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A PATH DEPENDENCY INVESTIGATION INTO THE SOURCES OF SUSTAINABLE COMPETITIVE ADVANTAGE OF THE UNIVERSITY OF RHODESIA, 1945-1980: THE INFLUENCE OF INITIAL CONDITIONS

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This paper examines the development of the University of Rhodesia (UR) and identifies a pattern that developed in a path dependent way. Path dependency captures the notion that choices, that are made when an institution is being formed, tend to have a continuing and lasting influence on the institution far into the future (Sydow, Schreyögg & Koch, 2009). It is the tendency for a step in one direction to encourage the next step to be in a similar direction, thus keeping the development of an organization in the same path (Greener, 2002). This study examines initial conditions as a factor that was crucial in the emergence of UR, and helped to perpetuate its dominance over time. The paper is based on a case study of UR from 1945 to 1980. It used semi-structured interviews and document analysis to give in-depth understanding of contextual issues and dynamics shaping the development of UR, and its ensuing path dependency. Interview data was collected from 73 former students, current and former academics and administrators over a 10-month period. The purposive sampling technique was used to select the respondents, and the complete list of respondents evolved through the study using the snowballing technique. Qualitative data was collected and analysed (with the aid of data analysis software, Nvivo 8) according to the grounded theory approach. The study established that the evolution of UR was path dependent and influenced by initial conditions, increasing returns, self-reinforcement, positive feedback and lock-in. This paper looks at the influence of initial conditions as a source of competitive advantage in the evolution of UR.

Keywords: Path dependency, Initial conditions, Increasing returns, Self-reinforcement, Positive feedback, Lock-in

INTRODUCTION

This study examined the development of the University of Rhodesia over the period 1945 to

1980, and identified a pattern that developed in a path dependent way. Choices that are made when an institution is being formed, or when a

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policy is being initiated, tend to have a continuing and lasting influence on the institution far into the future (Sydow, Schreyögg & Koch, 2009). According to path dependency (Greener, 2002), a step in one direction tends to encourage the next step to be in a similar direction, thus keeping the development of the institution in the same path. It is therefore significant to understand and establish the role of path dependency in the development of the University of Rhodesia (UR), and how this shaped the sustainability of its competitive advantage over time. The aim of this study was to empirically explore the enduring influence of initial conditions in path dependency as a source of competitive advantage, and to show their contribution to management theory and practice.

Below the researcher traces the history of the University of Rhodesia from inception in the 1940s up to 1980.

HISTORY OF THE UNIVERSITY OF RHODESIA (1945-1980)

The Beginnings

The idea of establishing a University stemmed from four initiatives. Firstly, the British Government was anxious to foster higher education in Central Africa to Africans. Secondly, the Rhodesians themselves were trying to start a 'White' University; and thirdly, some idealists such as Alexander Carr-Saunders and Walter Adams of the Inter-University Council for Higher Education came up with the idea of fusing the two initiatives. The idea took shape with the founding of a movement for the foundation of a University – the 'Friends of the University of Southern Rhodesia', which later changed its name to the Rhodesia University Association (Rhodesia University Association, 1947).

In October 1943, James Frederick Kapnek, a Hungarian-born philanthropic Jewish businessman, presented the Southern Rhodesian Government a gift of £20 000 for the founding of a University as an act of thanksgiving for allied war-time victories (Mackenzie, 1987). Kapnek's offer is the fourth force which may have helped trigger the idea of the need for a University for the country, and thus shaped the trajectory of events.

ASQUITH COMMISSION

During World War II, the British Government had begun to consider the post-war needs of the Empire. In 1943, a Royal Commission was appointed under Mr Justice AC. Asquith to consider the promotion of higher education in the colonies. The Commission reported in 1945 and recommended a preliminary step of setting up of a University College. It proposed that the University College should be admitted to a 'special relationship' with London for the purpose of awarding degrees but have "freedom to manage their own affairs" (Atkinson, 1972, p. 147). Another consideration was that the University College should be open to all, without distinction of race, religion or creed (Atkinson, 1972).

In 1946 the Southern Rhodesian Legislative Assembly agreed to a motion introduced by Manfred Hodson, as a private member, calling for the immediate establishment of a University in Rhodesia (Atkinson, 1972).

In 1952 Hodson, on behalf of the Rhodesia University Association, proposed a bill in the Legislative Assembly for the incorporation and constitution of the University. The Act was passed on 29 August 1952 and established an Inaugural Board for the University (Mackenzie, 1987).

The University was to consist of a Chancellor (appointed by the Inaugural Board), a Vice-Chancellor (appointed by the Council), a Principal (who would be appointed by the Inaugural Board but eligible for appointment by the Council as Vice-Chancellor), a Council, a Senate, a Convocation, professors, lecturers and registered students of the University (Gelfand, 1978). The government and executive authority of the University was to be vested in the Council. The Senate would be responsible for the superintendence of instruction in the various departments, lectures and examinations of the University (Gelfand, 1978). The Convocation was to be composed of the principal, professors, lecturers, other teachers of the University and past students.

The Queen Mother laid the foundation stone on the Mount Pleasant site on 13 July 1953. The 250 acres site had been formally handed over to the Trustees of the Rhodesia University Foundation Fund on 7 September 1950 by the Mayor of Salisbury (now Harare), Councillor R. M. Cleveland (Gelfand, 1978). On 11 November 1954, the Southern Rhodesian Parliament approved an amendment to the Land Apportionment Act allowing African members of the College to live on campus (Maxwell, 1980).

THE ROYAL CHARTER

Proposals for a University were sealed by a Royal Charter, dated 10 February 1955 under the title, 'The University College of Rhodesia and Nyasaland' (Atkinson, 1972). After the granting of the Royal Charter, the Queen Mother was the first President of the University College until 1970.

SPECIAL RELATIONSHIP

The University College had a 'special relationship' with the University of London. The Medical School was affiliated to Birmingham University in 1960.

SETTING UP OF THE UNIVERSITY COLLEGE

In 1953 with support of £1 400 000 from the British Government, the College began to erect most of the buildings – a main teaching block, three halls of residence (Swinton for women and Manfred Hodson and Carr-Saunders for men), a students' union and houses for members of staff (Atkinson, 1972). Other buildings followed as a result of private donations: the Library (from the Anglo-American Corporation, the British South Africa (BSA) Company and the Rhodesian Selection Trust), the Beit Hall (from the Beit Trust), and the Chapel (from the Dulverton Trust) (Atkinson, 1972).

Early in February 1953 the College administrative office was moved from 115 Baker (now Nelson Mandela) Avenue to its present site in Mount Pleasant (Gelfand, 1978). The Baker Avenue premises had formed the first nucleus of the College. That is where the first teaching, albeit part-time, had taken place (Gelfand, 1978).

Appointments to the academic staff began with the selection of the first Principal of the College – Dr William Rollo, who took up his duties for two years in December 1953 (Gelfand, 1978). He was formerly Professor of Classics at the University of Cape Town, South Africa (Atkinson, 1972).

Rollo left on 1 December 1955, and Dr Walter Adams took up responsibilities as Principal of the University College on 1 December 1955. He was Head of the College from December 1955 to mid-December 1966 (Gelfand, 1978). Terence Miller became the next Principal between 1967 and 1969 while Robert Craig took over from 1969 to 1979 (Chideya & Sibanda, 1979).

ACADEMIC DEVELOPMENT

The University College of Rhodesia and Nyasaland began its career as a teaching institution in March 1957. It began with an enrolment of 68 students and with teaching facilities limited to subjects within the Faculties of Arts, Science and Education (Morris, 1964). Between 1961 and 1980 five new

faculties were established – Medicine in 1963, Engineering in 1974, Agriculture in 1980, Commerce and Law in 1980 and Veterinary Science in 1980 (Mackenzie, 1987).

