreign direct investments and borrow money from multilateral institutions. The current state of the economy requires external finance in order for the economy to function normally. In the absence of external funding with limited domestic resources, Zimbabwe will continue to find it difficult to compete with international products due to high cost profile of its products.

Foreign direct investment

Zimbabwe suffered massive capital flight due to her appetite to lack of respect of property rights and rule of law. Early 2000 Zimbabwe went on a rampage which saw white commercial farmers' land seized without compensation. As if this was not enough, in 2008, government promulgated the empowerment and indigenisation policy which compels foreign owned companies to cede 51 percent of equity to the locals. Foreign direct investment averaged 18 percent of GDP in the 1980s and 20 percent in the 1990s because there were sober policies which were implemented under ESAP with the guidance of IMF and World Bank. As a result of mediocre economic policies, the period between 2000 and 2009 witnessed a mere FDI of 1.1 percent of GDP (Ministry of Finance, 2011). Zimbabwe's capital account inflows, thus, remain a sad story, with 2011 foreign direct investment levels at USD 125 million (Ministry of Finance, 2011).

Zimbabwe is the worst performer in terms of attracting foreign direct investments. Zimbabwe attracted a mere 1.1 percent of GDP (see Figure 5). Angola performed exceptionally well with FDI contributing 22.8 percent of GDP. One of the explanations for Zimbabwe's poor growth performance is a low rate of investment (Africa Development Bank, 2011). Capital flight experience over the years was witnessed with dilapidating infrastructure. As a result, the cost of doing business in Zimbabwe is extremely high. According to World Bank (2011b), Zimbabwe was ranked number 177 out of 183 economies on the cost of doing business.

Figure 5: FDI to SADC countries

Source: African Development Bank (2011)

Because of a very low level of foreign direct investment, most industrial equipment has over lived its life time and it is now fit to be in the national museum. The industry, as a result, suffers from lost production time due to frequent break downs and high cost of production caused by inefficiency as old machinery cannot cope.

Therefore, from the face value of this rating, Zimbabwe products are not competitive in the international market. Until industrial productivity is restored, Zimbabwe will not be able to compete, both regionally and internationally.

Sectoral performance

Agriculture

Output declined dramatically over the past one and half decades. As a result, the country lost its prestigious status from being the largest net exporter of food in the Southern African region to a basket case. Total maize production declined from a peak of 2 065 000 tonnes in 1996 to 575 000 tonnes in 2008. In 2010 output significantly improved to 1 328 000 tonnes although it is still below national requirement of 1 800 000 tonnes (Ministry of Agriculture Mechanisation and Irrigation Development, 2011). According to Ministry of Agriculture Mechanisation and Irrigation Development (2011) wheat production declined from a peak of 263 000 tonnes in 1996 to 34 000 tonnes in 2008.

Production of major cash crops also registered a significant decline. Tobacco production dropped from 226 000 MT in 1998 to 56 000 MT in 2008. Tobacco output peaked to 123 000 MT in 2010 due to improved economic climate (Ministry of Economic Planning and Investment Promotion, 2011). Cotton production has been fluctuating downwards, having declined from 229 000 MT in 1996 to 190 000 MT in 2002, peaking at 333 000 MT in 2004 before declining to 260 000 MT in 2010. Horticultural production also followed the same trend, declining from a peak of 82 000 MT in 2002 to 43 000 MT in 2010.

In the livestock sector, the dairy herd was the most affected with the it declining from 100 000 cows in 2000 to about 22 000 in 2010.

The decline in production levels and productivity in the agricultural sector was mostly due to the implementation of the Land Reform Programme in 2000. Critical shortage of inputs, adverse weather conditions, plant and animal diseases, poor and dilapidated irrigation infrastructure and inadequate financial support for the agrarian reform and loss of skilled labour exacerbated the matter (Ministry of Agriculture Mechanisation and Irrigation Development, 2011). Investment in the sector is negatively affected by lack of security of tenure.

Although the sector is registering significant improvements, the yields being produced per unit area are still far below potential.

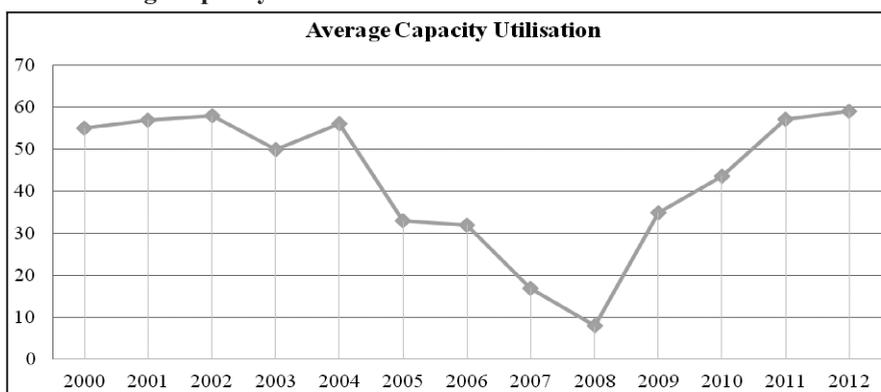
Poor performance of this sector is reflected on the manufacturing sector. Zimbabwe is an agro-based economy. Since the manufacturing takes 70 percent of its throughput from the agricultural sector, this continuous mediocre performance of the agricultural sector will worsen the already overburdened manufacturing sector. With the prevailing macroeconomic environment, it seems that this trend is likely to continue.

Manufacturing sector

The manufacturing sector declined by more than 50 percent between 2000 and 2008 due to economic meltdown. Capacity utilisation fell dramatically reaching 10 percent in 2008 (Ministry of Finance, 2011) from 55 percent in 2000 (see Figure 6).

The manufacturing sector is slowly recovering with the sector having grown by a mere 3 percent in 2010 after a decade-long de-industrialisation experience (Ministry of Finance, 2011). Growth in the manufacturing sub-sectors such as foodstuffs (0.5 percent), textiles and ginning (0.4 percent), chemical and petroleum products (0.3 percent), paper, printing and publishing (0.2 percent), and other manufactured goods (0.1 percent), remained subdued (Ministry of Finance, 2011). For other sub-sectors such as clothing and footwear, metals and metal products, and transport equipment, output is estimated to have declined by 0.4 percent, 1.4 percent and 0.4 percent respectively, in 2010 (Ministry of Finance, 2011).

Figure 7: Average capacity utilisation



Source: Ministry of Finance (2011)

In 2000 average capacity utilisation was 55 percent. It fluctuated between 50 and 60 percent up to 2004. From 2004, the economy witnessed a sharp decline of capacity utilisation which saw companies average output hovering around 10 percent in 2008 (Ministry of Industry and Commerce, 2012b). During this period, many companies shut down and the majority of them are still struggling to recover. The national output peaked up in 2009 to 33 percent. From 2009 the production trend has grown at a sluggish rate to 43.7 percent in 2010, 57.2 in 2011 and is expected to reach 59 percent in 2012. At this rate of production, Zimbabwe products will be uncompetitive because of high unit cost as the costs associated with idle capacity such as fixed costs will be spread over few units produced (Ministry of Industry and Commerce, 2012b).

However, some sectors such as foodstuffs, drinks, tobacco and beverages, wood and furniture, metals and metal products, non-metal and mineral products witnessed a remarkable improvement. Capacity utilisation in these sectors averaged 65 percent in 2011 (Ministry of Finance, 2011).

