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Banking Swaziland's Un-banked

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Aknowledgement

At the end of an enduring incubation phase, this dissertation has finally seen the light of day. My sincere gratitude goes to my mother Ivy R. Thring and brother Hogan M. Thring for their unfailing support, and willingness to urge me on and see me through.

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It is to all of you that I dedicate this work.

Yours sincerely

Kevin C. Thring

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CHAPTER 1

INTRODUCTION

The attention of information, communications, and technology (ICT) designers, developers, implementers, consultants, and venture capitalists, in the banking arena, has been focused on the corporate sector and on the commercial and corporate applications of ICT. Banking technology usage such as those by lower-income communities, have been marginalised and largely left unattended.

During the past five years, activities, behaviours, and attitudes of the financial services industry increased, in favour of the under-serviced mass market. Global growth of electronic payment banking systems and usage has brought about a considerable amount of technological advancement. The low-income market has become a subject of interest by ICT solution providers, banks and credit-offering incumbents[1], academics, government, and alternative non-banks and non-governmental organisations (NGO's). Despite the global increase in interest and technology usage, the inability to act on the augment, within the borders of Swaziland, is the primal focus of this research.

Swaziland's mass market can be transformed and banked through the proper deplo yment of ICTs. The ability to bank the un-banked, in viewing ICT as the enabler of the small society along with its various communities; those excluded because of cultural and educational restrictions; physical location and low income constraints; the disabled *etc.*, can be achieved. This dissertation investigates and analyses the present situation of banking in Swaziland, the related entities involved, and attempts to formulate an appropriate strategy for the successful implementation of a suitable banking solution in the Swazi context. This includes the recognition that access, to any ICT, in itself is insufficient, and illustrates, through the use of community informatics (CI), systems theory, change management theory, and the essential pre-study towards the utilisation of ICT deployed on a grand scale.

[1] Micro-lending services have recently been legalised in Swaziland but h ave been the dominant method of money acquisition, by the mass market, due to the ease of *Access.*

A BUILD ON RESEARCH CONDUCTED IN 2003

At the beginning of 2003, research regarding the development of underdeveloped communities and banking the un-banked, through the use of ICT, seemed the dominant paradigm to follow in order to address Swaziland's disturbing statistic – only 12% of the working population[2] hold bank accounts (Central Bank, 2002). The 2003 dissertation, titled, "Identification of feasible technology to send and receive money to and from un-banked countries with *small* population clusters" (Thring, 2003), questioned the current banking system with regards to the portion of society that is overlooked by the advancement of technology, and the banking system as a whole. An analysis of Swaziland's existing banking system was conducted and is revisited in Chapter 2 of this dissertation, so as to ascertain its strengths and weaknesses, proposing a viable technological method of banking the un-banked segment of society. Initially this view lacked insight into the inherent cognitive change elements and forces possessed by each individual within the society, and did not consider the existing socially constructed institutions.

A general and broad assessment of the Swaziland's demographics, information, communication and technological (ICT) infrastructure, and the nation's basic forms of income was undertaken for the research conducted in 2003, to determine the requirements that an improved banking system would have to address, in order to make the system work for the un-banked. I have now established that more needs to be done in the line of defining 'who the un-banked are?' Through time and urbanisation, the definition of the indigenous Swazi has been blurred and, for a country that thrives on culture and a sense of belonging, a thorough definition of the portion of society, being targeted, is required. In defining the predetermined mass market, which in 2003, represented 78% of the nation's population (Central Bank, 2002); solutions could be developed and deployed according to 'their'[3] requirements. A citing from Introna (1996), of Adam Smith (1942), best describes issues that were not addressed, regarding the smart card banking system proposed in 2003

[2] The working population refer to the formally employed – out of the formally employed, 88% chose not to utilise the available banking facilities.

[3] The focus has to be on the people. Getting the technology to work for the people entails a considerable amount of knowledge acquisition about the people.

(described in Chapter 5) and suggests the areas that need to be tackled in order for the system to be a success:

> *The man of system … seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chessboard. He does not consider that the pieces upon the chessboard have no other principle of motion besides that which the hand impresses upon them; but that, in the great chessboard of human society, every single piece has a principle motion of its own, altogether different from that which the legislature might choose to impress upon it. (Adam Smith, 1942)*

Understanding the people and their needs is the key to proposing a solution that makes the financial market work for the poor, distinctively, Swaziland's culture, and creating this understanding, is what forms part of this research. This is where the direct correlation lies – more clarity on the routines, activities and interaction of the Swazi people, along with the respective systems mentioned above, will lead to an increase in quality of the solutions that could be designed to suit the daily life styles of the targeted group.

In the earlier search for a complete technological solution that would be the answer to banking Swaziland's un-banked, a series of implementation setbacks surfaced that were not completely understood then, and form the core of this dissertation – all relating to the user (variously known as the mass market, the under serviced community, lower income earners). Analysed for the purpose of this dissertation were surveys conducted by Genesis Analytics (2005) and Finscope (2004), and form the basis of getting to know the un-banked along with the negative impact they have on a country's social system. For example, approximately 70% of the Swaziland's population have never had a personal bank account (Genesis, 2005). Such statistics, confirmed by Swaziland's Central Bank (2002) and Aplitec, South Africa's leading solution provider in Smart Card Technologies, are common in many countries throughout Africa and are mainly a result of costs incurred by financial institutions when attempting to service the so-called mass market or low income earners.

Information Technology managers of Swaziland's two largest banks, namely Standard Bank Swaziland and the Swaziland Development Bank, both advise that such costs are high due to a variety of reasons, the main ones being:

- ü High overheads involved in servicing such markets
- ü High illiteracy levels within such markets
- ü Reluctance to use technology
- ü Lack of feasible means to uniquely identify individuals within the mass market
- ü Unstable incomes of individuals
- ü Poor ways of tracking and locating the whereabouts of such individuals with regards to employment or places of residence
- ü Low transaction volumes per individual and lack of high revenue generating products per individual (making it not worthwhile for financial institutes to service this market)

(Thring, 2003)

Several technological solutions have been implemented in various parts of the world to overcome these issues, however each of these require expensive equipment whose implementation and running costs may only be recovered in areas of large populations and/or large transaction volumes. Countries such as Swaziland, who do not have such large populations, require more social and economically viable ways to receive money from, or pay moneys to their un-banked population and are therefore still subject to the problems resulting from this.

Such problems include:

- ü Long queues at banks to facilitate cash payments of School Fees, and Pensions
- ü Time consuming and labour intensive processing of payments by employers and financial institutes
- ü High risks of robbery on individuals from receiving payments through queuing
- ü Substantial time spent by employees off work in order to receive wages or to perform transactions such as School Fees payments
- ü On-site cash wage payments by employers, often resulting in robberies of substantial amounts

(Thring, 2003)

Finding a financial solution that works for the mass market has impacted the strategies of all four major banks in Swaziland and will continue to do so until an acceptable level of usage is obtained.

PROBLEM STATEMENT

The underutilisation of the banking system causes concern regarding the mass market. These sections of society have been excluded from a broad range of financial services and as a result have remained the stagnant portion of the country's economy. The Swazi Government together with the four major banks have no viable method of financially serving the lower income earners within the country's borders. This reaches beyond the unfit working population (pensioners, orphans, the disabled), and represents 70% Swaziland's population. The complex banking systems in place have not managed to reach and penetrate the lower-income earners and the presentation of the smartcard solution - adopted from Aplitec (2002) - proposed in the research conducted in 2003, would not act as a sufficient strategy to banking Swaziland's un-banked.

RESEARCH QUESTION

ü How do we Bank Swaziland's Un-banked?

This research question reflects the belief that there is a potentially infallible undiscovered method of bringing the un-banked community into the technological financial market. Getting the Swazi society to adopt and use ICTs, which would strongly benefit their banking condition, is where the trouble lies. In order to answer the question, a thorough analysis on why the un-banked have remained that way is in order, followed by a definition of who they are and finally proposing a viable method of banking the un-banked

SECONDARY RESEARCH QUESTIONS

- Who are the un-banked?
- Who are the role players that would influence the behavioural change of the un-banked?
- Why do they need to be banked?
- Which parties benefit from having these communities banked?
- How can technology work for the indigenous Swazi?

METHODOLOGY

The context and problem presented in this dissertation is constructed with varying combinations of primary and secondary data sources. The methods employed include the study of each of the four major banks in Swaziland, the Central Bank of Swaziland, the role of the Swaziland Government, other micro-lending and credit offering incumbents, and the relevant initiatives that were set up in the aid of servicing and catering to the mass markets' banking needs. The study includes the analyses of documentation available from each of the organisations involved, structured and unstructured interviews, informal discourse with people involved in the banking industry and living in the conditions presented, relevant published material, and four years of observation and surveillance that arose from being immersed in the situation as a prospective activist.

ICT has the potential to link distributed under-serviced communities into the grander forms of society, and as the national social system is transformed with ICT, these overlooked communities should evolve and adapt in response. According to Gurstein (2003), Community Informatics (CI) is concerned with these processes of disregarded communities transforming and adapting into the mainstream social system. CI will be used to addresses this process of transformation through a systematic concern of all entities involved, that would bring about the smooth adoption of the proposed (refer to Chapter 5) banking system. In answering the 'who' section of the research question; material regarding influential shareholders such as related articles, internet searches, news paper clippings, annual reports and academic workings based on cultural studies, political science, and urban studies will be utilised so as to gain a broader understanding.