Below is information on full-time student enrolment at the University College between 1957 and 1979 (Table 1).

Table 1: Full-time Student Enrolment at the University College

Date	Africans	Europeans	Others	Total
1957	8	59	1	68
1958	19	101	4	124
1959	32	132	2	166
1960	49	153	6	208
1961	64	173	11	248
1962	74	241	15	330
1963	159	309	20	499
1964	144	378	29	551
1965	174	455	43	672
1966	196	465	57	718
1967	211	432	74	717
1968	327	479	88	894
1969	303	463	80	846
1970	363	489	85	937
1971	407	510	76	993
1972	384	517	66	967
1973	417	586	73	1076
1974**	–	–	–	–
1975	561	707	95	1361
1976	727	666	113	1506
1977	998	1012	120	2130
1978	1266	916	121	2303
1979	1128*	697	106	1931

Note: *Figures depressed by African male call-ups to military service; **There are no figures for 1974.

Source: Compiled from Maxwell (1980, p. 262); Chideya & Sibanda (1979, p. 10); and Mlambo (1995, p. 482).

RACIAL POLARISATION AND STUDENT ACTIVISM

In the early days, a few incidents of racism occurred. When the College opened in March 1957, there were 68 students – 8 were African, one of them a woman (Gelfand, 1978). Fifty-three students lived in the halls of residence – 8 Africans and 45 Europeans (Gelfand, 1978). The rest stayed outside campus, mainly in their homes. Manfred Hodson Hall was for White students, Carr-Saunders for non-White males, and Swinton for European girls (Gelfand, 1978). Gelfand (1972) argues that, in spite of this segregation, the students all mixed well, probably because of the small numbers.

DEMONSTRATIONS

The first demonstration at the College took place in June 1962 against the Portuguese Governor-General who was visiting the College that day (Gelfand, 1978). It was organised to protest against the lack of academic freedom in Portugal, and in Portuguese East- and West-African Universities (Gelfand, 1978). Over 20 students of both races, mostly African, stationed themselves on the road outside the Principal's drive and waited with placards for the Governor-General (Gelfand, 1978).

The next major demonstration was the one against Lord Salisbury on 5 April 1963. He had been invited by the Federal Government to lay the foundation stone of what was going to be the teaching hospital of the Medical School that had just been opened (Gelfand, 1978). Lord Salisbury's right wing sympathies, as articulated in his parliamentary speeches in the British Hansard, were well known. In March 1966 some

230 students, mostly Africans, boycotted lectures and staged a series of noisy demonstrations around the campus (Atkinson (1972).

FROM UNIVERSITY COLLEGE TO FULL UNIVERSITY

In 1970 the 'special relationship' enjoyed by the University College of Rhodesia with the University of London was brought to an end. In 1969, the college changed its title to the University College of Rhodesia (UCR). In December 1969, Council decided to work for full University status by 1 January 1971 (Maxwell, 1980).

In early March 1970 the College's first President, the Queen Mother, resigned. At independence in 1980, the University of Rhodesia changed its name to the University of Zimbabwe, the name by which it is known today.

REVIEW OF LITERATURE

It is a truism that seeking the source of sustainable competitive advantage (SCA) is one of the dominant areas of research in the field of strategic management. Management theorists (Andrews, 1971; Ansoff, 1987) have explicated firm performance from the perspective of external factors using environmental models of competitive advantage, i.e., SWOT analysis (Andrews, 1971) and Porter's five forces analysis (Porter, 1979). This structure-conduct-performance paradigm (Porter, 1981; Ajlouni, 2010) dominated strategic management literature for a long time, and it suggests that industry structure determines firm conduct and thus firm performance (Porter, 1981). As a result, the link between strategy and the firm's resources and skills was comparatively neglected (Grant, 1991). However, as knowledge frontiers continue to grow in complexity and in speed, new thought/analytical tools in strategic

management have emerged to help organizations navigate the 'murky waters' of organizational life. One such way of thinking is the resource-based view of the firm (RBV).

In the 1980s and 1990s, the RBV emerged as an alternative analytical lens that switched the focus from the external environment, typified by Porter's paradigm (1980, 1985), to internal resources and capabilities. Thus early attempts to explain firm performance from the perspective of resources (Penrose, 1959) were rekindled by Barney (1991), Wernerfelt (1984), Grant (1991) and Rumelt (1984), among others. This led to the emergence of the RBV, which has now become one of the dominant approaches to studying competitive advantage within the strategy discipline. Its key proposition is that differences in firm strategy and performance are primarily driven by unique resources and capabilities that a firm possesses, or in the way in which these resources and capabilities are combined and utilised (Penrose, 1959). This school of strategy development theory continues to make a significant contribution to strategy research.

TYPES OF RESOURCES

According to RBV theory, there are three types of resources, namely tangible and intangible resources and organization capabilities (Barney, 1991). Tangible resources include plant, equipment and bank deposits (Barney, 1991). Intangible resources include trademarks, patents and company reputation (Collis & Montgomery, 1995). Capabilities include individual skills and

organization routines (Bitar & Hafsi, 2007). Prahalad and Hamel (1990) use the term 'core competence' to describe strategic capabilities.

Barney (1991) presents a comprehensive framework to identify the needed characteristics of firm resources which generate sustainable competitive advantage¹. According to Barney (1991), for resources to be a source of SCA, they must meet four criteria, namely: value (i.e., contribute to firm efficiency and effectiveness), rareness (i.e., not widely held), inimitability (i.e., they cannot be easily replicated by competitors), and non-substitutable (i.e., other resources cannot fulfil the same function). He further suggests that capabilities to transform commonly available resources into valuable, rare, inimitable, and non-substitutable resources are a barrier to imitation if these capabilities are: (i) physically unique, (ii) socially complex (no-one really understands how the resources are actually transformed), (iii) causally ambiguous (no one understands how capabilities actually result in the final product), or (iv) path dependent (the transformation of resources occurs over time and is rooted in the past). The concept of path dependency, specifically, has been examined by studying the evolution of UR.

PATH DEPENDENCY

Definition

According to Zukowski (2004), in spite of being widely used, the term 'path dependency' does not yet have a commonly accepted, precise definition. The concept originated as an idea that a small initial advantage, or a few minor random shocks

¹ While competitive advantage derives from firm-specific resources that are rare and superior in use relative to others (Peteraf & Barney, 2003, 311), sustainable competitive advantage is when current and potential competitors are unable to duplicate a firm's specific resources (Barney, 1991, 102). Both concepts require that resources have characteristics of exclusivity and inimitability. However, while competitive advantage is a source of superior performance, sustainable competitive advantage is the path to prolonged superior performance (Porter, 1985).

along the way [organizational lifecycle], could alter the course of history (David, 1985). Path dependency is when an unfolding sequence of events is shaped by particular events that occurred in the past (David, 2007).

Path dependency suggests that current phenomena cannot be adequately understood without knowledge of how they have been shaped by past events (Mwangi, 2006). According to Kay (2003), a system is path dependent if initial moves in one direction elicit further moves in that same direction. Once a particular path has been adopted, it becomes more and more difficult to change that path or to select previously available options, even if those earlier alternatives would have been more efficient (Mwangi, 2006).