However, capacity utilisation in such sub-sectors as clothing, textiles and printing is set to remain poor, with levels as low as 20 percent anticipated in some industries (Ministry of Finance, 2011). The subsectors such as clothing and footwear, paper printing and publishing, textile and ginning

and transport equipment paint a gloomy picture in terms of competitiveness of these sectors to both regional and international products. Products from China, for example, are produced at a large scale and are competitive, globally.

The local manufacturing industry, in general, faces international competitiveness challenges due to high production costs related to antiquated plants and equipment, power shortages, and lack of working capital, among others (Confederation of Zimbabwe Industries, 2012). Due to industrial capacity utilisation and supply-side challenges, the economy has been absorbing disproportionately large amounts of imports of finished goods, further threatening the survival of the local industry. The loss of skills and the lagging behind of training institutions has exacerbated the labour market. The private sector was also not investing in human capital development, thus affecting the production of goods and services (Ministry of Industry and Commerce, 2012b). As a result, locally produced products are relatively expensive compared to foreign products especially from South Africa. It explains why Zimbabwe is now called the “tenth province of South Africa”.

Mining

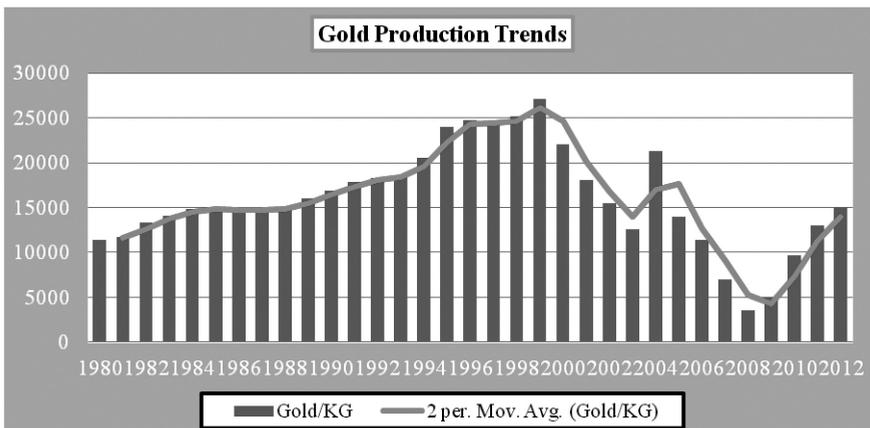
The mining sector has the capacity and potential to enhance economic growth and value addition. The sector has forward and backward linkages with many sectors of the economy, including manufacturing, small and medium industries, construction and infrastructure.

According to the Ministry of Finance (2011) approved lines of credit in support of investment in equipment into the mining sector in 2011 amounted to USD 502 million. The amount is still far below the sector’s requirements. According to the Chamber of Mines (2012) the mining sector requires USD 5 billion in order to increase capacity utilisation to 80 percent in the next three to five years.

The mining sector is anticipated to remain the major driving force behind overall economic growth, benefitting from further private capital injections, firm international commodity prices and anticipated initiatives to minimise electricity supply interruptions.

Mining currently accounts for nearly 50 percent of total exports and is a major recipient of foreign direct investment (Chamber of Mines, 2012). The sector however has been performing below its potential. Its contribution to the GDP for the period under review averaged 4.2 percent. Skewed macroeconomic policies which included extended periods of overvalued exchange rate and unsustainable foreign exchange surrender requirements at 75 percent, adversely affected investment in the mining sector. Output declined significantly during the period 1996-2009, particularly gold output (Ministry of Industry and Commerce, 2012a, 2012b).

Figure 7: Annual gold production



Source: Chamber of Mines (2010) & Ministry of Mines and Mining Development (2011)

Gold production peaked from 11 444 kilogrammes in 1980 and grew at a steady rate to 27 114 kilogrammes in 1999. From 2000 to 2008 gold production witnessed dramatic plummeting owing to the pervasive economic meltdown which ensued. In 2008, Zimbabwe produced 3 579 kgs of gold (see Figure 7). The downward trend was reversed in 2009 when the country's political environment stabilised through the formation of unity Government which saw new sober policies being implemented. However, gold annual output is still far too low to reach the yesteryear's glory. The trend in gold production is synonymous with other minerals.

According to the Chamber of Mines (2010), chrome production peaked from 555 475 metric tonnes in 1980 to 780 150 metric tonnes in 2007. Chrome production fell sharply from the 2007 peak to 193 673 metric tonnes in 2009. Coal output was 3 133 000 metric tonnes in 1980 and rose to 5 616 000 metric tonnes in 1991. It fluctuated at the same level for almost a decade and then fell to 1 667 000 metric tonnes in 2009 (Chamber of Mines, 2010).

Poor performance of the mining factor has a ripple effect on the economy. The sector has strong linkages with the manufacturing sector. If the mining sector sneezes the manufacturing sector also sneezes. Zimbabwe has failed to benefit from commodity boom which has seen international prices of metals firming up (Ministry of Industry and Commerce, 2012b).

However, the mining sector has the capacity to sustain double digit growth but is faced with a number of challenges that impede its faster recovery. The key challenges facing the sector are frequent power outages; shortage of funds for working capital and recapitalisation; skills flight; dilapidated and inefficient infrastructure (Chamber of Mines, 2011). Mining continues to lose production time through unscheduled electricity outages, as the country grapples with power shortages compounded by the regional energy demand that far outstrips supply. Shortages of funds for recapitalisation and working capital finance remain a huge challenge for the sector which is struggling to secure reliable resources for long-term capital finance due to the empowerment and indigenisation law which is scaring away investors.

The domestic economy does not have sufficient capacity to provide adequate resources to the sector which has resorted to internally-generated funds as well as off-shore debt financing for working capital requirements (Chamber of Mines, 2011). In addition, the absence of a clear exploration policy has made it difficult for potential mine exploration for which resources are difficult to secure for the mining exploration activities.

The growth rate of the sector is expected to increase to 44 percent in 2011 and gradually decline to 8 percent in 2015 (Ministry of Finance, 2011). Growth is premised on the key assumptions of new capital injections, firming international commodity prices, improved power supply, investment environment, access to credit lines and the exploration of new mining areas.

The revival of the mining sector presents vast opportunities, both in mineral extraction and value addition. Trade and industrial policies and initiatives to increase beneficiation and value addition for all major minerals including gold, platinum, nickel, copper, coal, coke and other various non-ferrous ores are being implemented or developed (Ministry of Industry and Commerce, 2012b). Strategies for minerals value addition and beneficiation activities, royalties, minerals resource management and the adoption of the World Bank Extractive Industries Transparency Initiative (EITI) will be spelt out in these policies. EITI sets a global standard for transparency, accountability and improved governance in mining, oil and gas. Mining companies would disclose their earnings, what they pay in taxes and what they reserve for the communities. The Government would disclose what it earns from mining companies and how it applies the money while the community would agree with the other parties on priority projects.

Government is reviewing penalties for the exportation of raw minerals where there is potential for value addition and such penalties will be imposed. According to the Ministry of Industry and

Commerce (2012b), these penalties include export tax. Government is developing the Diamond Act and Policy with a view to encourage the processing of diamonds prior to export (Ministry of Finance, 2011).