In a challenge to discuss the 'why' portion of the research question; information concerning, the need for social development through the use of ICT, the link between the banking industry and the under banked portion of society, the Swaziland government, empirical and factual societal information, and formulate a suitable strategy from the existing literature reviews of the global initiatives, an Interpretivist ethnographic path is predictable. Ethnography is the process of describing a culture or way of life from a cultural point of view and is needed to enhance the CI perspective and analyse the country's society. By spending a considerable amount of time with the people involved in Swaziland's banking industry and those whom are subjected to the governmental style of rule, establishing a truthful definition of Swaziland's un-banked will be achieved.

Most social systems are complex and becoming increasingly more so. The problems and challenges facing Swaziland's un-banked do not exist in isolation interrelate with one another. The detailed analysis of the un-banked society can only reach its goals, once we look beyond the single individual systems and transcend towards the broader perspective; compounding the individual issues and viewing them as a coherent whole. Realising the interrelationships between the respective individual systems requires the application of different perspectives and with this said *Systems Thinking* will be used to help illustrate the identified causes of the un-banked community.

And finally, the use of Theoretical underpinnings provided by Penelope Hawkins (2005), based on the Access Standards affluent, to the under serviced market, will be used in the prescription of a viable way forward. The un-banked community's view of the major banking sector needs to be addressed, and the individual perceptions of financial markets, need to be changed.

OUTLINE OF CHAPTERS

Chapter 1: Introduction
Chapter 2: Literature Survey
Chapter 3: Methodology
Chapter 4: Data Analysis
Chapter 5: Conclusion

EXPECTED CONTRIBUTION TO KNOWLEDGE

With regards to the contribution to knowledge in informatics, the literature survey reveals that research conducted on the under-serviced areas in the Swazi society, is minimal, implying that the proposed topic should contribute towards the advancement of human knowledge with the input of new information. With the current situation regarding communication infrastructure in the country, the proposed article will act as a voice for the silenced voices in Swaziland.

The underutilisation of the banking system causes concern regarding the mass market, presenting opportunistic specialists with the chance to aid in the future advancement of technological innovation in Swaziland. The migration towards this evolution poses new challenges for IT specialists and the like, to refine existing products (for complete list of products, view Appendix B), making them suitable to the presented environment.

The grand intentions of the final dissertation would be to provide usable information to opportunists, looking to cater for the untouched market and to interested parties in the international arena; with a documented assessment of the un-banked population, from an Interpretivist perspective, of the occurrences and possibilities within the nation. Getting more people informed on the matter could be seen as a viable starting point to the change of the society's banking status.

SHORTCOMINGS IN THE RESEARCH

Documentation regarding the workings and involvement of the Tinkhundla system is limited and this was confirmed by a search at the Public Library of Swaziland. An understanding of the system could only, vaguely, be obtained through interviews general discourse from reliable sources. The underlying morals of the trust-based system involve knowledge from the specified community and are not formally documented.

The Swaziland National Development Strategy, *"Vision for 2022"*, did not have a banking plan for the financially under serviced areas, and more focus on this would have been of much assistance.

DEFINITIONS OF KEY TERMS AND CONCEPTS

- ***Inkhundla**:* The SiSwati word for a traditional meeting place.

- ***Tinkhundla***: The plural of Inkhundla, Traditional meeting places.

- ***The Un-banked***: This portion of society relates to the mass market, lower-income earners, and the people that reside in financially under serviced areas.

- ***The "Grey Area":*** caused by the un-banked – the loss of money through its life-cycle stems from the high person-person cash transactions experienced in the country. The untraceable circulation of money forms the "Grey Area", and brings about with it no formal explanation of where the money is.

- ***Smart Cards:*** Any plastic card (like a credit card) with an embedded integrated circuit for storing information. You could store electronic money on the card or less valuable tokens such as those given away by petrol companies which you collect to exchange for free gifts at a later date. The idea being that one smart card is easier to carry around than a multitude of paper tokens.

- ***Micro- Payments:*** A micro-payment is defined as a low cost transaction (typically ranging from a few cents up to 10 Euro), for a digital or physical item bought via or downloaded/recorded onto a mobile device and/or its components and paid in a cash equivalent, e.g. a prepaid phone account, stored value account or phone bill.

- ***Electronic Payment:*** Automatic withdrawal of payments such as bill payments and other preauthorized debits to an account. Electronic Payments do not include ATM transactions and Point-of Sale transactions.

CONCLUSION

Although Swaziland has made substantial progress with the attempts made to bank the un-banked over the past few years, dramatic changes need to take place in order to get the underdeveloped society involved in the economy. This problematic area remains stagnant, as changes in technology, along with globalisation seem to bypass them and render them non-existent.

Within the borders of Swaziland, on a microeconomic level, numerous schemes and initiatives are trying to compensate where banks are lacking, and some of them have been extremely innovative, with the most significant illustrated and analysed. Despite the plausible efforts, there still remains a great deal of duplication and fragmentation.

Post 2003, the banks still have no incentive to serve the lower income society and are discouraged from doing so by their basic business objectives, sustaining a profitable entity. The lack of documented information and data pertaining to the under-banked sectors significantly decreases the sustainable growth factor and addressing the various issues mentioned could act as a stimulus for growth and beyond.

CHAPTER 2: LITERATURE REVIEW

PART I: COMMUNITY INFORMATICS

INTRODUCTION

Community Informatics relates to the appropriate application of ICT to facilitate a community's way of life. According to Gurstein (2007), "the objective of Community Informatics (CI) is to use ICT to enable the achievement of community objectives including overcoming "digital divides" both within and between communities". The uses of CI persist to go beyond the digital divide barrier to analyse "…how and under what conditions ICT can be made usable and useful to the range of excluded populations and communities…", (Gurstein, 2007) in support of communal development.

CI has emerged as the framework for systematically approaching Information Systems (IS) from a communal perspective. As Gurstein (2007) analysed, CI is based on the assumption that geographic communities have characteristics, requirements, and opportunities that require different strategies for ICT intervention and development from the widely accepted, implied models of individual or in-home computer/internet access and use. CI also addresses the concern for ICT use in Developing countries as well as among the poor, the marginalised, and the elderly, along with those living in remote locations without access to basic financial services.

INDIVIDUALISM

Individualism through the use of CI is not overlooked, and viewing the individual being part of a larger social system or community, brings forth a notion that the individual has no identity without the presence of the immersed communal network. According to

Wellman *et al*. (1999), the definition of an individual within a specific community relate to – "the manners in which that individual identity may perform actions within that network (community) are directly a function of the centrally determined and prescribed standards and regulations of that social system", *i.e.* the code or culture of that community determines, to a large extent, the outcome and mannerism of the individual.

Conforming to a social system enables the individual to control his/her internal characteristics, but only within the guidelines exacerbated by the social system, of which the individual has no control or direct influence over. Ignoring these boundaries involves the risk of being de-linked from the community, thus rebellious. Gurstein (2007), further states that "communities are regarded as phenomena secondary to individuals, corporations, organisations or groups", and not seen as being isolated. One makes up the other, and all are non-existent without the presence of the other.

THE LINK BETWEEN CI AND ICT RESEARCH

Based on the assumption that CI and ICT are a source of social and internal power, and the having access to ICT, coupled with proper usage of the implemented ICT, this produced power is redistributed throughout and within society over time. "Community Informatics at its core is thus about power and how power is distributed in society", (Gurstein, 2007). It should also be noted that in the context of Banking Swaziland's un-banked, the capacity to organize or resist within the network is in itself a characteristic determined and by the present social culture.

Research from a CI perspective is holistic in the sense that, it takes into account the detail regarding the social context in which CI systems are to be implemented. This differs to Management Information Systems research where these assumptions are implicit and the assumed findings are considered universal and context sovereign. With CI research, the goals of the outcome relate to the complexities responding to the emergent needs of the specific community, along with the continuity and sustainability of that community. This goes beyond organisational or MIS research where goals are relatively straightforward *i.e.* gaining competitive advantage, profit maximisation, and increasing efficiency and

effectiveness. The goals of CI include the various components required to warrant sustainable continuity of the specified community, which the system is developed for.

This kind of holistic research approach requires the attainment of a deeper understanding of, and valid insight to the grander social and technical environment that the banking system is introduced. According to Gurstein (2007), this follows "from the nature that CI is primarily 'practise' i.e. outcome driven, rather than methods or theory driven.

One notion derived from this kind of research, is finding the champion or owner of such a project – who would take ownership of change at this level? The classic forms of IS are organisational based, thus the owner is the organisation. In the case of banking the un-banked, government would not want ownership – it is not in their operational capacity as yet – banks are not looking to take on the cumbersome burden of deal with the mass market due to non-profit related realities. Gurstein's (2007) point of view, is that a "communal project should consist of a dispersed or democratic consensus driven operative agent". This would entail a group of organisations or individuals linked by one common goal and expected outcome, and this paper focuses on revealing who these players can be.