The concept of path dependency was first used by economists to explore technological processes, and was associated with increasing returns processes (Arthur, 1989; 1994; David, 1985). It was initially applied to account for the phenomenon of persistent domination by inferior technologies in competitive markets, despite the availability of a superior rival (Nee & Cao, 1999). David's (1985) best-known work in this area is his discussion of the layout of the QWERTY typewriter keyboard. The QWERTY keyboard story can be summarised as follows: the strike mechanism of the earliest mechanical typewriters was prone to jamming, so the typewriter's inventors designed the QWERTY keyboard in order to slow down typing speed (Liebowitz & Margolis, 1994). Typists thus remain burdened by this speed-reducing design today, even though a competing Dvorak keyboard exists – scientifically designed to be easier to learn and to allow greater speed (Liebowitz & Margolis, 1994). Later on the concept of path dependency was adapted by historical sociologists, political

scientists and specialists in organization theory (Zukowski, 2004).

Causes of Path dependency

Page (2006) posits that literature on path dependency reveal four related causes: increasing returns, self-reinforcement, positive feedbacks, and lock-in. Another cause, not articulated by Page (2006), is sensitivity to initial conditions which is associated with chaos theory (Potgieter, April, Cooke & Osunmakinde, 2009). The paper examined this cause of path dependency.

Sensitivity to Initial Conditions and Chaos Theory

Sensitivity to initial conditions means that the characteristics of organizations tend to reflect how things were at the time of the founding of the organization. Small events trigger shifts in the course of events, and this leads to positive or negative consequences that move the system away from its systematic course. Liebowitz and Margolis (1995, p. 206) argue that, "... historical accidents may have left us with the wrong types of automobiles, video recorders and typewriter keyboards".

A famous example of initial conditions which is used to explain path dependency in the literature, include the establishment of such technologies as the VHS video recorder (David, 1985). Foray (1997) posits that the VHS format was adopted as the VCR industry standard despite the technical superiority of the more compact Sony Betamax, due to the interplay of seemingly unrelated background conditions and events. Prominent among these, were the incidental ability of the VHS cassette initially to carry a tape with a longer playing time, and the creation of a complementary product – the pre-

recorded tape (Foray, 1997). According to Goulielmos (2005, p. 538), "... as more (VHS format VCRs) sold, more people wanted to buy them" and this ensured the superiority of the VHS in terms of market share. Thus, we see how small historical chance events/accidents can have durable effects. This reinforces the point that technologies and organizational formats do not exist isolated from their uses and users, and social programmes and institutions do not emerge accidentally (Schwartz, 2004).

Chaos and Complexity

One random event can select a particular path; the choice becomes locked in, regardless of the advantage of the alternative (Goulielmos, 2005). This sensitivity to initial conditions is accompanied and motivated by a mathematical literature known as chaos theory, or complexity models (Liebowitz & Margolis, 1995). Chaos theory is the study of complex, non-linear, dynamic systems (Levy, 1994; Potgieter, April & Bishop, 2005). According to Thiétart & Forgues (1995), from tomorrow's weather, water turbulence, jet engine gas propulsion to demographic evolution, economic cycles and stock market evolution, systems seem to be governed by relationships which dynamically interact with one another and are prone to chaotic behaviour (Peter, de Lange, Musango, April & Potgieter, 2009). In this theory, chaos is not used in the popular sense of total randomness, or disorder, but have order but just with no long-term predictability. Chaos and order are not as we have always thought them to be – opposites from which to choose (Eijnatten & Putnik, 2004). Rather, they are complementary aspects of a singular reality.

Although the researcher has attempted to articulate chaos theory below, the mathematical variant is removed from our present concern.

However, it is the promise of finding a fundamental order and structure behind complex events that explains the great interest chaos theory has generated in so many fields (Levy, 1994). Chaos refers to systems which display behaviour which though it has certain regularities, defies prediction (Rosenhead, 1998).

Complexity Theory and Organizations

Complexity theory has been advanced to challenge traditional management assumptions by embracing non-linear dynamic behaviour of systems (Potgieter, April & Bishop, 2005). Stacey (1992), and Cunha & Cunha (2006), explain the essence of complexity theory. They argue that complexity theory suggests that systems are vital and creative when they are at the 'edge of chaos' (Stacey, 1992), i.e., in a state that includes both order and chaos. Secondly, complexity theory shows how the behaviour of complex systems results from the interactions of many agents at multiple levels following simple rules (Potgieter *et al.*, 2005).

Third, as complex adaptive systems, organizations are sensitive to their environments and respond to these environments, co-evolving with them (Cunha & Cunha, 2006). Fourth, complex systems are, to a great extent, self-organising but that self-organization is the outcome of the interdependences among individual agents following their own set of rules (Stacey, 1995).

Cunha and Cunha (2006) and Valle (2000) explain the structure of complex adaptive systems as follows:

- (i) a large number of similar, but independent, elements or agents.
- (ii) persistent movement and responses by these elements to other agents.

- (iii) adaptiveness, so that the system adjusts to new situations to ensure survival.
- (iv) self-organization, in which order in the system forms spontaneously. Self-organising complex systems cannot be predicted and do not observe the principle of additivity, i.e., their components cannot be divided up and studied in isolation.
- (v) local rules exist that apply to each agent.
- (vi) progression in complexity, so that over time the system becomes larger and more sophisticated.

Rather than designed processes, organizations can be viewed as interactive, iterative, emergent, self-organising processes (Cunha & Cunha, 2006; Potgieter *et al.*, 2009). They have become what they are as a result of myriad interactions occurring inside the organization and its environment. To this extent, organizations adapt through response and interaction, rather than through analysis and reflection (Cunha & Cunha, 2006).

The Organization as a Chaotic System

Earlier research on organizational analysis was done by Burns and Stalker (1961). They proposed a contingent relationship between formal structure and organizational performance, arguing that organizations with a mechanistic structure (bureaucracy) were more suitable for static environments, while those with organic structures or loosely coupled networks of workers, were more suited for dynamic environments.

Chaos theory and properties of chaotic systems are increasingly being used as an alternative approach to understanding how

organizations work. According to McBride (2005), chaos theory is that part of complexity theory which concerns itself with non-linear dynamic systems, and whose behaviour does not follow clearly predictable and repeatable pathways. An organization is presented as an open, dynamic, non-linear system subject to internal and external forces which might be sources of chaos (Thiétart & Forgues, 1995). Reality is more complex, interactive and dynamic and contains elements of rationality, formality and order mixed with intuition, informality and disorder (Thiétart & Forgues, 1995).

Thiétart and Forgues (1995) further argue that chaos, i.e., a seemingly random, yet deterministically driven behaviour, has organising attributes – what Bohm (1980) termed an ‘implicate order’. These organising attributes result from multiple interactions between forces of stability and forces of instability that the system is subjected to. To that extent, although social systems are constituted through non-linear interaction, they are neither random nor chaotic, but well structured and robust (Cilliers, 2006; Potgieter *et al.*, 2009).

According to chaos theory, some forces push the system toward stability and order. These include the forces of planning, structuring and controlling (Thiétart & Forgues, 1995). According to Pascale (1999), equilibrium is concealed inside strong values or a coherent, close-knit social system, or within a company’s well-synchronised operating system (often referred to as ‘organizational fit’). Stacey (2007), however, asserts that the true dynamism of the system is concealed in the constructions of power within the organization, and is not as well-synchronised as we may want to believe. However, Pascale

(1999) does concede that nothing novel can emerge from systems with high degrees of order and stability. Enduring competitive advantage entails disrupting what has been done in the past and creating a new future – what Schumpeter (1942) described as ‘creative destruction’, the essence of free market economies (Pascale, 1999).