Financial sector

Zimbabwe boasts a diversified banking sector which includes 27 banking institutions, 16 Asset Management Companies and 114 microfinance institutions under the supervision of the Reserve Bank of Zimbabwe (Reserve Bank of Zimbabwe, 2012b). The banking sector in Zimbabwe has undergone a dramatic transformation in 2010, largely due to the restoration of the RBZ as the lender of last resort, among other Government initiatives (Ministry of Industry and Commerce, 2012b). Overall, the banking system remains sound, although the sector still faces some challenges related to undercapitalisation of some banks, rising non-performing loans, short-term nature of deposits as well as loopholes in the regulatory system (Reserve Bank of Zimbabwe, 2012).

The Zimbabwe Stock Exchange, which plays an integral part in mobilising investment resources, has also improved its performance since the introduction of the multicurrency system (Ministry of Finance, 2011).

Challenges and constraints are still being felt as reflected in the low market liquidity, lack of long-term finance and high lending rates.

Like any other sector, the financial sector suffered from enveloping economic decline to the extent that financial mediation was virtually impossible. The adoption of the multiple currencies saw the sector rebounding into the growth line. The sector grew by 5.7 percent and 8.1 percent 2009 and 2010, respectively. It grew by 9.3 percent in 2011 (Ministry of Finance, 2011).

Interest rates have largely remained unchanged since the introduction of the multicurrency system. Bank deposit rates have remained depressed between 0.5 percent and 5 percent. Lending rates continue to vary widely between financial institutions ranging between 8 percent and 60 percent, depending also on tenure of the loans (Reserve Bank of Zimbabwe, 2012). High lending rates have been one of the major cost drivers affected in the local industry (Confederation of Zimbabwe Industries, 2012). Because deposits are transitory, the loans given to industry are short term, thereby compound industrial woes. Unlike regional and international banks which give long-term loans to industry for capitalisation and long-term project funding, Zimbabwean companies are at the mercy of a very harsh business environment which makes the cost of doing business very high.

Tourism

Tourism remains one of the most exciting and progressive industries in Zimbabwe. Government has identified it as one of the strategic sectors for economic growth and development. The sector has linkages with other industries and makes a significant contribution to GDP, employment, investment and export earnings. The sector's contribution to GDP is about 6 percent (Ministry of Finance, 2011).

Zimbabwe is best known for housing one of the Seven Wonders of the World, the mighty Victoria Falls. The country also boasts of being one of Africa's best Safari locations and is home to the Great Zimbabwe, Hwange National Park, Gonarezhou National Park, Lake Kariba, Mana Pools and the Eastern Highlands, most of which are UNESCO World Heritage sites.

The sector faced a major decline in 2008 which saw tourist arrivals dropping to 1.8 million from 2.5 million in 2007. The partial recovery of tourism has seen growth in average bed occupancy from 36 percent in 2010 to 37 percent in 2011.

The sector is, however, on a recovery path with the years 2009 and 2010 having recorded an increase in arrivals of 2 million and over 2.5 million, respectively. The partial recovery of tourism has seen growth in average bed occupancy from 36 percent in 2010 to 37 percent in 2011.

However, the level of operation is still too low to make the industry viable.

According to the Ministry of Industry and Commerce (2012b) the upward trend is expected to continue up to 2015 mainly due to aggressive marketing campaigns being undertaken by the Government. In 2012, success of the tourism marketing initiatives should see room occupancy further improve from 56 percent in 2011 to more than 60 percent in 2012, translating to an annual growth of 13.7 percent for the sector in 2012 from 10.3 percent in 2011.

The main challenges and constraints in the sector include negative publicity; skills flight; poor state of roads; poor maintenance of infrastructure; water and electricity shortages; few direct flights to and from source markets; shortage and high cost of utilities which renders tourism uncompetitive regionally.

Investment opportunities are abundant in the hotel and catering industry, services and downstream-related activities, conservancies and eco-tourism. Tourism Development Zones are being developed and offer a lot of good investment opportunities; for example, the Great Limpopo Trans Frontier Park, spanning the borders of South Africa, Mozambique and Zimbabwe (Ministry of Industry and Commerce, 2012b). The Park is the largest and the most ambitious effort in Africa to combine conservation, environmental protection, tourism and economic development. Other areas of investment include sports facilities, restaurants, conference facilities and convention centres, theme parks and tourist village centers, air services, luxury tourist coaches and safari trains, hunting safaris and community-based tourism enterprises.

Although Zimbabwe provides lucrative investment opportunities in the tourism sector, the takers are very few due to poor publicity of the country. Zimbabwe made a commitment in tourism at the World Trade Organisation with the hope that it can use this sector to grow its economy.

Economic infrastructure

Economic infrastructure is a key enabler of economic development (Africa Development Bank, 2011). Transport, energy, water and information communication technology will be discussed in this section. In this regard, the state of these infrastructures and challenges linking with the country's competitiveness will be reviewed.

By African standards, Zimbabwe has impressive backbone infrastructure, including power, roads, ICT, and water (World Bank, 2011a). The country is historically well-integrated with its neighbours when it comes to power and transport networks, allowing Zimbabwe to participate in regional trade and act as a transit country for landlocked neighbours Zambia and Botswana and a key link in the north-south surface corridors. The deteriorating quality of this infrastructure is currently jeopardising the functionality of the regional and national links (World Bank, 2011a).

The past decade's protracted economic decline negatively impacted on Zimbabwe's infrastructure rehabilitation and improvement efforts. The period was characterised by very little or no new infrastructure-related investments at all (World Bank, 2011b). Infrastructure maintenance was also limited to what was necessary to keep the essential parts of the service delivery system going.

As a consequence, this has caused frequent breakdowns, shortages and the general decay of the country's infrastructure. Potholes, for example, are now a characteristic feature of all the country's urban roads, whilst rural ones are now virtually impassable. Also, uncollected garbage and raw sewerage flowing in the streets has become another defining feature of the country's urban landscape and power outages have become the order of the day. The overall effect of the decline in the state of the country's infrastructure is that it has also resulted in severe adverse economic and social effects that are currently stifling the country's economic recovery prospects.

In fact, it can be safely stated that the current huge infrastructure deficit is proving to be the leading binding constraint in achieving quick economic recovery and increasing Zimbabwe's economic growth and competitiveness.

In order to enhance the country's competitiveness, key enablers such as power, transport, water and sanitation and Information and Communication Technology (ICT) should be efficiently supplied. In the case of Zimbabwe, power infrastructure rehabilitation, transport infrastructure rehabilitation, water supply and sanitation rehabilitation, and ICT infrastructure rehabilitation are particularly important for quick economic recovery (Ministry of Economic Planning and Investment Promotion, 2011). In particular, the rehabilitation of power generation, transmission, and distribution infrastructure is critical for the successful gearing up of local mining, industrial and agricultural production.

The reality, however, is that neither central government nor the many local authorities scattered all over the country have the capacity or the requisite resources to carry out this much needed infrastructure rehabilitation and improvement exercise (World Bank, 2011b).

CONCLUSION AND RECOMMENDATIONS

The Zimbabwe economy had mixed fortunes since independence. The country performed fairly well from 1980 to late 1990s. In the beginning of the twenty-first century, the economy plunged into serious economic decay with a record hyper inflationary environment, high unemployment levels, acute foreign exchange shortages, and deterioration in infrastructure. All these factors contributed to the economy shrinking by about 50 percent during the period of 1998 to 2008. The slowdown in the economy was reversed in 2009 after a new political dispensation was given through the formation of a Government of National Unity. The new government implemented improved policies which stabilised the economy. Going forward, the government must implement measures *inter alia*:

- (a) Policies to address structural rigidities must be implemented. These policies must include:
 - Auditing of the land reform and removal of unproductive farmers whilst replacing them with committed farmers;
 - Provision of funds to industry for recapitalisation so as to revamp production and the restoration of key infrastructures such as electricity and water; and
 - Provision of subsidy to the agricultural sector.
- (b) Government must implement policies which lures investors;
- (c) There is also need for the restoration of political stability, governance and rule of law;
- (d) Zimbabwe must implement stringent accountability in the dealing of mineral trade, in order to benefit from the vast mineral resource.