THE COMMUNITY INFORMATICS FRAMEWORK

Based on the assumption that CI provides a different set of research principles and processes as opposed to MIS research, a CI framework compiled by Gurstein (2007), is summarised below for later reference in Chapter 4: Data Analysis.

1. Inputs

Traditional MIS research aims to add to knowledge areas consisting of the improvement of profitability and efficiency of a presented organisation. In CI research the primal focus and input revolves around the social system or community in context of the proposed system – "who the users are, what they need, what skills they bring (or do not bring) to the use of proposed system" (Gurstein, 2007). The proposed system is then designed and implemented primarily around these requirements for the intended users, and secondarily, the intended processes that need support.

2. System goals

According to Gurstein (2007), the local environment is everything in CI. A system implemented from this perspective acts to enable the local community, as opposed to the global environment in which they exist.

3. Process

CI was designed to favour the local and underprivileged in a collaborative move towards bettering the underprivileged situation, as opposed to the competitive elements displayed in the economic markets of this century.

4. Outputs

The service outputs of a CI project are strongly determined by the adoption of the implemented IT solution; the views of the stakeholders and the value add to the community. The aim here is to find solutions concerned with the enhancement of the communal individual's daily life by finding suitable, meaningful and significant tools to aid this, as opposed to breaking down the barriers of the digital divide and lessening the gap. Empowering and enabling the mass market and responding to their needs is where the primal focus lies.

5. Contextual factors

As mentioned above, the social setting or context drives the differences in the outputs, processes and inputs. Setting the context allows the researcher to respond to the desires and willingness of the intended users, ultimately, delivering a system that caters to their requirements.

CONCLUSION

The role and aim of CI research is to have (within the environmental context and that of ICT) documented areas of resistance and conflict. The ultimate test in this kind research is not based on the outcome of the theory in itself, but finding the appropriate fit of technology for the intended community. As the technology evolves, so does the community, and vice-versa – an attempt to gain synergy from these evolutionary processes is what the remainder of this article focuses on.

PART II: DEALING WITH SOCIAL CHANGE

INTRODUCTION

In defining change in a society, links between the individual, the social system, accompanying social movements, power balances, and information diffusion, need to be recognised. The expression “information is power” brings about numerous implicit assumptions about information itself, and forms the first basis of this part of the literature review. The structure of this section will commence with an analysis of how information established this position, followed by the role communicative technologies have played and how they have and tend to change peoples lives over time, presenting some of the changes introduced. The section then looks at the influence that Information and Communication Technology has had on social change, through the use of the evolution theories of organisations (social systems) and of change.

ICT TO BETTER THE LIVES OF A SOCIAL SYSTEM

Social systems evolving in today’s world are constantly collecting, gaining and transferring social data, and processing it into ‘usable’ developing information, to help better their lives. One of the underlying implicit assumptions is that the social systems

would not develop if this information was not passed on from generation to generation. Social systems have been in existence long before the, recently termed, information revolution, which has been estimated by Drucker (Unknown), to have commenced in the 1950's.

The survival of a social system in the current global information age is strongly dependant on the communication and usage of information. Bearing in mind that the information required for a social systems survival, would slightly differ from system to system, the access to, transfer of, and correct usage of the required information would present the social system with the necessary decision making ability to allow a smooth developing evolutionary process, with cutting edge technology at the forefront.

Having information grants leverage to those with possession, and would result in a lagging scenario to those societies without. According to Cosijn *et al.* (2006), in order to gain the most out of information, one requires 'the ability to know when information is needed, to have access and be able to locate the information, to evaluate the information, and to use the information that has been obtained.' These characteristics could be utilised as the basis to gaining power through the use of information and at this stage, rethinking the expression "information is power", would be commendable.

One other implicit assumption, "merely having access to information leads to a desired leverage in society" (Thring, 2003) was proved untrue. As many of the multipurpose community centres (MPCC) that have been set up (in and around South Africa) are now facing - access alone, to technological information portals, is insufficient. For information to be power, timely and proper usage of the information would need to be considered a prerequisite.

THE ROLE OF COMMUNICATION TECHNOLOGY

Communication Technology has vastly increased the availability and accessibility of information as a whole. The rapid evolution of the technological realm has changed the way entire societies, along with their embedded social systems, think, operate and

ultimately communicate, or transfer knowledge. According to Drucker (Unknown), for the past fifty years within the information revolution, information technologists have centred on the "T" in "IT", this referring to the data *i.e.* the transmission, collection, storage, presentation, and analysis: and are only now beginning to realise the meaning and importance of the "I" or the actual information.

There is no doubt that technologies have become easier to use and Katz (2002) suggests that this is through a 'combination of breakthroughs in both hardware and software engineering'. A clear example comes to mind with the increased use of web enabled student content.

Seven years ago – envisioning universities as social organisations - the thought of all student course material placed on the web seemed mythical. Tangibility formed the basis of student-lecturer interaction and the essence of knowledge creation in general. Nowadays (2006), the relationship between Information and Communication Technology is one of mutual dependence; the Communication Technology being the tool that transfers or conveys knowledge in the form of information. These changes, along with many others will be viewed in the following section through the use of Van Tonders (2004) compilation of the evolution of organisational theories.

HOW ICT CAN INFLUENCE CHANGE

The term 'change' is one of which very little consensus has been reached. According to Van Tonder (2004), we struggle to identify a 'coherent and integrated view of change in and within [societal social] systems, as the way we describe the [society] will influence the way we see and describe change within this society' (Van Tonder, 2004). For the purpose of this section, the term organisation is seen as a collective social body, living together in accord and trying to achieve similar evolutionary growth patterns. Views from the four evolutionary schools of thought will be used as lenses on how social systems can be viewed, and how ICT would have influenced change in these different scenarios.

Many commentators acknowledge that Information, Communications and Technology (ICT), has long been associated with both the enhancement of skills and the deskilling of work. The impacts and dynamics that have stemmed from the information revolution through the assistance of ICT have brought about large scale changes that involve the adaptation of societies to their subsequent condition, and in some instances, created new societies all together.

According to Van Tonder (p16, 2004), "successive waves of innovation" have given form to the evolution of change, together with the different emerging schools of thought. Each of the distinct schools of thought illustrates a particular view of social systems. These selected theories have resulted from reactions to the inadequacies of preceding theories and are, in sequential format; the Classical Theorists, Human Relations Movement, Structural Analysts, and the Contemporary Theorists. Each one of these will be used as a lens to viewing how ICT has influenced change in these differing scenarios.

Classical Theories

The Classical Theorists comprised of thought from the schools of Scientific Management, Taylorism, and Max Webber's Bureaucratic school, and labelled social systems as a machine (Van Tonder, p.16, 2004). The perception of a social body as a machine stems from the functionalist tradition and based on that, the viewpoint adopts the characteristics of the functionalist paradigm *i.e.* 'rationality, linearity, and that change is planned and manageable' (Van Tonder, p.49, 2004).

Gathered from this theory, focus on the technological component, as the driver for societal change, would dominate. Through the use of ICT, repetitive operations and tedious calculations would be handled efficiently and effectively. And in this social setting, ICT would act as the change agent, change initiator, and the determinant of change success. The modernist method of thinking places the technology before the individual in which the individual in the social body can be replaced, but the role of IT cannot be overstated.

The influence of ICT on this social change perspective implies that the changes introduced are 'manageable, rational, planned and linear'. This notion would apply to Van Tonders

(2004) *Type I* change, within an organisational setting, which exudes incremental or sequential change that evolves over an extended period of time. A fair amount of control over the entire social system would be required for this arrangement to achieve its goals.

It must be mentioned, that contextualisation is imperative for the undertaking of such an endeavour. What is the social system trying to achieve through the use of ICT? In search for this answer, Drucker (Unknown) provides a creditable solution that centres on "the creation of value and wealth". Through the creation of value and wealth, the complex human component would inevitably be added to the theory and this is where the Classical Theorists fell short, and were sidelined by the Human Relations Movement, analysed below.

Human Relations Movement

The Human Relations Movement came about through contributions from mainly Maslow, Lewin, Herzburg and others (cited in: Van Tonder, p.16, 2004). They questioned and altered the focus of the dehumanized mechanical concept of social bodies adopting technology, to one that recognises the importance of dealing with the social needs of the individual, through interactive communal practices and the power of characterised leadership.

The influence of ICT in this social setting would be one where the role of IT would have been demoted – in comparison to the previous school of thought. People come first and IT is there as a tool to assist the role of the people within the social system. ICT would not act as the driver for change initiatives, nor would it be the determinant of change success – the success of the innovative system or change initiative would be determined by user adoption, usage and acceptance.

In this movement, entire social systems were viewed as evolving social communities, and the belief they had was that "any change is achievable subject to the social collective sanctioning the change" (Raab, 2001).

Structural Analysts

Attempting to place any form of structure to any society would be a daunting task, but actually achieving the desired results through the use of ICT, is one learned through trial and error, and is challenged through this article. Structural analysis theory revolves around theories, which emphasize the significance of the environment in which a social system is embedded. The main argument is that "there is no single best way to structuring…" social systems (Van Tonder, 2004) as the two theories above would have us believe. When using structural analysis, more focus and emphasis is placed on the interdependencies of the social system and its environment - resulting in a stronger understanding (or a deeper search) and creation of 'meaning' between the relationship of IT and people, from the use of technological social tools, to the power struggles faced and the conflict and challenges that arise, from the introduction of IT.