Chaos theory also makes the claim that some other forces push the system toward instability and disorder, out of its stable equilibrium. These are forces of innovation, initiative, incoherence, and experimentation (Thiéart & Forgues, 1995). They create demands, unintended consequences and interdependencies which are not necessarily consistent with the planned objectives (Stacey, 2007). The coupling of these forces can lead to a highly complex situation: a chaotic organization (Thiéart & Forgues, 1995) or otherly termed as a chaordic organization (Hock, 2000). In the zone of stability, when the system is disturbed, it returns to its initial state. However, in the zone of instability, a small disturbance leads to a movement away from the starting point, which in turn generates further divergence (Rosenhead, 1998). Systems may operate at boundaries between these zones, sometimes called a phase transition, or the ‘edge of chaos’ (Stacey, 1992).

Principles of Chaos Theory

According to Thiéart and Forgues (1995) and Schneider and Somers (2006), chaos theory presents organizations as non-linear dynamic systems subject to forces of stability and forces of instability which push them towards chaos. Processes appear to proceed according to chance even though their behaviour is in fact determined by precise laws (Mason, 2007). Although chaotic behaviour is complex, it has simple rules (Mason, 2007; Beinhocker, 1997).

The characteristic of non-linearity in chaotic systems means that the output of the system is not proportional to the input (Valle, 2000) while the characteristic of chaotic systems being deterministic means that chaotic behaviour is not random (Valle, 2000).

When in a chaotic domain, organizations are likely to exhibit the qualitative properties of chaotic systems such as iteration, sensitivity to initial conditions, bifurcation processes, attraction to specific configurations, time irreversibility, and self-organization (Thiéart & Forgues, 1995). Collectively these principles explain what it means for a system to be dynamical, non-linear, deterministic and unstable (Arrigo & Barrett, 2008).

Iteration

Iteration refers to the process of repetition – the output of the system is used as input in the next calculation. According to Arrigo and Barrett (2008, p. 170), “Systems prone to chaos tend to stretch and fold back upon themselves in self-reinforcing loops”.

Initial Conditions

According to Arrigo and Barrett (2008), non-linear dynamic systems can be significantly affected by what may seem to be very minute variables or inputs. Thus a small initial change in one variable can lead to a dramatically different evolution or can have monumental consequences (a big effect), consequences which could not have been predicted beforehand (Manson, 2001; Thiéart & Forgues, 1995). In this regard, one simple creative breakthrough can evoke a cascade of increasing complexity. Simple inventions such as the wheel, printing press, or transistor led to complex offshoots such as automobiles, cellular phones, electronic publishing, and computing, so argues

Pascale (1999). The popular expression of this concept of initial conditions is the so-called 'butterfly effect' – i.e., something as small as a butterfly flapping its wings can theoretically alter the behaviour of an entire weather system (Manson, 2001). The implication of this conception is that weather patterns are so complex, the argument runs, that a butterfly flapping its wings today on one side of the globe could cause tiny changes in air pressure which could induce a torrential downpour on the other side of the globe at some future point (Roe, 1996). In this regard, organizational growth and its future state are vulnerable or highly sensitive to the founding conditions.

Bifurcation

The term is used to describe critical points in the evolution of chaotic systems. To reach a state of chaos, a system will progress from stability, through diverse degrees of disorder, ending in the chaotic domain (Arrigo & Barrett, 2008). Each change from one state of stability to the next is a bifurcation and each functions as a critical point of destabilisation (Eidelson, 1997; Arrigo & Barrett, 2008). Bifurcations mark qualitative changes in the behaviour of a system that accompany its evolution into disorder and chaos (Arrigo & Barrett, 2008).

Strange Attractors

Attractors are the rules and logics that create some order and replication within a system (Haynes, 2007). Chaotic systems which dissipate their energy may get organised around structures called strange attractors (Mason, 2007). An attractor is a region which exerts a magnetic

appeal for a system, seemingly pulling the system toward it (Arrigo & Barrett, 2008; Haigh, 2002).

Chaos theory speaks of attractors rather than control mechanisms. Attractors may be visualised as magnets that exert a pull on the system (Ward, 1995). They offer the potential for periods of time when there is relative stability within complexity (Haynes, 2007). Attractors wield their influence on social phenomena like the organization of graffiti artists or gang members (Arrigo & Barrett, 2008).

Time Irreversibility

The fifth characteristic of chaotic systems is that of time irreversibility, ie the probability to see a system 'reverse' to its initial state is extremely low. Once in a state of chaos, the system will probably not find itself again in the same situation in the foreseeable future (Thiétart & Forgues, 1995). In an organization, it is unlikely that the same action, taken twice, will lead to the same result (Thiétart & Forgues, 1995). To this extent, actions which once produced excellent results might lead one day to failure.

Self-Organization

This is the ability of systems to organise themselves out of apparent disorder. Self-organization is when an organization is able to discover, through experimentation, answers to its problems (Thiétart & Forgues, 1995). The organization develops a catalogue of responses and stimulates learning opportunities through multiple experiments (Thiétart & Forgues, 1995). The structure that emerges through self-organization grows out of an interaction between systems parts and between the system and its environment (Lichteinsten, 2000; Ward, 1995). An example of self-organising properties of complex

adaptive systems are flocks of birds, where there is no single, organising, bird leader (Ashmos, Duchon & McDaniel Jr., 2000). Rather, a pattern of organization develops from local interactions among agents, apparently following simple order-generating rules (Ashmos *et al.*, 2000; & Beinhocker, 1997). In the example given above, each bird follows simple rules of interaction:

- (i) Keep a minimum distance from other birds, for example, stay 20cm away from its two neighbours.
- (ii) Fly at the same speed as other birds.
- (iii) Move towards the centre of the flock (Burnes, 2005, p. 80).

The benefit of self-organising is a structure that is fluid and sensitive to the needs of connected elements (Ashmos *et al.*, 2000).

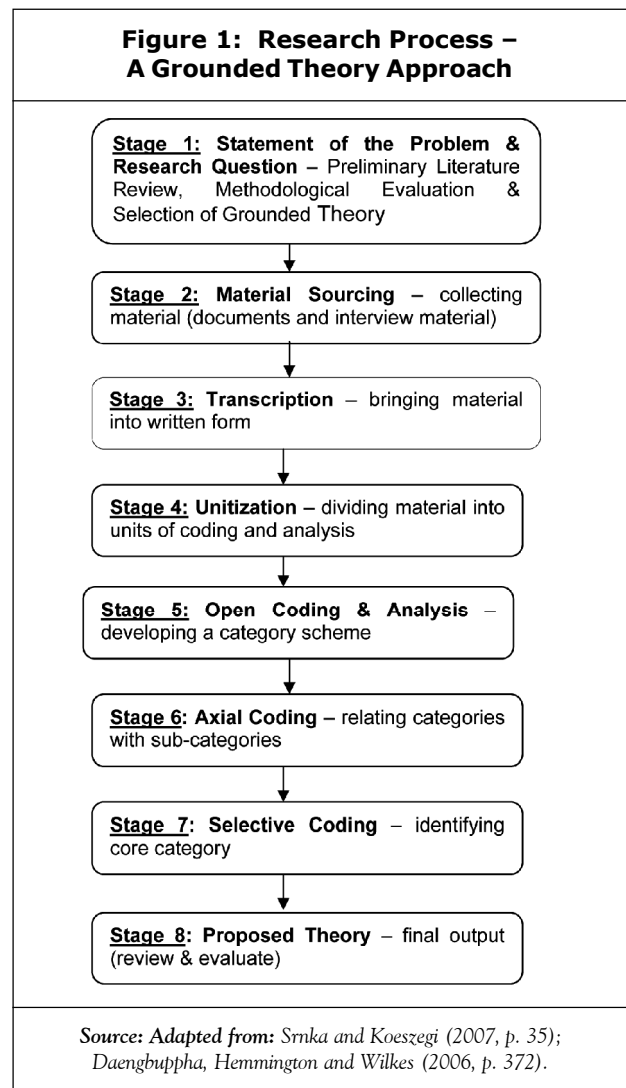
Chaos Theory as a New Perspective

The qualitative properties of chaos theory can offer a new perspective from which to view the way organizations work (Thiéart & Forgues, 1995). The theory promises to be a useful conceptual framework that reconciles the essential unpredictability of organizations with the general emergence of distinctive patterns (Levy, 1994). The attractiveness of complexity has been amplified by environmental uncertainty (Smith & Graetz, 2006). Svyantek and Brown (2000) have advised that in studying organizations as complex systems, researchers are required to take a historical, in-depth and context specific approach. This research follows this advice by looking at the influence of initial conditions in the development of the University of Rhodesia.