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MONETARY POLICY TRANSMISSION IN NAMIBIA: THE CREDIT CHANNEL

J.P.S. Sheefeni & M. Ocran¹

ABSTRACT

This paper investigates the presence and significance of the credit channel of the monetary policy transmission in Namibia over the period 1993:Q1 – 2011:Q4. The empirical analysis was conducted using innovation accounting tools such as impulse response functions and variance decompositions obtained from a structural vector autoregressive model (SVAR). The results of econometric analysis support the presence of a significant bank lending channel in Namibia, that is, changes in the monetary policy instruments affect the credit variable which in turn transmits the shocks to output and prices. The study established that the credit channel serves as a good vehicle to transmit shocks innovated by monetary policy actions to the economy.

Keywords: Namibia, transmission mechanisms, credit channel, monetary policy, structural vector auto regression

INTRODUCTION

This article presents a discussion on the credit channel of monetary policy transmission in affecting prices and output in Namibia. This channel is where monetary policy changes cause financial institutions to alter the volume of loans that they issue to economic agents (Berkelmans, 2005: 1). This action is directly linked to credit, in a sense that it has an impact on the supply of credit. However, changes in monetary policy also affect the demand for credit. The debate as to whether the effect is from the supply side or demand side has not gained as much momentum. This is due to the fact that a tighter monetary policy is associated with weaker credit growth.

There has been a considerable amount of research in this regard investigating the role played by banks in the transmission of monetary policy, aiming at uncovering a credit channel and assessing its relative importance. Abhay (2004: 1) highlighted a number of reasons advocating the need to understand the relative importance of money and credit. Firstly, understanding the financial aggregates that are impacted by monetary policy enhances the understanding of the link between the financial and the real sectors of the economy. Secondly, understanding of the transmission mechanism assists monetary authorities and analysts in interpreting movements in financial aggregates and, thirdly, more information about the transmission mechanism may lead to a better choice of intermediate targets. In particular, if the credit channel is an important part of the transmission mechanism, then the banks' asset items should be the focus of more attention. The role of financial intermediaries is a critical component when it comes to the transmission of a monetary policy, as referred to by Bernanke and Blinder (1988).

This article draws its primary interest from the fact that, tighter monetary policy is associated with weaker credit growth. It is against this background that this study is aimed at establishing the importance and significance of the bank lending channel in Namibia. In investigating this channel of transmission, Section Two presents the literature which includes both theoretical and empirical literature. The methodological framework is presented in Section Three. The discussion in Section Four constitutes the empirical results and analysis and Section Five presents the conclusion.

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LITERATURE REVIEW

Theoretical Literature

The displeasure with how interest rate effects explain the impact of monetary policy on expenditure on long-standing assets gave rise to the view of the monetary transmission mechanism that emphasizes asymmetric information in financial markets. Mishkin (1996) indicates that information issues also refer to matters related to problems brought about by costly verification and enforcement of financial contracts. These, in particular, are closely related to asymmetric information problems. There is a hybrid of credit channels depending on how one classifies them. However, the most talked about are the basic channels of monetary transmission that arise as a result of information problems in credit markets namely: the bank lending channel and the balance-sheet channel. There is a vast amount of literature on the credit channel, pioneered by Bernanke and Gertler (1995), Cecchetti (1995) and Hubbard (1995).

The bank lending channel is founded on the basis that banks play a special role in the financial system because they are able to deal with asymmetric information problems in credit markets. Gertler and Gilchrist (1993) indicated that the bank lending channel is based upon two critical assumptions. Firstly, bank loans and other non-bank assets, such as commercial paper, are imperfect substitutes; this is because of imperfect information in credit markets. Mostly small firms are by largely dependent on bank loans. This is due to the fact that these firms find it difficult to acquire the funds via other means such as issuing securities or bonds due to high screening and monitoring costs (Mies & Tapia, 2003: 12). Should the bank become unwilling to offer credit, this will have repercussions in terms of spending by the dependent customers which also translates into lower aggregate demand. Secondly, through change in monetary policy, the central bank has the ability to constrain the supply of bank loans. For instance, a monetary policy contraction leads to a reduction in bank reserve money and quantity of loans, hence bringing about a fall in spending by bank-dependent customers. In summary, the two assumptions simply give an indication that monetary policy contraction leads to a reduction in the supply of bank loans and in turn affects real economic activity.

One of the popular hybrid channels of the credit channel is the balance-sheet channel. This came about as a result of a decline in the importance of the bank lending channel (Mishkin, 1996). As in the case of the bank lending channel the balance-sheet channel also arises from the presence of asymmetric information problems in credit markets. Introduced by Bernanke and Gertler (1989), the balance sheet channel is normally coupled with the outcome of a policy-induced change in interest rates on the cash flows and hence the balance positions of non-financial firms that are heavily dependent on bank loans (Afandi, 2005: 47).

A contraction in monetary policy in the form of a rise in interest rates is a cost because it increases the interest expenses for the firm leading to a reduction in the firm's cash flows and consequently weakening the firm's balance sheet position. Interest rates increase (tight monetary policy) leads to a reduction in the asset price, hence, it lowers the value of collateral and consequently lowers the net worth of business firms. This magnifies the severity of adverse selection and moral hazard problems in lending to these firms because to the lender lower net worth means less collateral for the loans, and so losses from adverse selection are higher. Moreover, there is going to be a reduction in lending to finance investment spending. The resulting effect would increase the moral hazard problem, because it implies that owners have a lower equity stake in their firms, giving them more incentives to engage in risky investment projects. Taking on riskier investment projects increases the likelihood of the borrowers not being able to repay their debt (Mishkin, 1996: 37).

An expansionary monetary policy (lowering interest rates) becomes favourable for firms because it raises the cash flow leading to an improvement in firms' balance sheets position. This monetary policy stimulates aggregate output, but it involves credit rationing (Mishkin, 1996: 38). This

phenomenon occurs when borrowers are not given loans even when they are willing to pay higher interest rate (Stiglitz & Weiss, 1981). In this case firms and individuals with the riskiest investment projects are the ones who are willing to pay the highest interest rates with a view that should the high-risk investment succeed, the benefit accrued will be theirs. This reduces adverse selection and moral hazard problems because with lower interest rates, less risk-prone borrowers are a higher fraction of those seeking loans and thus lenders are more willing to lend, raising both investment and output.

In the context of consumer spending, the effects of the balance sheet channels can also be viewed through consumers via liquidity effects on consumer durable and housing expenditures (Mishkin, 1978). In this view, the operation of the balance sheet effects is on the impact on consumers' desire to spend as opposed to lenders' desire to lend. The argument is that because of asymmetric information about their quality, consumer durables and housing are not very liquid assets. There are two possible outcomes: (1) in a case where there is a bad income shock a consumer is expected to sell their consumer durables or housing to raise money. This would result in an anticipated big loss because they could not get the full value of these assets in a distress sale, (2) in contrast, if consumers held financial assets (such as money in the bank, stocks, or bonds), they could sell them rapidly at their full market value and raise the cash. In this view one can conclude when consumers expect a higher likelihood of finding themselves in financial distress, they would rather be holding fewer consumer durable or housing assets and more liquid financial assets (Mishkin, 1996: 38).