In describing the influence ICT would have on change within this social setting, an extract from Van Tonder (2004) helps enhance how this perspective is viewed:

> *Change in or within {*social systems*} from this perspective is essentially "adaptive" in nature, as it is concerned with matching, "fitting" or aligning {*social*} structure and complexity with that required by the operating environment.*

(Van Tonder, p.49, 2004)

The influence that ICT would have in this era would be paramount to the decision making process. Information and the Communicative Technologies or information systems would play a huge role in the gaining of a holistic view of the social system, along with the larger environment in which it is embedded, and in which it must adapt for survival purposes.

The Contemporary Theorists

This can be described as the period of, as Raab, J. (2001) puts it, 'paradigm proliferation' in the theory of organisation social systems. The Contemporary Theorists focussed on what is now termed the 'post-modernist way of thinking'. They placed the emphasis on the roles of different aspects of social systems; and looked at components such as symbolism, chaos and complexity, social identity, conflict, action and most of all culture.

The influence that ICT has amongst societies revolves around that of the liberation of information. The 'merge' of ICT in to the everyday lives of individuals, the communal setting, as well as the larger societal and global environment is acknowledged. This entails the diffusion of authority, for access to information, which is shared throughout the system. The ICT influence creates a change-prone social system, through the numerous system changes that individuals need to adapt to, in turn, making reaction to change a societal norm.

The basic premise is that social systems need to "adapt to increasing complexity and have to contend with competition" (Raab, 2001).

CONCLUSION

In discussing the influence ICT would have on change in these different schools of thought, it was discovered that, the Classical Theorists place the technology before the individual in which the individual can be replaced, but the role of IT cannot be overstated. In the Human Relations Movement people come first and IT is there as a tool to assist the role of the people in achieving their goals. With the Structural Analysts Theory, the view of ICT playing a major role in the daily existence of the social system is evident. And with the Contemporary Analysts the 'merge' between ICT and people is strongly acknowledged, and changes feed off each other allowing for the smoother, and natural evolutionary process of adoption to take place.

The influence of ICT on a national and global level will continue to play a major part in social change, and the outcome of this will result in continuous social definition and redefinition. The abundance of Information available, through the use of Communication Technology will call for more refined uses of information and technology through the ever increasing power of communication technologies, to leverage organisational competitiveness, and ultimately to create social value and wealth.

CHANGE AT THE INDIVIDUAL LEVEL

When dealing with social change, the key focal point should be the people affected by the changes introduced. The underlying assumption of this part of the literature review is that change is natural, but due to the nature of the human being, it should be seen as unpredictable and illogical.

Social systems or communities do not have meaning without the individuals running their personal daily operations, making decisions (at all levels), and striving for personal growth. In order to deal with change effectively, 'the change initiative must involve the individual to the extent that he/she internalises and accepts change' (Van Tonder, 2004), and ultimately supports the efforts to facilitate the larger desired social outcome. This portion of the document centres on the changes that social systems along with its individuals go through during the conduct or implementation of Information, Communications and Technological (ICT) change. The introduction of a new technological banking system or information system is ultimately conducted by people and delivered for the people.

Changes introduced at the communal level – be it an organisation or company - through the introduction of ICT, may involve technological changes, process changes, and/or information system changes, and, according to Van Tonder (2004) can be of both *Type I* and *Type II* change, but acknowledgement must be given to the grey area in between these change types.

When dealing with change at the people or individual level, cognitive and affective changes are of primary concern (Van Tonder, 2004). These are viewed as the micro-level change processes within the process of interpersonal change (Raab, 2001). The following section analyses how communal or social change at these individual levels takes place.

CLARITY ON ICT

In order to analyse the societal change, in terms of the people involved, brought about by the introduction of ICT, deeper insight to the boundaries of ICT are required and will be discussed in this section.

First and foremost, the usage of ICT brings about automation. According to Forsbak, (Unknown) ICT can be used for, "*automation* of production in order to obtain rationalisation, standardisation and improvement of safety… and *Informatisation*." On the automation aspect, the separation of work tasks are translated into software modules and routinely processed. The process of automated work processes removes the employee from physically processing and calculating, for example, balance sheets, and lessens the workload through the processing of the IT processor. From Forsbak's (Unknown) analysis *Informatisation* revolves around the technological capability to "…produce new pieces of information." In a SAP system, for example, slotting in the right information at the presented prompts is the 'workload' and the processing of the balance sheet is done by the enterprise management system.

"ICT is gradually becoming a technique of the culture – in line with arithmetic, reading and writing." (Forsbak, Unknown). In this light the merger of ICT into the human lifestyle is stipulated. Reading, writing and arithmetic had become prerequisites to societal survival. The ever increasing use of ICT has watched a shift from a 'nice to have' tool or product, to that of 'need' status.

Today's society sets the platform for knowledge creation. ICT improves this, through the use of enhanced internal and external communicative networks. Innovation is crucial in the societal context, and coming up with innovative ideas involves communicating and bringing those ideas to life, and this is where ICT tends to play an important role. According to Nonaka's (cited from Forsbak, Unknown), "the creation of new knowledge takes place in a process where tacit and explicit knowledge interacts". The social system provides the base for this interaction and knowledge exchange to take place, and this is

done through communal gatherings (large or small) or through the electronic media presented through ICT.

One of the major challenges with regards to societal change, post ICT implementation would be to gain the maximum coherence between the technologies presented and the societal requirements.

ICT has the power to immensely affect the interaction of day-to-day living, both intentionally and unintentionally, and contains the prospect of enhancing and initiating development within the society, and this will be looked at and analysed in the Chapter 4 of this writing.

ORGANISATIONAL CHANGE: A SWAZI CASE ANALYSIS

According to Van Tonder (2004, p130), "organisational change unfolds as a process brought on by interventions in the work-setting variable or the organisation's vision, which will prompt cognitive change at the individual level, which in turn will lead to individual behavioural change, followed by modified organisational functioning and performance." In a search for totality, in terms of a general explanation, an analysis of Figure 1.1, will aid in enhancing the comprehension of organisational change, from a holistic point of view, with the changes that SwaziBank went through from the year 2000.

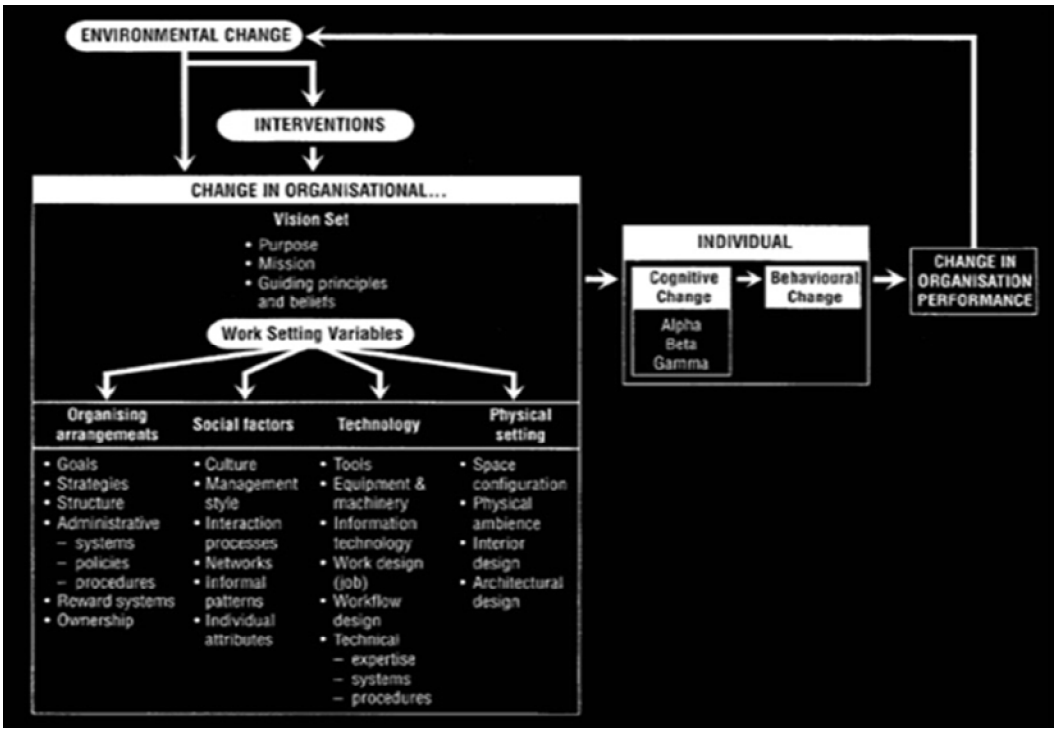


Figure 2.1: Van Tonder (2004: p.130), Vision and Work setting Change

Using Figure 2.1 to illustrate an instance of change will help contextualise a specific change instance, which in this case would be the response to the introduction of new ICT, into (what was then) a lagging bank in Swaziland – Swaziland's Bank Ltd.