METHODOLOGY

The researcher selected an information-rich case for in-depth study, the University of Rhodesia. Yin

(1994), one of the most influential contributors of this research approach, recommends this type of research. Case study research is considered to be particularly useful where research and theory are at their early, formative stages. Given the ambiguities and debates surrounding path dependency as a concept, this research assesses the utility and validity of this concept in the context of one particular institution, the University of Rhodesia. In the diagram below is the research process that was undertaken, from a grounded theory perspective (Glaser & Strauss, 1967), to establish whether the development of UR was path dependent.



Grounded Theory and Literature Review

Glaser and Strauss (1967), the two main proponents of grounded theory, diverged significantly on their beliefs about how its principles and methods should be interpreted and deployed. The place of literature review in grounded theory studies has been one such controversial area. The dispute was about whether grounded theory should start with a framework or any knowledge of structure. Strauss, in his later writing with Corbin (Strauss & Corbin 1990), advocated reviewing the literature early in the study for several reasons:

- It stimulates theoretical sensitivity.
- It provides a secondary source of data.
- It stimulates questions.
- It directs theoretical sampling.
- It provides supplementary validity.

McGhee, Marland, and Atkinson (2007) suggest that it is undesirable that a researcher enters the field in an 'atheoretical' state and rather should be aware of extant knowledge. Further, as grounded theory studies often take a new perspective on an old issue, it is important to be familiar with previous knowledge so as to outline the research phenomenon (McGhee *et al.*, 2007).

This study used the 'modified', or 'modern interpretation', of grounded theory as a research study. This study reviewed literature at the beginning of the research and developed a theoretical framework in order to reduce the uncertainty regarding the context and the focus of the topic. Examples of studies that have used this approach include April (2004), who uses a multiple case approach for unearthing specific insights in the South African personal financial services firm, and Shockley (2003), who first reviews literature on education, information

technology and the economics of change, before coming up with a 'model for internet embedded use among teachers' in California, England and Singapore.

TRIANGULATION

Triangulation is the combination of theories (theory triangulation), methodologies (methodological triangulation), use of multiple investigators (investigator triangulation), and multiple data sources (data triangulation) in the study of the same phenomenon in order to strengthen the credibility and applicability of findings (Jack & Raturi, 2006). The design structure of this study was based upon using semi-structured interviews and document analysis.

Data Collection

The time horizon used in this research study was a cross-sectional approach, where data was gathered just once over a ten-month period, December 2009 to September 2010. Prior to field interviews, Yin (1994) recommends a pilot interview to refine procedures and discover potential study design defects. Five pilot interviews were conducted to check the interview questions for clarity, content and completeness (Gorelick, 2000). Following the pilot interviews, a detailed analysis of the interview questions, and process, was conducted. Feedback helped to validate the substance of the questions, and minor changes were made to allow for more open-ended conversation (Gorelick, 2000).

These exploratory interviews preceded the development of an interview schedule, consisting of 73 in-depth semi-structured interviews with former students, current and former academics and administrators of UR. After interviewing 33 interviewees, the researcher reached theoretical

saturation. He then isolated issues for further investigation and interviewed 40 more interviewees. The complete list of respondents evolved through the study using the snowballing technique (Yin, 1994), as respondents were asked during interviews about other people who might provide additional information about the study. An underlying assumption, for the study and selection criteria for the interviewees, was that the participants were familiar with the history of UR. In this regard, purposive sampling was used to identify respondents.

The interviews were scheduled in advance and lasted between 45 minutes and one hour. They focused on key events, people, and issues. Each participant was asked for permission to tape record the interview – none objected to the use of the recorder (Gorelick, 2000). Brief handwritten notes were taken in case of technical failure.

Following each interview, the audiotapes were transcribed verbatim by the researcher prior to analysis. Each participant received an electronic copy of his, or her, transcript for review and revision (Gorelick, 2000).

The principles of theoretical sampling were adopted, where the data collection and analysis stages were designed to overlap in order to allow both the sampling and data collection processes to be informed by the emerging data analysis (Daengbuppha *et al.*, 2006).

Printed documents included Annual Reports of the Department of Education of Southern Rhodesia (now Zimbabwe), correspondence, newspaper articles, brochures, journals, and books. Documents were used as a source for triangulation. Data collected during interviews were checked against documentary evidence, and vice versa, thus enhancing the credibility of findings (Jick, 1979).

Data Processing, Analysis and Presentation

The qualitative data was analysed according to Glaser and Strauss's (1967) grounded theory approach. The data analysis process (see Figure 1 above) was enhanced using a software package for qualitative data storage, management and retrieval, Nvivo 8.

Results of the qualitative analysis are presented in the schema below, and they also outline the working theory. Below the researcher presents these themes more elaborately and illustrates with verbatim quotes.

Methodological Experiences, Access to Site, and Ethical Considerations

Obtaining physical access was not a problem for the researcher, because the researcher has had a long history of associating with the University. The researcher was a student at the University between 1985 and 1990 and also between 1997 to 2000. He was also employed as a Senior Administrator from 1994, before he crossed over to become an academic at the same institution in 2001. Being a staff member of the University, the researcher had established both formal and informal relationships within the organization. This helped to facilitate access to former students, current and former administrators and academics and paved the way for gaining overall trust. With the above experience as a student, administrator and academic, the researcher was in an advantageous position to study developments at the institution. However, this long association with the case institution might have affected the researcher's ability to be objective.

DISCUSSION OF FINDINGS: EMERGING THEMES

The section discusses outcomes from the interviewees and presents the themes that emerged from the findings.

Five determinants of path dependency (Initial Conditions, Increasing Returns, Self-reinforcement,

Positive Feedback and Lock-in) which emerged from the review of literature were used to categorise data. They provided the foundation upon which a new framework of path dependency was built. During data coding and analysis of both Rounds 1 and 2 interviews, 28 sub-categories were identified. The frequencies appearing in Table 2 below are sorted in descending order by

Table 2: Frequency Counts for Each Code (Round 1 and Round 2)

Code	R1 References	R2 References
External Linkages	30	59
Educational Standards	29	70
Multiracialism	25	65
Eminent Staff	20	75
Federation	19	43
Financial Support	18	17
Lack of Alternatives	17	22
Limited Alternatives	15	22
Loyalty & Attachment	14	6
Contribution of the University	13	48
Conditions of Service	13	40
Selection of Students	13	10
External Examiners	12	35
Class Size	12	21
'Kremlin on the Hill'	12	7
Living Conditions	11	30
Publicity Efforts	11	12
Unilateral Declaration of Independence	10	32
First Mover Advantage	10	6
Grants & Scholarships	9	30
Opportunities for Research	9	19
Rhodesian Nationalism	9	6
Curriculum	8	3
British Influence	7	33
Infrastructure	7	25
Fees	7	4
Rewarding Experience	6	14
Reputation	4	38

Round 1 interviews. Figure 2 below shows the frequency counts for each code for both round 1 and 2 interviews.