Literature on empirical studies

There are various studies that have empirically explored the monetary policy transmission mechanisms, in particular the case for the credit channel. In a study for USA, Bernanke and Blinder (1990) and Romer and Romer (1990) assessed the impact of a restrictive monetary policy on money, credit and economic activity using vector autoregressive (VAR) models. The results found that a tightening of monetary policy causes an immediate contraction in deposits with no short-term effect on lending. They concluded that the results support the credit view, and they attributed the delayed response of loans to their contractual nature. Romer and Romer, on the other hand, conclude that the credit channel is ineffective. In another study the credit channel was found to be ineffective in Greece, where Markidou and Nikolaidou (2005) investigate the relevance of the credit channel of monetary policy transmission using both aggregated and disaggregated data and estimating the response of bank loans to different macroeconomic shocks. The structural vector autoregressive (SVAR) model was estimated, using monthly data for the period 1995-2005 and distinguished between households and firms instead of focusing on the response of total bank credit to a tightening monetary policy shock. The results reveal that the credit channel in Greece has been inoperative in spite of the two monetary policy variables used, the monetary base and the interest rate. The responses of the different bank credit measures to monetary policy changes do not significantly differ, rendering the credit channel ineffective for both consumers and business firms.

In a study for Australia and New Zealand, Suzuki (2008) examined the credit view in an open economy context. That is to say that a monetary-policy shock originated in one country propagates to another through banks' shifts of funds between the two countries. In this study a vector autoregressive (VAR) model was used to conduct the analysis and for this purpose, uses quarterly data for the period 1988:Q4 to 2005:Q4 for Australia and New Zealand. The reasoning behind this analysis is that Australian-owned banks dominate the banking market in New Zealand. A significant finding is that the supply schedule of loans shifts left in New Zealand after a monetary tightening in Australia.

In a study for Nigeria, Ogun and Akinlo (2010) examined the effectiveness of the bank credit channel of monetary policy. A Structural Vector Autoregressive (SVAR) technique is employed

in conducting the analysis on the quarterly data for the period 1986:1 to 2006:4 to determine the responses of bank balance sheet variables to monetary policy shock. The results from this study reveal that bank deposits, securities holdings and total loans and advances responded slowly to monetary policy shock during the simulation period. Monetary policy shocks also contributed very little to the forecast errors of these bank balance sheet variables. The study concludes that the bank credit channel is ineffective in Nigeria. Unlike in Nigeria Bayangos (2010), looked at whether the credit channel matters in transmitting impulses to the real economy in the Phillipines. Simulation results suggest that bank credit channel matters in Phillipine monetary transmission mechanism. However, the impact of a monetary policy tightening on output appears to be relatively moderate and quite lengthy. On the one hand the impact on the price level appears to be stronger and shorter compared to the impact on output. On the other hand bank capital is found to have significant effects on bank credit suggesting that it could be a possible major determinant of monetary policy transmission in the Phillipines.

There are lessons to be learnt from both theory and practice. First, the credit channel appears to be an important channel in all cases. However, there seems to be variation in terms of its effectiveness as in some cases it is significant and ineffective while in other cases it is not. Secondly, the VAR technique appears to be the most useful tool in illustrating a macro view of interrelation among all channels of transmission mechanism. In particular, the structural VAR, a hybrid of the VAR appear to be predominant when it comes to the empirical analysis of monetary policy transmission mechanisms. It has been applied in most, if not all, of the empirical cases presented earlier. To date the researcher is not aware of any study that has recently examined the effectiveness of the credit channel in Namibia apart from that of Uanguta and Ikhide (2002). This study differs from that of Ikhide and Uanguta, in that it employs the structural VAR technique in analysis of this particular channel.

METHODOLOGY

Econometric framework and model specification

To assess the relative importance of this channel of the monetary policy transmission mechanism in Namibia, the VAR approach is used. The choice of this approach is influenced by the fact that the VAR technique appears to be the most useful tool in illustrating a macro view of interrelation among the channels of the transmission mechanism. VAR is a system of dynamic linear equations where all the variables in the system are treated as endogenous. To draw the SVAR mainframe, assume that Namibia's monetary transmission process is described by a dynamic system whose structural form equation is given by:

$$Ay_t = \Psi + \Omega_1 y_{t-1} + \Omega_2 y_{t-2} + \dots + \Omega_p y_{t-p} + B\mu_t$$

...1

where A is an invertible $(n \times n)$ matrix describing contemporaneous relations among the variables; y_t is a vector of endogenous variables such that; $y_t = (y_{1t}, y_{2t}, \dots, y_{nt})$; Ψ is a vector of constants; Ω_p is an $(n \times n)$ matrix of coefficients of lagged endogenous variables ($\forall i = 1, 2, 3, \dots, p$); B is an $(n \times n)$ matrix whose non-zero off-diagonal elements allow for direct effects of some shocks on more than one endogenous variable in the system; and μ_t are uncorrelated or orthogonal white-noise structural disturbances ie the covariance matrix of is an identity matrix $E(\mu_t, \mu_t') = 1$. Equation (1) can be rewritten in compact form as:

$$Ay_t = \Psi + \Omega(L)y_{t-i} + B\mu_t$$

...2

where $\Omega(L)$ is a $(n \times n)$ finite order matrix polynomial in the lag operator L .

The SVAR presented in the primitive system of equations (1) and (2) cannot be estimated directly (Enders, 2004). However, the information in the system can be recovered by estimating a reduced

form of VAR implicit in (1) and (2). Pre-multiplying equation (1) by yields a reduced form VAR of order p , which in standard matrix form is written as:

$$y_t = \Phi_0 + \sum_{i=1}^p \Phi_i y_{t-i} + \varepsilon_t \quad \dots 3$$

where $\Phi_0 = A^{-1}\Psi$; $\Phi_i = A^{-1}\Omega_i$; and $\varepsilon_t = A^{-1}B\mu_t$ is an $(n \times 1)$ vector of error terms assumed to have zero means, constant variances and to be serially uncorrelated with all the right-hand side variables, as well as their own lagged values though they may be contemporaneously correlated across equations. The variance-covariance matrix of the regression residuals in equation (3) is defined as $\Sigma = E(\varepsilon_t \varepsilon_t')$. Given the estimates of the reduced form VAR in equation (3), the structural economic shocks are separated from the estimated reduced form residuals by imposing restrictions on the parameters of matrices A and B in equation (4):

$$A\varepsilon_t = B\mu_t \quad \dots 4$$

which is derived from equation (4). The orthogonality assumption of the structural innovations ie $E(\mu_t, \mu_t') = 1$, and the constant variance-covariance matrix of the reduced-form equation residuals ie $\Sigma = E(\varepsilon_t \varepsilon_t')$, impose identifying restrictions on A and B as presented in equation (5):

$$A\Sigma A' = BB' \quad \dots 5$$

matrices A and B are both $(n \times n)$, a total of $2n^2$ unknown elements can be identified upon which $n(n + 1)/2$ restrictions are imposed by equation (4). To identify A and B , at least $2n^2 - n(n + 1)/2$ other additional restrictions are required. This study uses the generalized impulse response function (GIRF) to avoid the impact of the ordering of variables on the restriction imposed since it does not require orthogonalisation of shocks (Koop, Pesaran & Potter, 1996; Pesaran & Shin, 1998).