Swaziland's Bank Ltd. is Swaziland's oldest running bank and their prime focus was lending monies to clients with development potential. With the liberalisation of the banking industry in Swaziland, extensive competition was faced with the entrance of Standard Bank (1988), First National Bank (1995), and Nedbank (2002), (Thomson, 2002). The competition had tried and tested electronic payment (EP) systems in various countries with great success, and there was no doubt that the success pattern was to continue within the borders of Swaziland.

Pre 2004, Swaziland's Bank Ltd. had been a paper-based organisation, offering no EP solutions to their clients. With stiff competition and changes in the environment the organisation was prompted to react and intervene**.** Intervention came in the form of total organisational redefinition, and in 2001 the organisation carried out its re-launch. Prior to this the company was named Swaziland Development and Savings Bank. The re-launch brought about its name change, redefinition of focus or purpose**,** the mission changed so as

to enable the organisation as a fully-fledged commercial bank, which could in turn challenge the competition in the rapidly evolved market place.

ICT was the key to leverage their position in the demanding market arena, and one of the main changes implemented involved the migration from the paper-based company to one of IT and IS enabled business conduct. A new five-year strategic plan became the blue print and was made available for public viewing; this emphasised "…efficient and speedy delivery using technology whose capacity will be reviewed from time to time…" (Thompson, 2002). The exercise entailed the publicising of new services in addition to the old but improved services; designed to meet the needs of more sophisticated clientele, which the international banks sort after.

The work setting variables consist of the "organising arrangements, social factors, technology, and physical setting" (Van Tonder, 2004). With the change of the company mission, organisational goals, strategies, and structure inevitably changed. The internal goals had to be aligned to the external ones, making speed and efficiency a possibility. The strategic dimension, as discussed above, involved the extensive usage of ICT. The organisational structure and setting has changed drastically up till to date and can be seen as an ongoing event, with a more open plan, and publicly visible and transparent communicative setting.

The social factor contains attributes such as culture, management style, interactive processes, networks, informal patterns *etc.* (Van Tonder, 2004). A deeper analysis of the case would be required to obtain the intricate details of these different perspectives, but due to the time constraint this was not possible, and the rest of the analysis relies on theoretical judgement, observed differences and calculated assumptions.

From a long-term customer perspective, these changes are un-doubtfully noticeable. There is a certain vibrant sense one gets, on entrance, in comparison to the lethargic feeling obtained from the employees of yonder. According to Twala, C., a computer scientist – who is the current and newly placed IT Manager of Swaziland's Bank, (bearing in mind that the role did not exist prior), - the move from a paper based organisation to that of IT and IS, involved first and foremost, "planning with the consultants, then came introduction of a new department, extensive and ongoing (5 years till now) consultation

with the IT roll-out team from India, training at all levels, and most importantly, the need to fill the gaps with the introduction of new employees."

Gathered from Mr. Twala's statement and from the literature provided by Van Tonder (2004), it can be gathered that the change of around a thousand (speculative approach with eight branches around the country, including Head Office), PC illiterate employees, to the use of ICT enabled processes, can be seen as daunting – but this is the case in the majority of the developing nations, and one well worth analysing and documenting.

Impact on the organisational culture could have faced the highest resistance. Employees from the organisation were used to dealing with eradicating poverty and helping NGO's look after the destitute, to providing highly sophisticated banking solutions to the mobile network, insurance firms company and many more aspiring incumbents. The increase in complexity that stemmed from the new vision required the entire workforce to increase their learning and face a multitude of new challenges. As exciting as this might seem to the academic, this was probably a time of great turmoil and uncertainty for weary employees.

On the technology side, the organisation moved to computer based tellers at the front end (to collect customer information electronically) and concluded the selection of a backend system, that can facilitate the rollout of all electronic banking products used in the country, at the end of 2001 (Twala, 2006). The implementation of the banks first ATM (Automated teller machine) was a success at the end of 2004 (Twala, 2006).

With regards to the capability of the system, in summary a range of sophisticated customer delivery channels were added to the traditional branch banking system, and these comprised of; ATM's, Telebanking, (Point of sale) POS Terminals, Mobile banking modules and Internet banking modules. The customer delivery channels mentioned reveal all the possible available solutions that the new backend system can handle and offer, but unfortunately only three of the six mentioned are utilised (teller, ATM, & POS), due to the lack of operational skill from the people aspect.

Nevertheless, the tools, equipment and machinery are what the workforce had to adapt to and learn or leave. The information technology based system required drastic changes in

the workflow, work design of employee jobs, and the new procedures and technical expertise.

The physical setting and workspace configuration was briefly mentioned above with the evidence of the increased open spaces and easier communicative area. The interior design is now maintained and up to international standards along with the banks investments in new architectural designed buildings.

Still following the diagram, we finally get to deal with change on the individual level. The analysis above relates to environmental and organisational aspects that changed, and essentially, organisations along with their larger environment are comprised of individuals.

INDIVIDUAL CHANGE

It has already been established that individuals have to change in order for the organisation to change. This in turn boils down to the individual's cognitive and affective change, which stems from the individual and transcends to the group and organisational level. In an attempt to gain a deeper understanding on individual change, along with a multi-viewed perspective on the matter, a model (Figure 2.2) adopted from Smollan (2006) will be analysed.

The model illustrated that change initiates individual cognitive responses, namely: negative, positive, and mixed or neural evaluations. According to Smollan (2006), these are 'mediated by perceptions of the favourability of the outcomes, and the justice, scale pace, and timing of the change'. The cognitive reactions shape and are shaped by affective responses, such as those mentioned above; negative, positive *etc.* From the view of the organisation, before individual behaviour occurs, people tend to consider the implications of their behavioural alternatives, *e.g.* With the rearranging of the employees desk, the engagement of resistant behaviour would rarely occur without the consideration of the personal possible ramifications.

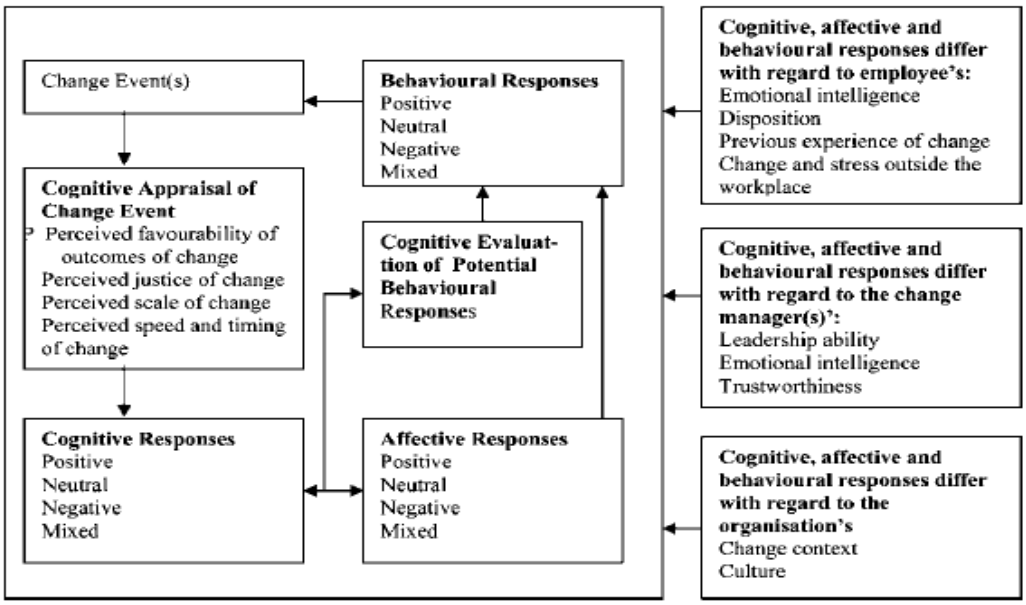


Figure 2.2: Smollan (2006, p.146): Model of response s to organisational change.

The cognitive, affective and behavioural reactions would be altered by factors from within the individual, such as, 'emotional intelligence, disposition, and previous experience of change, change and stressors outside the workplace' (Smollan, 2006: p. 145). From Figure 2.2, the types of change responses mentioned are similar and will be looked at below.

Negative Responses

Negative responses stem from the individual experiencing strong cognitive reactions. Depending on the degree to which the schemata changed determines the degree of negative emotions felt, the degree of fear and anger, and to what extent the individual will go in order to reject the change. According to Turnley and Feldman (1999) (cited from Smollan, 2006), "rejection is a term that encompasses but is not confined to the term resistance, and manifests itself in many ways: disloyalty, neglect, exit, or intention to quit, lower trust, active campaigning against the change initiative, deception, sabotage, violence and aggression, go slows, refusal to work *etc.* According to Piderit (2000), the negative cognitive and affective responses are often well intentioned.

Positive Responses

Positive responses related to the changes the individual employee believes would be beneficial, to firstly themselves, to selected groups of employee's, the organisation, and then extended to various external shareholders. According to Smollan (2006), 'positive cognitions should lead to positive emotions that could range in intensity from exhilaration and enthusiasm to pleasure and contentment (cited in. French, 2001). Positive organisational behaviour could possibly direct employee's to achieving higher performance expectations, and encompasses a range of 'pro-social behaviours, such as taking initiative, an increase in effort, increased loyalty, helping others and many more'.