Code Frequencies

Qualitative enquiry emphasises meanings and quality of data. The fact that an issue was mentioned more times than others during research does not necessarily render that particular issue more significant than those mentioned fewer times. Nevertheless, despite the fact that Round 1 and Round 2 interviews were coded separately, the frequency of prominent themes was almost similar. Thus, the following themes: ‘linkage with UK Universities’, ‘high educational standards’, ‘attraction and retention of eminent staff’, ‘multi-racialism’ and ‘Federation’ emerged as some of the prominent themes in both cases. This consistent outcome increases our confidence around the reliability of both the analytic process as well as the findings. Below, the researcher presents the category/theme of initial conditions in detail and illustrates with verbatim quotes.

Initial Conditions

The University was conceptualised within a context of several initial conditions, some of which had a significant bearing on the manner in which the institution continued to operate as it expanded. These conditions are discussed in turn below.

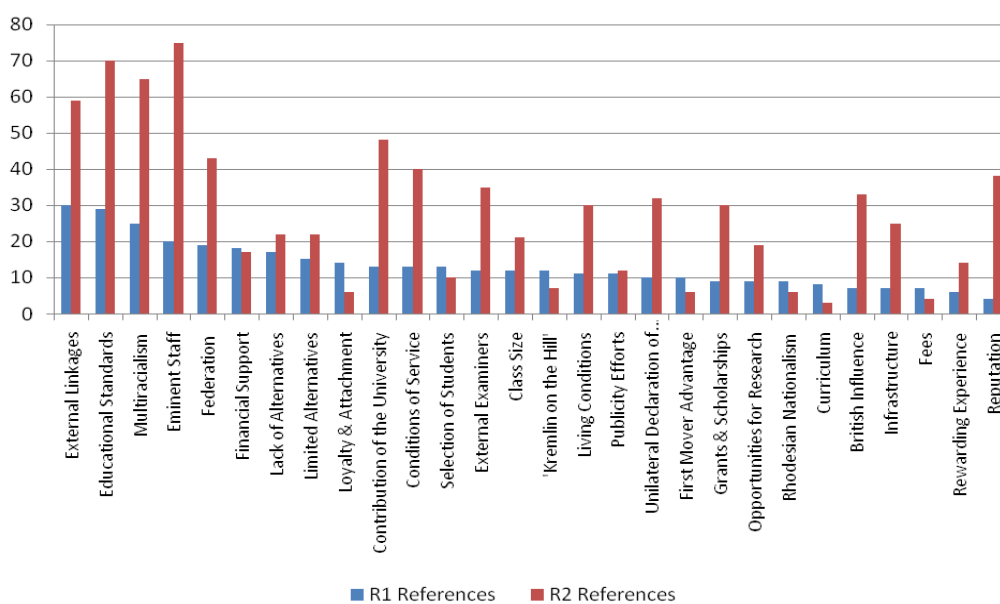
Federation

All interviewees felt that the establishment of the University was inextricably linked to the formation of the Federation of Southern Rhodesia, Northern Rhodesia and Nyasaland. The British Government wanted the Federation to succeed and so it helped the University to succeed. This provided foundational support for the UR to succeed. This evidence is consistent with Dopfer (1991)’s definition of an initial condition as constituting some sort of seed that grows by the self-generating dynamics of the process.

One participant had this to say,

I think that the founding of the Federation of Rhodesia and Nyasaland may have influenced the founding of the University. Students, after their

Figure 2: Frequency Counts for Each Code (Round 1 and Round 2)



This article can be downloaded from <http://www.ijmrbs.com/currentissue.php>

secondary school in the three territories, used to go to South Africa. I think very few went overseas. With the formation of the Federation, it was considered that an educational institution was necessary in the country (SCR2).

Another Participant Concurred:

The University College of Rhodesia and Nyasaland was established in order to address higher education needs of the three British colonies making up the Federation of Rhodesia and Nyasaland (ZRR1).

In fact, the Federation helped to give birth to the University. As one participant elaborated:

There was a sort of euphoria about the possibilities about this Federation in Central Africa. People put money in it. I think there were a lot of positive vibes going on about the Federation and that spilled over to the University (BRR2).

As a complex adaptive system, UR was sensitive to its environment and responded to this environment, co-evolving with it (Cunha & Cunha, 2006).

There was no University in the three countries and inevitably, one had to be established. "There was no University in the whole area so the motivation was that the Federation needed a University here" (WPR1).

In addition to addressing the higher education needs of the three countries, the University was also intended to churn out manpower. One participant said, "The main motivation for the establishment of the University College of Rhodesia and Nyasaland was to serve the Federation of Rhodesia and Nyasaland and to produce manpower for the region" (MCR1).

Others felt that the motivation for establishing the institution was philanthropic.

The key people were philanthropists but they were also very traditionally British, and so when I joined the University, the Chancellor was the Queen Mother and people who were the first students in this University used to be visited by Her Majesty. She would hold dinners in Swinton Hall. We saw a link forming between philanthropists and the head of the colonial vision, the monarchy itself (LBR1).

Unilateral Declaration of Independence

The Unilateral Declaration of Independence (UDI) was one of the founding conditions in the evolution of UR. It became a problem during the 1960s and 1970s when the University was seen as a place of dissent – an institution opposed to the Rhodesian Front Government. According to one participant, UDI was in 1965. Racism became more open. I was doing my 'A' [Advanced] level. In 1966 I was at the University and during the first month we were already throwing stones. There was rebellion at the University against UDI. That was the centre of resistance. Some White lecturers were not happy with this rebellion, so the racism in the classroom and outside intensified (MMR2).

One participant explained the unease at the institution during UDI.

There were a lot of well publicised incidents. Lecturers were arrested and some were deported. That is when the place started to have real problems. The place became more radical. I can remember as a student, I played hockey and we would go to hockey matches in the Salisbury [now Harare] region. People would refer to us as the 'Kremlin on the Hill'. And so there was political turmoil on the campus (BRR1).

UDI had a negative influence on the development of the University. According to one interviewee,

On the whole, UDI was basically a negative influence. Lots of people, both students and staff were on both extremes of the political spectrum. We had quite a lot of trouble there. Lots of students and staff left. It probably slowed down the development of the University quite significantly. However, in all fairness, the Rhodesian Front Government, although they were seen as being racist, continued to fund the University. They didn't stop it from being multi-racial. They didn't try to stop recruiting non-Whites (BCR2).

Another interviewee elucidated how students reacted to UDI and the state response to the demonstrations:

I arrived here just after deportations had taken place in the 1960s. In Africa Unity Square there were demonstrations. Professor Ranger was part of the demonstrators. One member of the Department of English was deported at that time. There were serious battles on campus. I remember Alsatian dogs and Rhodesian police being involved in door-by-door corridor chases inside the Faculty of Arts building and to their [current government] credit, since Independence we have never seen anything as monstrous as that (LBR1).

In a discussion of chaotic systems as part of initial conditions, Rosenhead (1998, p. 3) notes that "a small disturbance leads to a movement away from the starting point, which in turn generates further divergence". UDI was a seemingly chaotic event which created a paradigm shift in path dependency by causing UR to change course in its evolution.

Rhodesian Nationalism

Rhodesians built a University that was unique and peculiar to the Rhodesian situation, different from

South African Universities. This uniqueness gave the UR competitive advantage because Rhodesian students now attended University at UR rather than go to South African Universities. This allowed UR to compete at a regional level. Barney (1991, p. 102) said in this regard, "A firm has SCA when it is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors....".