The VAR model consists of the macroeconomic series data. The output is captured using the real gross domestic product (Y). The movements in relative prices are captured by consumer prices. This variable is intended to control for demand side of the economy while, interest rate are used for money market and instrument of monetary policy. To identify the changes in loan demand and loan supply, claims on private sector are included in the system. The vector of endogenous variables for the credit channel entails:

$$Y_t' = [\Delta GY_t \ \Delta CP_t \ BL \ R] \quad \dots 6$$

with ΔGY_t denoting output growth, ΔCP_t the rate of inflation; BL are the bank loans and R is the repo rate. The equation separating structural economic shocks from the estimated reduced form residuals for the credit channel model is presented as:

$$\begin{pmatrix} 1 & 0 & 0 & 0 \\ a_{21} & 1 & 0 & 0 \\ a_{31} & a_{32} & 1 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix} \begin{bmatrix} \varepsilon_t^{GY} \\ \varepsilon_t^{CP} \\ \varepsilon_t^{BL} \\ \varepsilon_t^R \end{bmatrix} = \begin{pmatrix} b_{11} & 0 & 0 & 0 \\ 0 & b_{22} & 0 & 0 \\ 0 & 0 & b_{33} & 0 \\ 0 & 0 & 0 & b_{44} \end{pmatrix} \begin{bmatrix} \mu_t^{GY} \\ \mu_t^{CP} \\ \mu_t^{BL} \\ \mu_t^R \end{bmatrix} \quad \dots 7$$

The main uses of the VAR model are the impulse response analysis, variance decomposition, and Granger causality tests. The analysis is carried out in the following order. Before VAR estimation, test for non stationary (unit root) of time series is essential to determine the order of integration.

This test is conducted by employing one or a combination of the Augmented Dickey Fuller (ADF) test, the Phillips-Perrons (PP) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests (Pindyck & Rubinfeld, 1991; Gujarati, 1995). Thereafter, a Granger causality test is performed. This is to examine whether lagged values of one variable help to predict (forecast) another variable (Stock & Watson, 2001: 104). But since this test is affected by the number of lags, the number of lags prior to conducting this test will be determined. There are many criteria used to indicate the number of lags. These criteria are Hannan-Quinn (HQ), Schwarz information criterion (SC), Akaike Information Criterion (AIC), Final prediction error (FPE) and Likelihood Ratio (LR). After determining the number of lags it is possible to run a pair wise granger causality test. However, one should also check whether VAR satisfies the stability condition. The next step would be to conduct tests for co-integration, ie if two or more series have long-run equilibrium. The co-integration test can be applied in several ways, according to the nature of the equation that is tested ie single or multivariate system. If co-integration is found among the variables, the adjustment of the short-run to the long-run equilibrium is obtained through the vector error correction model (VECM). When co-integration is not found, then a VAR model specification is estimated, via the estimates of structural factorisation. This procedure is used to estimate the factorisation matrices for a structural, or identified VAR. Thereafter, the impulse response function and variance error decomposition would be derived from the estimated VAR/VECM.

Data and data sources

This study utilized quarterly time-series data covering the period 1993Q1 – 2011Q4. The macro-economic data is obtained from various sources namely, *National Accounts* (Republic of Namibia), Bank of Namibia's *Quarterly and Annual Report* as well as from the International Monetary Fund's *International Financial Statistics*. The data for the following variables were obtained namely, output, general prices, claims from the private sector and interest rate. All data has been transformed into natural logarithms.

ANALYSIS AND RESULTS

Testing for stationarity

The Augmented Dickey-Fuller (ADF), Phillips-Perron (PP) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests are applied. The PP and KPSS were added as confirmatory tests due to the fact that the ADF statistic has limitations of lower power and it tends to under-reject the null hypothesis of unit roots. The results of the unit root test in levels are presented in Table 1.

Table 1: Unit root tests: ADF and PP in levels and first differences

Variable	Model Specification	ADF	PP	ADF	PP	Order of Integration
		Levels	Levels	First Difference	First Difference	
	Intercept and trend	-3.17**	-1.87	-4.85**	-4.38**	1
R_t	Intercept	-1.52	-0.76	-4.88**	-4.42**	1
	Intercept and trend	-1.99	-2.69	-10.77**	-29.56**	1
$\ln GY_t$	Intercept	-1.21	-0.26	-10.62**	-26.68**	1
	Intercept and trend	-2.90	-2.03	-5.87**	-5.82**	1
$\ln CP_t$	Intercept	-2.75	-1.98	-5.92**	-5.87**	1
	Intercept and trend	-2.56	-3.15	-12.13**	-9.09**	1
$\ln BL_t$	Intercept	-1.72	-1.75	-11.96**	-12.24**	1

Source: Author's compilation and values obtained from Eviews

Notes: (a) at 5% the critical value -2.908 for $\ln GY_t$, -2.906 for $\ln CP_t$, -2.906 for R_t and -2.908 for $\ln BL_t$. (b) ** means the rejection of the null hypothesis at 5%.

Table 1 shows that the series were found to be non-stationary in level form with the exception of the repo rate whose results from the two-unit root tests are conflicting. After differencing them, the entire test statistic shows that all the series became stationary. This is also confirmed by the KPSS test as the results shows in table 2 below.

Table 2: Unit root tests: KPSS in levels and differences

Variable	Model Specification	KPSS		
		Levels	First Difference	Order of integration
R_t	Intercept and trend	0.86	0.07**	1
	Intercept	0.87	0.07**	1
$\ln GY_t$	Intercept and trend	0.35**	0.11**	1
	Intercept	1.07	0.09**	1
$\ln CP_t$	Intercept and trend	0.216**	0.04**	1
	Intercept	0.74	0.05**	1
$\ln BL_t$	Intercept and trend	0.08**	0.08**	1
	Intercept	1.074	0.23**	1

Source: Author's compilation and values obtained from Eviews

Notes: (a) at 5% the critical value 0.463 for all variables. (b) ** implies rejection of the null hypothesis at 5%.

After establishing the statistical properties of the data series, a reduced form VAR model is estimated based on the information criteria. The convergence lag length suggested is two. At the chosen lag length, all the inverse roots of the characteristic AR polynomial have a modulus of less than one and lie inside the unit circle, meaning the estimated VAR is stable or satisfies the stability condition. The results for lag length structure and roots of characteristic polynomial are shown in tables 3 and 4 respectively.