Neutral Responses

Neutral responses are said to have a minute perceived impact on the individual employee, and a likely individual response would usually result in a submissive collaborative approach by the employee.

Mixed responses

Mixed responses: Staff members that experience mixed cognitive evaluations from differing aspects of change '…may demonstrate positive, negative, neutral or mixed behaviours' Smollan, 2006. The individual's keenness for a specific instance of change can be accepted on the cognitive level and still experience emotional resistance, providing the uncertainty experienced by the individual.

Van Tonder (2004, p.114) states that '…individual cognitive change provides a firm conceptual foundation for the predominantly cognitive concepts of organisational change, but it suggests a role and presence for the otherwise neglected issue of affect and emotion in organisations…'. Cognitive and affective change can be seen as the smallest components of personal change. They represent the fundamental building blocks of change on the grander social collective level, and will be analysed in more depth from Van Tonder's perspective below.

Cognitive Change

In defining cognitive change, a close reflection of Van Tonder's (2004) view will be utilised in aid of a better understanding of the concept. Cognitive change can be referred to as "…the modification of pre-existing cognitions that are ordered in the form of meaning structures" – schemata (Van Tonder, p.118). Smith (1998), (cf. VanTonder, 2004: p.118), relates schemata to "mental representations", which is the "encoding of some information that individuals construct, retain in memory, access and use in a variety of ways". It forms the core component of memory and the base of cognitive processing. "The primary role of schemata is to provide a framework for interpreting new or incoming information, and it will influence evaluations and judgements about an object and behaviour towards an object", (Van Tonder, 2004: p.119). Another important aspect Van Tonder (2004) brings out about schemata is that it directs attention to information that is consistent with the schema.

Contextualising the theory involves making it relevant to this specific task at hand. At the individual level, a person could receive 'word' that there is a new information system on the way, "memory functions will stimulate the recall of the relevant schema with its associated meanings" (Van Tonder, 2004). This provides the interpretative context on top of the retrieved information and builds on that in order to make sense of the information provided. Lastly, the schema provides "a preconscious resource for guessing or reconstructing an event or object when memory functions fail."

Cognitive distortions are formed biasness, developed by the individual over time, inaccuracies employed by the individual's logic, which is all influenced by "pre-existing schemata at the preconscious level" of the individual. A huge array of variables determines the development of an individual's schemata and range from the humans experience throughout life, personality, and cognitive approach. Cognitive distortions generally refer to the humans' alternative ways of "manipulating and leveraging data beyond those for which the data could truthfully be used."

Based on this perspective, if change is consistent with the individual's mental representation or schemata, the change would not affect or alter the individual's

knowledge and would not shift him/her out of their comfort zone. This would basically imply minor changes in the individual's life *e.g.* an email from the board announcing that the new information system is on its way. Changes of this magnitude do not reflect changes in the structure of the individual's schemata, and can be related to *Type I*, incremental or gradual changes. The "learning process inherent in the building up of schemata will over a period of time extract further schemata or modify existing ones on the basis of analysing repeated events…" (Van Tonder, 2004: p. 120), that is similar in nature.

With the introduction of a new information system, the informative build up about the new system will impact the individual's schemata, and allow the individual to register numerous new insights, slightly altering the persons understanding on how things will be in the future, but not registering significant or high level changes (Alpha change).

Van Tonder (2004: p.121), suggests that Gamma change relates to the "hard-earned schema that has been developed over extended periods of time is altered…" so it can no longer be regarded as the same schema. The reference of the SAP accounting example with the paper based calculating individual accountant, who moved up to a spreadsheet system, and finally to the usage of the SAP accounting module is common in business practices today. The individual accountant's schema was drastically replaced three times with each of the presented systematic changes.

Using the SwaziBank example, and recognising that for change to be successful at the organisational level, it would entail the changing of one thousand individualised schemata, change at scales as large as that can tend to get extremely complex and challenging.

Affective change

This change deals with the creation of relationships that provide the foundation for personal growth, which is mainly hindered by dysfunctional relationships. Van Tonder (2004) refer to the phrase "affective change" is like a flowing river – the individual's affect or mood is always changing state. The topic of affective change is viewed from the "context of an emotional or affective reaction and response" (Van Tonder, 2004).

Emotions are in way, the coping mechanisms used by people to adapt to changing situations. From the ancient Greeks, emotion is perceived as something not controlled, willed or judged, but something that is suffered, coped with and submitted to (cited in Antonacopoulou & Gabriel, 2001).

A more explicit reference to emotion would see it as "a state of arousal, characterised by facial and bodily changes, brain activation, subjective feelings, conscious or unconscious and rational or irrational cognitive appraisals, as well as a tendency towards action", (cited in. Wade & Tavris, 1996). Affective responses are of shorter duration and vary from strong to weak intensity, and moods are more enduring and more diffuse in a sense that relate to a persons life events, the individual's predisposition towards affective behaviour, personality traits, *etc.*

Affective change has been related to the change in feelings one goes through, with affective reaction and "moods representing differing forms of emotion that are differentiated on the basis of intensity of the emotion, its duration and its persistence…" (cited in. Frijda, 1987).

PURPOSEFULLY ENGAGING WITH CHANGE

The following section was adopted from Assignment 2B, (Thring, 2006), and illustrates how to deal with organisational change in conclusion of how the introduction of ICT impacts organisational change at the people level. With the exception of a few qualifying conditions Van Tonder (2004), stands firm on the notion that change cannot be managed, "…it can be ignored, resisted, responded to, capitalised upon, and created." (Van Tonder, p.224, 2004). He acknowledges the fact that change is multifaceted and strongly influenced by the context in which the change occurs. This is aligned with what Hatzakis *et al.* (2005), put forth, in which the Relational Manager is introduced to facilitate or extend the organisations capacity to engage in change purposefully and effectively.

With regards to Van Tonder's (2004) Action research and Appreciative enquiry, a clear description of Hatzakis's (2005) Relational Manager comes to mind. The similarities of

the Action Researcher, Appreciative Enquirer, and the Relational Manager are illustrated below:

- All focus on an interdependent and collaborative process

The aim is to glean information from the individual or group level, for a successful change implementation with regards to the 'whole'.

- The methodology used requires a strong consultative philosophy

Heavy reliance on the facilitator's skills and capabilities is a challenge that must be faced. If the facilitators skills, in terms of problem solving, conflict handling and political agenda acknowledgement capabilities are weaker than that of the interviewer, unforeseen problems could render the exercise a failure.

- All take into account the organisational context – culture

All three kinds of operations require the facilitator to actively interact with those affected by change on a personal level. Only once embedded in the organisational culture, the endeavour would prove effective.

The negative aspects involved in implementing any one of these change facilitators are also similar in calibre and are illustrated below:

- The processes are time consuming

Getting to know and deal with individual employee concerns is a daunting task that could be seen as a difficult task to budget for, or gain buy-in from decision-making shareholders.

- The effectiveness relies largely on the facilitators skills

Measuring the effectiveness of the facilitator's skills could be done by Hazakis *et al*. (2005) social capital approach, *i.e.* the three dimensions (relational, cognitive, and structural) measured on a standard 5-point Likert scale.

- And all three would be rendered inappropriate at a *Type II* change

In the case of disruptive *Type II* change, the mental preparations and challenges faced by the employees would not be attended to in time for any of these three endeavours to be successful.

According to Van Tonder (2004), by viewing any system from one 'rigid' perspective or paradigm, you lose the value-add gained by equally valid paradigms (use a multi-paradigmatic framework to analyze the society). The social capitalist view on a social body looks at the importance of human networks obtained through personal networks.

Only when the individual component is provided can the collective communal action be determined.

Purposefully engaging with change requires a specific concept along with a more intense and detailed analysis and planning process. Resistance and delayed change are directly attributed to vague and non-specific change concepts and ideas. The social capitalist approach may be an acceptable 'middle-ground' solution for evaluating such interventions, because it provides a conceptually coherent framework that is

- Flexible enough to enable the integration of different stakeholder views on evaluation across time; but
- Tight enough to maintain its internal coherence to enable the tracking of both the rate and the locus of this change.

According to Van Tonder (2004), change is neither discrete nor linear, and it is not predictable. Relational management is unplanned, unfocused, and lacks clear direction, which falls in line with Van Tonder's (2004) problematic stance on how generic programmes tend to ignore the organisational context, fore the relational manager is immersed in the cultural situation and manages the conflicts accordingly. Van Tonder (2004) requires that N-step programmes should be used to serve to stimulate the initial thinking around change but rigid adherence should be avoided, in favour of a more natural unfolding change process, which leads to the final word on how Hatzakis's *et al*. (2004), agree with that concept, with the exception on how the relational manager, should shift from trying to manage change and intervene from more of a facilitative stance.

CONCLUSION

Administering change involves careful thought, planning and the ability to deal with sensitive individual issues, in the form one-to-one consultation or one-to-many workshops, to gain the involvement of the people affected. Change conducted in a vigorous manner normally comes with threats attached; these could be subtle or explicit.

At IBM's "Global Innovation Outlook" conference, it was acknowledged that '…change in people's behaviour is the most important challenge for businesses trying to compete in a

turbulent world…' (Deutschman, 2005) when dealing with resistance to change. Kotter (2005) confirms this in this quote "the central issue is never strategy, structure, culture, or systems. The core of the matter is always about changing the behaviour of people".