A former lecturer said,

I think we have to remember that in 1923 Rhodesia almost became a sixth province of South Africa. But the Whites in Rhodesia said, "No, we have to be a distinct Rhodesian nation". In establishing the University, they wanted an institution which would be a mirror or reflection of British traditions as distinct from the South African tradition, which by 1948 was going for separate development, separate institutions and facilities (ZRR2).

Another Participant Echoed the Above Sentiments

You had settler nationalism going back to the referendum of 1923 in which Rhodesia had rejected becoming the sixth province of South Africa. Rhodesians were keen to divorce themselves from the political direction of South Africa. What better way than to invest in an educational institution which would be liberal (ZMR2).

British Influence

Discussions suggested that the British were significantly influential in pushing for the establishment of the University in line with their policy. One participant said, "It was the British Government's policy to set up University Colleges right across the continent" (HAR1).

Another participant said that the establishment of the University was a way of transitioning out of colonialism:

They [British] realised that the colonial empire was waning and couldn't survive and this was a transition, as I saw it, of trying to create what they would call a dominion, a bit like Australia and New Zealand, rather than having a colonial institution that the British no longer had the will, the power or money to sustain. So they wanted to get it off their hands, but politically, it had to be multi-racial because there was no way they could agree to a shade of dominion under minority rule (HAR2).

One interviewee felt that the establishment of the University was an extension of British philanthropic initiatives: *"The British authorities were trying to continue what the missionaries had started" (KGR1)*. The University greatly benefitted by being modelled along the British system.

The fact that both the administration of the University and its whole academic structure were modelled and determined in the British way had the advantage that the British academic system is a very strong one, and one which the quality of higher education is outstanding (BCR1).

The British influence was a source of competitive advantage for UR because UR benefitted from the advice, teaching materials, administrative practices, and financial assistance that were provided by Britain.

Another Interviewee Concurred:

One of the most important decisions was that the founding fathers had the foresight to know that Independence would come and they made this University subject to a Royal Charter, which meant that even the outrageous interference that was planned had to be tampered with. I was excited to watch the [current] Chairman of Council sitting

on the throne that was created for the Queen Mother. That's part of tradition. That's not colonialism. This institution has cherished traditions (LBR1).

The above findings are consistent with Teece, Pisano and Shuen (1997, p. 522)'s observation that, "...the current position of a firm is often shaped by the path it has travelled ... we cannot understand today's choices without tracing their evolution through time". Schwartz (2004) also argues that technologies and organizational formats do not exist isolated from their uses and users, and social programmes and institutions do not emerge accidentally.

Multi-Racialism

One of the reasons why the Federation had a strong influence on the University was so that the University would accommodate all races and especially Black students who were intelligent but poor, and who would otherwise not be able to get University education outside the Federation.

...the decision at its [University] establishment was that it would be multi-racial, and that was radical under the circumstances ... and that it therefore would be open to anybody specifically to Blacks. That really made it to be different at a time when in South Africa, which was a dominant influence, things were moving in the opposite direction (BCR1).

One participant gave credit to the advocates of the multi-racial experiment for being forward-looking in their thinking at the time.

I think to its credit the fact that it [the University] dared to make itself multi-racial at a time when things were really hard, when the Government couldn't even brook that kind of thing, let alone all the die-hards and the rules of the country... I think they were advanced in thought. When I look back

at what used to happen ... You struggled to come with your White friend in Salisbury [now Harare] and have a cup of tea. That kind of thing we were practising already at the University campus. I really give them credit for being pioneers. It was not perfect but they tried it and it worked (KSR1).

Another interviewee explained the main motivation for establishing a multi-racial University: "The main reason for establishing a multi-racial institution was that you could not have a Federal University that was segregated because there was already enough mistrust of the Federation among Black academics in Northern Rhodesia and Nyasaland" (RR2).

The multi-racial nature of the University contributed to the institution's uniqueness: *"The University was an oasis in a totally racist environment" (FJR1).* The institution's multi-racial nature meant that students of different races could learn together, share ideas and socialise, as revealed by a current lecturer,

I am sure there were some White students who had never sat at a table or next to somebody in the lecture theatre who is Black and had never had the opportunity to treat them as people... Black students had to realise that they could talk to White people and go through all the social adjustments, not necessarily the academic ones (PFR1).

Enduring competitive advantage entails disrupting what has been done in the past and creating a new future – what Schumpeter (1942) described as 'creative destruction', the essence of free market economies (Pascale, 1999).

Multi-racialism was crucial in the growth and development of the University. For example, it was able to attract academics and students of all races.

I think for quite a number of people, the fact that it was a distinctly multi-racial University was probably a very attractive pulling card (SJR1).

This also reinforced the concept of social capital (connections within and between social networks) as academics and students felt like one family. Above all, multi-racialism resulted in collaborative research endeavours which produced optimum results such as "revolutionary methods of controlling the tsetse-fly [which causes sleeping sickness]" (MCR1). The University leadership continued to defy all odds and promoted multi-racialism at the institution. As one former Vice-Chancellor revealed:

The leaders of this institution kept on saying that eventually we want to become a multi-racial institution in a society which didn't accept that initially. But they did not deviate... other Colleges and Universities in the region were not multi-racial. We kept on saying that was not our route (CGR1).

However, the promotion of multi-racialism brought about other challenges to the institution. Racism raised its ugly head in many places including the classroom. One participant had this to say about some of the consequences of the multi-racial experiment:

There was also the problem of racially motivated anti-social behaviour by extreme right-wing White students, especially beating up Black students at the Students' Union (SU) on Saturday nights. No Black male student would dare go to the toilet alone at the SU on such nights! (ZRR1).

Another Interviewee Concurred:

I joined the University in 1966 just after UDI. The number of Blacks on campus was very small. In fact, it was not even safe to move around campus

at night alone. You could get into serious trouble. We moved in threes and fours, sometimes with weapons, especially during the weekend. There were these White army guys who would come to campus to 'beat up a kaffir' for the fun of it (MMR2).

As if this was not enough,

The Land Apportionment Act prohibited Black students from staying in a White area, Mount Pleasant. Parliament had to debate the issue and pass enabling legislation. The halls of residence were segregated by race on campus. A problem arose about what to do with the only Black female student on campus (Sarah Chavunduka), who ended up staying alone in the corridor of a Black male residence before the White warden's family took her into their warden's residence (ZRR1).

Below, we allow the victim of the above incident to say what she felt about the incident:

There was Manfred Hodson Hall [hall of residence] for men, White men; Carr Saunders for Black men, but there were not that many Blacks, and then Swinton which was the ladies' hostel. Swinton was not even full because the University had just opened. The debate hadn't been concluded as to where I was going to stay in a land of apartheid and I was the only Black woman. There was the opinion that if the whole of Swinton is not full, "Why does she not go there?" It was a big issue. One journalist wrote that you can't have an African woman in a White women's hostel because you will find these African boys who will be coming and going all over the place. You get these exaggerated stories which just upset you (KSR1).

Another participant observed that,

There was a belief that Africans can't do Science, that Black people could not draw three

dimensional figures because their mental make-up was sub-standard. I wrote an essay as part of an assignment and I was awarded 25 marks out of 100. I didn't question it because I thought maybe that is what it was worth. When it came to the seminar and I participated in the discussions, the [White] lecturer challenged me whether I had written the essay. When I said, 'Yes'; she said, 'You have to convince me. I don't believe you wrote it because that is worth at least 95%' (MCR1).

Another interviewee had this to say about some of the effects of the multi-racial experiment,

In the classroom there were some lecturers who did not like the idea of a Black person asking a question. If you raised your hand, the lecturer would just ignore you. There was racism. Multi-racialism meant that as a Black person you could also go to University but not to integrate the races. It was very unsafe to be seen in the company of a White girl. Besides, there were very few Black lecturers at that time. It was all White (MMR2).