Table 3: Lag length criteria for the credit channel

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-122.6267	NA	0.000461	3.670341	3.799854	3.721723
1	139.1798	485.6702	3.72e-07	-3.454488	-2.806921*	-3.197577*
2	159.6672	35.63022*	3.28e-07*	-3.584557*	-2.418936	-3.122116
3	166.3691	10.87835	4.35e-07	-3.315045	-1.631371	-2.647075
4	183.5375	25.87709	4.30e-07	-3.348913	-1.147185	-2.475414
5	201.1304	24.47712	4.27e-07	-3.395085	-0.675303	-2.316057
6	210.9991	12.58613	5.40e-07	-3.217366	0.020470	-1.932808
7	220.3358	10.82513	7.13e-07	-3.024226	0.731663	-1.534139

Source: Author's compilation using Eviews

Table 4: Roots of characteristic polynomial for the credit channel

Root	Modulus
0.994400	0.994400
0.739006	0.739006
0.682849 - 0.234778i	0.722083
0.682849 + 0.234778i	0.722083
0.448096	0.448096
-0.445874	0.445874
-0.231344	0.231344
0.074361	0.074361

Source: Author's compilation using Eviews

Notes: No roots lie outside the unit circle. VAR satisfies the stability condition

Testing for Co-integration

Table 5: Johansen Co-integration Test based on trace and maximum Eigen Values of the Stochastic Matrix for the credit channel

Maximum Eigen Test				Trace Test			
H_0 : rank = r	H_a : rank = r	Statistic	95% Critical Value	H_0 : rank = r	H_a : rank = r	Statistic	95% Critical Value
r = 0	r = 1	24.73	27.58	r = 0	r >= 1	48.10	47.87
r <= 1	r = 2	15.34	21.13	r <= 1	r >= 2	23.37	29.80
r <= 2	r = 3	7.10	14.26	r <= 2	r >= 3	8.037	15.49
r <= 3	r = 4	0.94	3.84	r <= 3	r >= 4	0.94	3.84

Source: Author's compilation using Eviews

Note: Trace tests indicate 4 co-integrating equations at the 0.05 level, while the Max-eigen value does not indicate no co-integrating. Sample period 1993:Q1 to 2011:Q4.

Table 5 presents the results for the Johansen co-integration test based on trace and maximum eigen value test statistics. The results for the maximum eigen values test statistic reveals that there are no co-integration equations, because the test statistics are less than the critical values, hence accepting the null hypothesis of no co-integrating variables. The trace test statistic shows that there are four co-integrating equations, rejecting the null hypothesis of no co-integration of variables at 5%. The results of the trace statistic are chosen because of its superiority in a sense that this test is more specific and not general like the maximum eigen values test.

Granger causality test

Table 6: Granger causality tests for the credit channel

Regressor	Dependent Variable in Regression			
	GY	CP	BL	R
GY	0.00	0.40	0.00**	
CP	0.95	0.00	0.66	0.83
BL	0.00**	0.35	0.00	0.02*
R	0.52	0.27	0.02**	0.00

Source: Author's compilation using Eviews

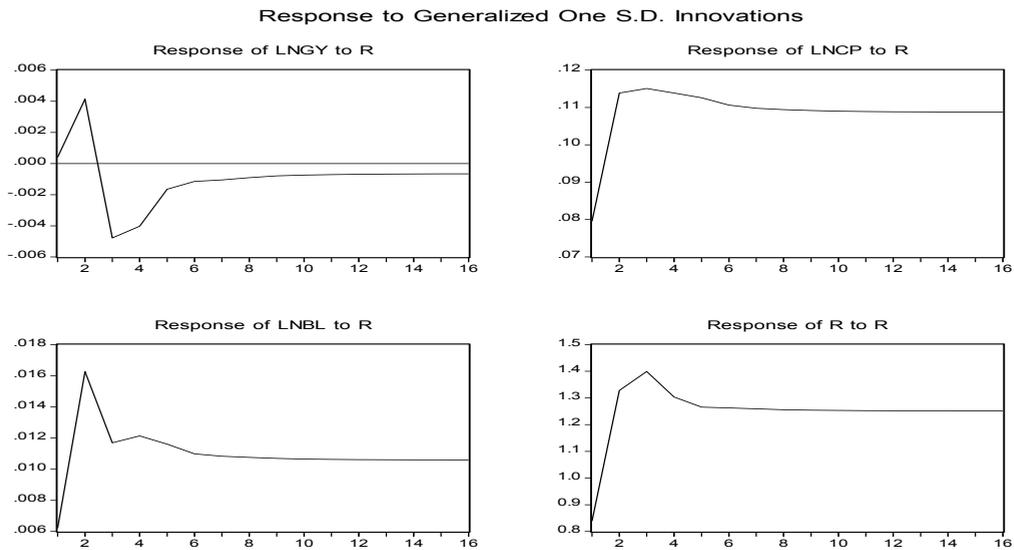
Notes: (a) *GY* denotes output, *CP* denotes rate of price inflation, *BL* denotes bank loans and *R* denotes repo rate. (b) ** means a rejection of the null hypothesis at 5%.

Table 6 summarises the Granger causality results for the four-variable VAR. The results show that output can help to predict the repo rate. Bank loans also help to predict both output and the repo rate. Similarly, the repo rate can also help to predict bank loans. This suggests a bi-directional causal relationship between bank loans and repo rate.

Impulse response function

Figure 1 below presents the responses of output, consumer prices and bank loans to innovations in the repo rate. In line with theoretical expectations, output decreases follow a sudden increase in the repo rate. The effects of the shocks are transitory on output and cease after one year. Thereafter, there is convergence toward the steady state although slightly below the baseline. However, the effects remained constant or permanent even after 16 quarters. Consumer prices increase as the repo rate increases, illustrating the presence of price puzzle. Noticeably, the transitory price effects die out sooner compared to permanent price effects which remained persistent even after four years. The IRF shows that bank loans decrease due to monetary policy tightening. The transitory bank loan effects lasted for a year and six months, while the permanent effects remained persistent even after four years. However, there is evidence that the bank lending channel is operational.

Figure 1: Impulse responses of output, consumer prices and bank loans: the credit channel



Source: Author’s compilation using Eviews

Forecast Error Variance Decomposition

Table 7 below presents forecast error variance decompositions for each variable in the model over a 16-quarter forecast horizon. The result shows that error in the forecast of output are mostly attributed to bank loans and the repo rate, though the magnitude of bank loans is higher than that of the repo rate. Bank loans accounted for 52.6 percent after 16 quarters. That means it accounted for more than half in the forecast error. The fluctuations in the consumer prices dominated the repo rate but not significantly. In comparing the other two variables the result also shows that fluctuations in bank loans are largely attributed to consumer price and the repo rate, though there is not much difference in the magnitude of the two variables. The errors in the forecast of the repo

rate are dominated by bank loans and consumer prices. The magnitude of these two variables is not that different.

Table 7: Variance decomposition for the credit channel

Variance Decomposition of GY				
Quarter	GY	CP	BL	R
1	100	0	0	0
4	74.533	1.517	12.45	7.497
8	56.242	3.895	31.897	7.966
12	42.551	5.140	44.712	7.598
16	34.231	5.881	52.577	7.311
Variance decomposition of CP				
Quarter	GY	CP	BL	R
1	0.204	99.796	0	0
4	0.084	98.501	0.0856	1.329
8	0.0722	98.231	0.228	1.469
12	0.0834	98.123	0.312	1.479
16	0.100	98.066	0.359	1.484
Variance decomposition of BL				
Quarter	GY	CP	BL	R
1	1.534	1.040	97.426	0
4	0.880	1.140	96.062	1.918
8	0.954	1.525	95.541	1.980
12	1.072	1.705	95.258	1.965
16	1.145	1.805	95.096	1.954
Variance Decomposition of R				
Quarter	GY	CP	BL	R
1	0.020	6.756	1.274	91.950
4	0.276	3.847	3.343	92.535
8	0.138	2.822	2.939	94.101
12	0.095	2.500	2.684	94.721
16	0.075	2.339	2.545	95.041

Source: Author's compilation using Eviews.