PART III: SWAZILAND'S BANKING SYSTEM

OVERVIEW

This chapter sets out to illustrate Swaziland's current commercial banking environment, along with its target markets, main focus areas and flaws. Over the past decade, Swaziland has maintained the same assortment of banks within the kingdom, with changes occurring mainly in ownership and, therefore, trade name. Following the purchase of Barclays Bank by Standard Bank Swaziland in 1997 (Thomson, 2002), there are four commercial banks operating in Swaziland - the other three being First National Bank, Nedbank and SwaziBank. The commercial banks offer a range of products and services from deposit taking and lending, to electronic banking products such as ATM, Point of Sale (POS), and Internet banking services but still fail to bank more than 20% of Swaziland's population.

INTRODUCTION

Electronic payment (e-payment) instruments have become an important means of payment in Swaziland and are a growing trend on the African continent (BMI-T/IDC, 2003). This includes an individual withdrawing cash from a cash dispenser, purchasing goods at a retail outlet using his bankcard or transferring money from his bank account via his personal digital assistant or office PC.

The worldwide proliferation of the Internet, magnetic strip and smartcard technologies have led to the birth of a business environment that allows the electronic transfer of

transactional information. Electronic money transfers have flourished because of the openness, speed, anonymity, digitization, and global accessibility characteristics of such technologies that facilitate real-time business activities including advertising, querying, sourcing, negotiation, auction, ordering, and paying for merchandise (Edward, 2000).

BRIEF ANALYSIS OF SWAZILAND'S FOUR COMMERCIAL BANKS

The Central Bank of Swaziland is the monetary authority responsible for the management of the country's foreign exchange reserves, administration of exchange controls, and regulation of the financial institutions.
The main function of the four commercial banks is to collect deposits from those with surplus cash resources and to lend the funds to those with a need for them (Dlamini, 2002). The four commercial banks are looked examined in more detail below.

FIRST NATIONAL BANK

FNB and Wesbank began operating in Swaziland during 1995 (Thomson, 2000) and through an assertive marketing campaign, have successfully introduced many new products, including card-based savings schemes, home loans, leasing and other services.

During the year 2002, new home loan packages were introduced, designed to make home ownership more viable for the Swazi people, enabling the borrower to deposit any excess funds into the home loan, thus reducing interest costs. If the customer requires these funds at any point, they may be withdrawn.

The bank initially operated three branches in Mbabane, Manzini and Matsapha with a service branch at Mbabane's New Mall shopping centre. Further branches and agencies operate at Siteki in eastern Swaziland, Big Bend, Nhlangano, and Piggs Peak. The bank

presently operates 20 ATMs around the most densely populated areas and these accept all South African SASWITCH-linked ATM and credit cards (Thomson, 2002).

Wesbank, with branches in Mbabane and Manzini, is the leasing arm of FNB, specialising in competitive leasing and hire purchase services for vehicles, machinery and equipment. It is a key provider of asset-based finance, catering for both corporate and individual clients.

NEDBANK SWAZILAND

Nedbank Swaziland limited, currently Swaziland's smallest commercial bank hosts branches in Swaziland's two major cities, and three of the kingdom's outskirt towns.

Nedbank started 2002 on a high note with the opening of an additional branch at the recently developed Gables shopping complex (Ezulwini) and with the launch of Club Account. The Gables mini-branch began operations late 2001 and was officially launched in February 2002 (Thomson, 2002). The outlet serves residents and businesses in the Ezulwini area and it is anticipated that it will provide banking facilities for the influx of tourists expected as a result of the government's Millennium Projects venture.

One of the bank's major services is "The Club Account", which consists of a savings product for groups of three or more members. The objective is to encourage people to save throughout the year in order to accumulate money for end of year shopping and school fees for the following year. In terms of business, much effort and emphasis have been placed on the promotion of corporate scheme loans to staff members of selected companies (Madwick, 2003). Nedbank also provides ATM services at all its points of presence.

STANDARD BANK SWAZILAND

Standard Bank Swaziland Limited is an international bank and a member of the Standard Bank Group of South Africa, which through its Stanbic Africa Division also owns banks in 14 other African countries. The local operation was started in 1988 and has grown to become the largest commercial bank in the country with a network of 9 branches (Managing Director, Standard Bank Swaziland, Benincasa, 2003).

Standard Bank Swaziland benefits from the group's internationally recognized expertise in technological innovations in service to the corporate, commercial and retail markets. It provides electronic services delivery through its card-based systems, which are established with various merchants as points of sale throughout the country, plus 18 ATMs at strategic areas (Benincasa, 2003).

During 2002, a new E1.3 million Auto-bank Centre was established at the Mbabane branch in the Swazi Plaza, comprising four machines serving the local network with one for international cards. This centre is the first of several which have been budgeted for at *towns* and *cities* throughout the country. There is also an international ATM at the Royal Swazi Sun hotel (Benincasa, 2003).

Standard Bank Swaziland contributes towards economic growth by financing programs to corporate firms operating throughout the kingdom and by supporting small businesses through an education program and basic term loans (Benincasa, 2003). The bank is a leader in investments with a variety of products.

SWAZIBANK

The institution that was for many years known as the Swaziland Development and Savings Bank was re-launched in November 2001 (Thring, 2003) and is now referred to as SwaziBank under an amendment act that provides that it operates under an extended mandate, which includes commercial farming and industrial financing.

Its re-launch made it a fully-fledged commercial bank with a section administering special funds for development business, housing and agricultural financing. This exercise entailed the publicizing of new services in addition to the old but improved services, designed to meet the banking needs of a sophisticated clientele. The new services involve Venture Capital (also designated empowerment financing), Auto Easy motor vehicle financing, Corporate Finance, the VIP Account aimed at a particular bracket of income earners, and the Personal Account, an affordable package for savings schemes. The Foreign Exchange Department has been upgraded with a daily supply of exchange rates.

A new five year strategic plan became the blue print under which the renewed bank was launched. It emphasizes efficient and speedy services delivery using technology whose capacity will be reviewed from time to time.

As part of its corporate responsibility the bank has pledged R150, 000 (Thring, 2003) towards a government program to introduce business skills into the education system. SwaziBanks social responsibility is to eradicate poverty and entails helping NGOs in looking after the destitute and supporting national events.

SwaziBank operates eight branches throughout the country for the convenience of its existing and potential customers and an extension of these branches along with the implementation of ATMs is to be effected in identified areas where customers are increasing in number.

Of the four commercial banks, Swazibank is the only bank that does not provide any electronic banking facilities to its customers. The bank however is in the process of concluding the selection of a new banking backend system that will facilitate the rollout of all electronic banking products used in the country. Swazibank began the rollout of its ATM network in late 2004 and in 2006, had 8 ATMs in four different towns.

HOW THEY GENERATE REVENUE

Each of the four commercial banks mentioned above generate revenue by:

- attracting larger investors,
- offering loans and charging interest on money loaned out,
- charging fees for services rendered e.g. money transfers, safe custody services,
- charging transaction fees per transactions made *e.g.* ATM withdrawals, cash deposits etc.,
- and investing customer deposits and receiving returns that are higher than the interest paid to customers for such deposits.

(Thring, 2003)

The Central Bank of Swaziland has to answer to the government with regards to the regulation of the country's financial institutions. The Central Bank of Swaziland is in charge of the following payment operations:

- Opening, maintenance and closing of bank accounts, accounts of the international financial institutions and donor organizations;
- Acceptance, validation and execution of cash and non-cash payment orders of its clients;
- Processing of inter-bank and intra-bank payments, via money transfers across the accounts in the Globus system (book entry of debits and credits and account balances);
- Inter-bank clearing and settlement;
- Management of cash flows, performance of vault operations (cash lodgements and withdrawals, safekeeping and depositing functions) and performance of cash distribution function to the banking system;
- Maintenance of account registers and other registers, in line with regulations;
- Monitoring of the liquidity of participants in the inter-bank payment system and Globus system and provision of intra day and overnight liquidity facility under the set conditions;
- Monitoring of the systemic risks exposures (liquidity, operations and systemic) and undertaking of measures aimed at minimizing those risks;
- Implementation, management and maintenance of the IT systems in support of the inter-bank and Globus systems;
- Provision of statistical data on payment operations;

- Implementation of mechanisms for timely identification and elimination of errors and failings and resolution of unexpected situations in performance of payment operations in inter-bank and Globus system;
- Activities and functions in line with the Law and other regulations

(Thring, 2003)