Another Interviewee Concurred:

When it came to writing assignments, the professors would invite White students to their homes, have an evening drink and a meal, and discuss the topics coming the following day. I only discovered this when we wrote our second assignment. I got a 'C' and I was wondering how I managed to perform so poorly when this White girl had a 'B'. She told me the whole story. You had this sinking feeling that it was not fair. The marks had to confirm that Blacks were not good enough (RR2).

Financial Support

Since the Federation was a significant factor behind the establishment of the University and

also since the University was the only institution serving the three countries, it received generous support from various stakeholders. Substantial support came from the Federal Government itself. "The Federal Government itself saw this [University] as an asset and they also supported [it] generously" (MCR1).

Yet another interviewee stated that,

Factors that made the UR unique included the fact that it was given moral and financial support by the British government than any of the other colonial institutions (ANR1).

Government funding was by far the University's lifeline: "Throughout its life the main source of funding for the University has been the state" (RRR2).

Support from the United Kingdom

Additional support came from the United Kingdom (UK).

It [the University] was well resourced. I am pretty sure that a great deal of resources was made available by the University of London and the Foreign and Commonwealth Office. That would have boosted its standing. There was a lot of external funding that came in for building facilities, etc. (SAR1).

This was Echoed by Another Interviewee:

One key decision I would mention is the role of the Inter-University Council in the UK, which was responsible for establishing links with, and really assisted, the University Colleges which were all associated initially with the University of London. It continued to support the new University College of Rhodesia and Nyasaland at the time of UDI and assisted by recruiting staff from the UK and internationally (BCR1).

Private Sector Support

Support was availed by several other local, regional and international stakeholders such as the municipality, charitable trusts as well as the private sector. A current lecturer revealed that,

Some firms and businesses started supporting the University. Take Faculties like Medicine and Engineering; they got private financial support. When we started the Commerce Faculty in the late 1970s, we got some support. Law got support from the legal profession (HAR1).

Yet another interviewee mentioned that,

Commerce and industry have always been supportive... Many of them provided scholarships and cadetships. Some of them pumped in money, like the Education building was paid for by Delta Corporation. So they put in money (ZMR2).

The various stakeholders were unwavering in their support such that even in the face of UDI-induced sanctions, the University continued to receive assistance: "Although there were problems in the Rhodesian regime in confronting sanctions and keeping the economy going, the University seemed to be well-funded throughout" (FJR1).

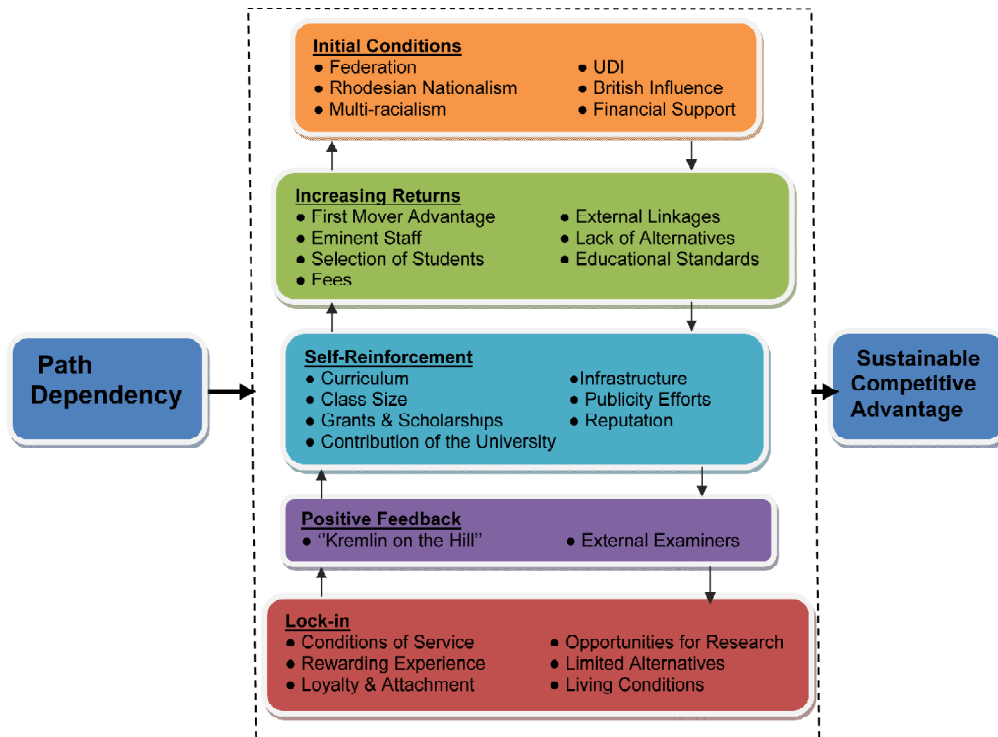
A summary of the findings was presented in Figure 3 below. It also outlines the working theory.

CONTRIBUTION OF THE STUDY

Conceptual Framework

The first important contribution of this study was the development of a robust conceptual framework (see Figure 3 above) which emerged from an empirical application of the concepts of RBV and path dependency. Evidence from the empirical analysis indicated the profound influence of initial conditions. Both the literature review and empirical data confirmed the influence of other elements

Figure 3: A Framework for Determining Path Dependency in the Evolution of the University of Rhodesia, 1945-1980



Source: Author (The arrows that link the five categories vertically explain the fact that the framework is self-reinforcing).

of path dependency, ie., increasing returns, self-reinforcement, positive feedback and lock-in. Based on the review of literature, the researcher realised that there was a missing link in the framework of path dependency. The research made an improvement on the existing framework by incorporating 'initial conditions' as a major determinant of the emergence of organizations. Initial conditions defined and shaped the contextual factors that influenced the development of the University. They were a key determinant in the evolution of the institution by setting the path and trajectory of the institution. This influence helped to improve our understanding of path dependency.

Levy (1994) argues that one of the enduring problems facing the field of strategic management is the lack of theoretical tools available to describe and predict the behaviour of firms and industries. The conceptual framework is a partial answer to that call.

EMPIRICAL EVIDENCE

Studies (Hermann, 2005; Fahy 2000; and Miller & Shamsie, 1996) criticise the RBV concept as being under-theorised and under-served empirically. Fahy (2000) and Hermann (2005) argue that contributions within the RBV have been of a conceptual rather than empirical nature and that many of the fundamental tenets still remain to be validated in the field. Miller and Shamsie

(1996, p. 521) suggest that, “There is need for more systematic empirical studies to examine the conceptual claims of the resource-based scholars”. This study was a response to the call for empirically testing the concept of path dependency by examining the evolution of UR between 1945 and 1980, in order to reveal the influence of initial conditions, one of the institution’s sources of competitive advantage.

Contribution to Management Theory and Practice

Although institutions like UR are important but under-researched, they have been one of the decisive factors in the economic and social growth of the Rhodesian/Zimbabwean economy and society. By applying path dependency, especially the influence of initial conditions, to the development of UR, this can help managers better distinguish, analyse and understand processes of institutional change. The application of path dependency can also help managers to improve their understanding of organizational transitions – especially of complex organizations operating in business environments characterised by high unpredictability and complexity.

LIMITATIONS OF THE STUDY

The data sampled in this study was drawn only from former students, current and former administrators and academics. This could have introduced some bias. Respondents drawn from a different sample could have come up with different themes. However, the study unpacked initial conditions as a source of competitive advantage in an institution in an emerging economy.

FURTHER RESEARCH

Other researchers can assess the resilience of

the founding conditions and patterns that shaped the development of UR in a post-colonial setting.

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