CONCLUSION

This study investigated the role of the credit channel of monetary policy transmission in Namibia. Specifically, it investigated the relative importance of this channel in the monetary policy transmission process using quarterly data for the period 1993 to 2011. The techniques of Granger causality, impulse response functions and forecast error variance decomposition were used in a SVAR framework. The results on the credit channel show two notable outcomes. Firstly, consumer price response to an increase in the repo rate shows a price puzzle. Secondly, the bank channel only starts working after two quarters and not immediately after monetary policy tightening. Since the objective of exploring the credit channel is to establish whether

or not it serves as an adequate vehicle in transmitting shocks innovated by monetary policy actions to the economy and therefore of evaluating the efficiency of monetary policy. There is evidence that the bank lending channel is operational and is consistent with economic theory. The bank lending channel thus appears to have operated in the same manner as is evident in other international empirical studies. For example, in response to a monetary policy shock, commercial banks often cut down on the supply of credit. This in turn has a greater impact on macroeconomic activity.

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BOOK REVIEW

By S.R. van Zyl

Liburd, J.L. and Edwards, D. (eds). (2010). *Understanding the Sustainable Development of Tourism*. Oxford: Goodfellow Publishers Limited. Pages 247, ISBN 978-1-906884-13-0

This book equips today's student, practitioner and manager to deal with tomorrow's issues of sustainability within the field of Tourism Management.

Sustainability is presented as being a managerial philosophy and is portrayed to be a dynamic process of transformation instead of merely being a static goal that has to be achieved. Consequently the need for creative and innovative problem solving approaches and flexible strategies are encouraged.

The book consists of twelve chapters. Managerial concepts addressed are:

- The evolution of the concept of Sustainable Development and its application to Tourism.
- The importance of implementing a sustainable approach when planning for Tourism.
- The key principles of sustainability required for the Operations Management of Tourism.
- The role of Marketing in the development of Sustainable Tourism.
- The main elements of Human Resource Management required for the promotion of Sustainable Tourism.
- The development of Corporate Social Responsibility and its application to the Tourism sector.
- Triple Bottom Line perspectives of Sustainable Development.
- A conceptual approach to supplier-driven innovations pertaining to Sustainable Tourism.
- Establishing criteria for sustainability for the management of Festivals, Meetings and Events.
- Volunteer Tourism and its relation to Sustainable Tourism.
- Methodologies pertaining to Risk, Crises and Recovery Management and its application to Sustainable Tourism.
- The future of sustainability. The need to incorporate the interrelated values of Knowledge, Ethics, Professionalism, Mutuality and Stewardship are recognized. These are key values identified by the Tourism Education Futures Initiative (TEFI) and are interwoven into the twelve chapters of the book in order to assist with the philosophical mind shift that is being called for.

Educators would enjoy the book for its exercises, activities, ideas for discussion and case studies that reflect international perspectives on the topic under discussion. Chapters are well designed and contain the following sections: Introduction, Learning Outcomes, Conclusions, Review questions, Further Reading (that includes websites and journals), References and a Glossary of Terms.

Authors are academics from the *Business Enterprises for Sustainable Tourism Education Network* (BEST EN). The content for each chapter is the product of material developed by Think Tanks involving academics and industry professionals. It is indicated that the Nominal Group Technique (NGT) has been used to identify knowledge outcomes that are relevant to Sustainable Tourism and that the knowledge base has been expanded upon through research.

The book provides valuable insights to students in the Tourism and Hospitality sectors. It is said that the book is designed to enable students to apply the principles of Sustainable Tourism to their existing subject matter.

Reviewer: S.R. van Zyl is a lecturer in the Tourism Department at the Nelson Mandela Metropolitan University. She lectures to under-graduate and post-graduate students across a range of Tourism modules. She is also involved in the supervision of post-graduate research. Her areas of expertise include Tourism, Education as well as Business and Entrepreneurship Development.

JDL JOURNAL POLICIES

Aims and scope

The Journal for Development and Leadership (JDL) is a peer-reviewed journal of the Faculty of Business and Economic Sciences at the Nelson Mandela Metropolitan University in Port Elizabeth, South Africa. This journal is aimed at providing practical guidance and empirical evidence to researchers and practitioners specialising in Business and Economics and related fields.

The journal provides a communication forum to advance entrepreneurship, innovation, small business management and various disciplines in Business and Economics, as well as the application of the disciplines in practice. Its aim is the improvement and further development of these fields and it is designed to appeal to academics, researchers and practitioners.

A double-blind review process is followed, supported by a national and international Editorial Peer Review Board.

Full academic accreditation will be applied for at the DoHE when the set requirements have been met.

The mission of the Journal for Development and Leadership (JDL) is to be a dynamic and internationally-recognised academic journal of excellence that will stimulate sustainable development and leadership by generating and disseminating of cutting-edge knowledge and understanding.

It is envisaged that the JDL will serve as a platform for presenting information central to the concerns of academics, researchers and practitioners. In this manner, research will grow and simultaneously shape theories for future application in the relevant societal contexts.

The Journal is published bi-annually, in June and December by the Faculty of Business and Economic Sciences of the Nelson Mandela Metropolitan University.

The views expressed in the journal are those of the respective authors.

INFORMATION FOR CONTRIBUTORS OF ARTICLES

Editorial policy

The editorial policy includes taking cognisance of the journal's objective to advance all disciplines, fields and sub-fields within the Faculty of Business and Economic Sciences, such as those mentioned above and, in addition, the advancement of entrepreneurship, innovation, small business development, among others, as well as the application of the various, relevant disciplines in practice.

The primary purpose of the journal is to publish research articles in the various fields, to disseminate information and to serve as a publication vehicle for academics, researchers and practitioners. For example, practical papers, empirical papers, new approaches and techniques, case studies, and conceptual papers will be considered for publication, as well as book reviews and, when appropriate, conference papers.

Review process and proofing

The decision of the Editorial Committee to publish a given article is based on the judgement of the reviewers, who are all knowledgeable in their respective fields.

Authors will be informed of the committee's decision, including any relevant comments, after the article had been reviewed. Neither authors nor reviewers are identified in the review process.

Submission requirements

When submitting articles, authors have to agree that:

- They have not submitted and will not submit their article to another entity while the article is under review at JDL.
- They will only submit articles and empirical reports that have not been published previously.
- Their articles are prepared according to the prescribed style of JDL.
- Articles that have not been appropriately prepared according to the set guidelines will be returned to the authors prior to peer-reviewing.

Format

Font and font size should be Arial or Times New Roman in 12 pt font size. The margins should be 3cm left, 2cm right and 2.54 top and bottom of each page.

Abstract

The abstract should consist of approximately 200 words and should be in single spacing.

Keywords

Authors should identify up to five keywords, separated by a semi-colon on the title page that characterise the principal themes covered by the paper.

Language

Papers should be written in English (preferably South African English) (In MS Word go to Tools, Language, Set Language and then select "English, South Africa").

Title page

This page should contain the title of the article and the name, affiliation, full address and contact information of every author. If the article is co-authored, then the name of the author to whom correspondence should be sent has to be marked with an asterisk (*).

Body

The article has to be typed on one side of the page only in 1.5 line spacing. Appropriate headings and sub-headings should be used to segment the article to enhance readability. The length of the article should not exceed 10 000 words of typed text (approximately 30 typewritten A4 pages).

Headings

Headings and sub-headings should not be numbered. All headings have to be formatted in bold upper case, and sub-headings in bold lower case (for example, using initial capitals and the rest lower case). Sub-sub headings should be in regular lower case.

Manuscript contents

Articles should include: abstract, introduction, identification of a problem, aims of the study, method and sample, measuring instruments, procedure, followed by interpretation and articulation of the results.