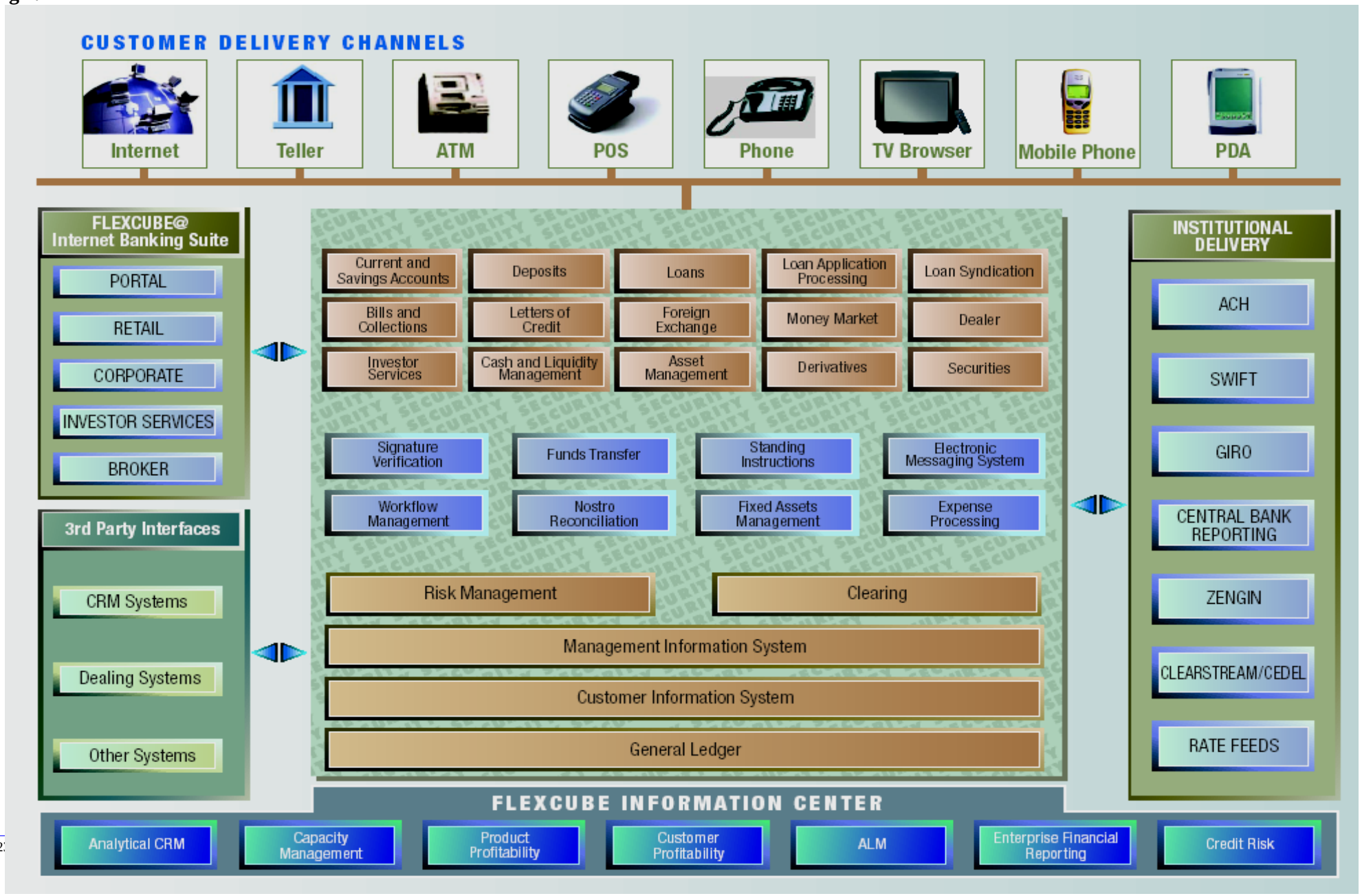
THE BANKING SYSTEM IN A NUTSHELL

With the emergence of online banking services, corporate customers are seeking to take advantage of the anytime, anywhere, any device accessibility for managing payments. The challenge for corporate banking institutions is significant because of the mission-critical nature of payment processes. Payments are one of the processes that are at the core of corporate banking itself, and typically involve the interdependency of multiple systems, third party networks, and service providers. Given their central role in corporate banking, modernizing payment systems carries huge potential risk and reward. Understandably, while banks may be eager for new solutions, they are also wary of the impacts on their current operations.

This section of the chapter reveals the various methods, through the use of software and hardware, that the banks use and could use, to reach and service their targeted markets. To serve as an example of a modern day all encompassing banking system, the FlexCube solution (rated the worlds best selling banking solution 2003) developed by i-Flex, will be used.

The following banking components are described and sectioned according to the i-Flex "FlexCube" solution, illustrated in figure 4.1.

Fig 4.1


CUSTOMER DELIVERY CHANNELS
Internet
Teller
ATM
POS
Phone
TV Browser
Mobile Phone
PDA
FLEXCUBE@ Internet Banking Suite
PORTAL
RETAIL
CORPORATE
INVESTOR SERVICES
BROKER
3rd Party Interfaces
CRM Systems
Dealing Systems
Other Systems
Current and Savings Accounts
Deposits
Loans
Loan Application Processing
Loan Syndication
Bills and Collections
Letters of Credit
Foreign Exchange
Money Market
Dealer
Investor Services
Cash and Liquidity Management
Asset Management
Derivatives
Securities
Signature Verification
Funds Transfer
Standing Instructions
Electronic Messaging System
Workflow Management
Nostro Reconciliation
Fixed Assets Management
Expense Processing
Risk Management
Clearing
Management Information System
Customer Information System
General Ledger
INSTITUTIONAL DELIVERY
ACH
SWIFT
GIRO
CENTRAL BANK REPORTING
ZENGIN
CLEARSTREAM/CEDEL
RATE FEEDS
FLEXCUBE INFORMATION CENTER
Analytical CRM
Capacity Management
Product Profitability
Customer Profitability
ALM
Enterprise Financial Reporting
Credit Risk

CUSTOMER DELIVERY CHANNELS

A complete banking system is comprised of a range of sophisticated customer delivery channels – from traditional branch banking to ATMs, Telebanking, Mobile Phones to POS Terminals, and the Internet.

1. **Teller** – needs an integrated front-office transaction processing system and teller platform and has to support cash vault operations, denomination tracking and cash balancing.
2. **Automated Teller Machines (ATMs)** – ultimately processes (online), a complete range of transactions from ATM networks as well as the VISA, MasterCard network.
3. **Point of Sale (POS)** – these should ultimately support the full range of POS transactions at various merchant outlets, including purchases, merchandise returns and enquiries.
4. **The Internet** – this is ultimately a complete range of banking services over the Internet, including funds transfers, bill payment, and investment services.
5. **PDA/Mobile Phone** – ultimately provides a range of banking services over WAP and SMS devices.
6. **Phone/Telebanking/Call Centre Interface** – ultimately provides an interface with interactive voice response (IVR) and CTI systems to provide a range of banking services over the telephone

(Manson, 2003)

The customer delivery channels described reveal all the possible available solutions banks could utilise to service an array of clients. Unfortunately only three of the six channels mentioned are utilised by the banks of Swaziland – Teller, ATMs, and POS. Only two of the four banks utilise all three channels adjacently.

INSTITUTIONAL DELIVERY CHANNELS

The provision of secure Information Exchange to the numerous entities is presented through a number of institutional delivery channels and interfaces such as "…clearing houses, payment systems, Central Banks and networks like S.W.I.F.T, Cedel, Euroclear/Clearstream, Globus, and multiple-news and rate feed providers such as Reuters and Telerate" (Edward, 2000). This component of the system enables the communicational interface with the stock exchange for straight through processing of trade transactions. The subsets of this component are described below:

SEACH/ACH

SAECH (Swaziland's Automated Electronic Clearing House) is company that banks and businesses turn to with confidence when they need SAECH processing services, software solutions and consulting expertise.

Banks use the SAECH front-end tools for their corporate clients, SAECHs' data processing centre as their "SAECH department" and the consulting services to keep the banks in compliance with ever-changing regulations. For banks that rather process "in-house", SAECH Commerce provides the technology that drives their effort (Madwick, 2003).

The ACH (Automated Clearing House) makes collecting payments (direct debit, direct deposit, accept checks over the telephone, the Internet or convert paper checks into electronic items) from customers easy and efficient (Micheal, 2003). They provide Banking institutions with tools to create and deliver the transactions and process the results directly through the Federal Reserve Bank, depositing funds into clients' bank accounts. It does the same for remitting payments to vendors or employees. Collections are usually deducted from the customer's checking or savings account. Payments are deducted from your business checking or savings and then deposited into the vendor's account. Because the ACH transfer is handled electronically, organizations save paperwork and unnecessary costs. Payments and collections can be set up automatically which improves cash flow and predictability of cash levels. Function: Collect and submit payments electronically to and from customers' accounts (Michael, 2003).

SWIFT

SWIFT (Society for World-wide Inter-bank Financial Telecommunications) is the world's largest financial payments network and is the industry-owned cooperative supplying secure, standardized messaging services and interface software to 7,500 financial institutions in 200 countries (Heyn, 2003).

The SWIFT system is a computer-based message switching system used by most international Banks as a method of making overseas payments. The Co-operative Bank uses this method where possible but whilst it is currently available in 150 countries (Heyn, 2003); it is not always possible to transmit a payment instruction using this system and, therefore, it is not always possible for customers to stipulate SWIFT as a payment method.

The SWIFT community includes banks, broker/dealers and investment managers, as well as their market infrastructures in payments, securities, treasury and trade. Over the past ten years SWIFT message prices have dropped more than 70% (Heyn, 2003).

GIRO

Inter-bank Giro (IBG) System is an inter-bank bulk payment system designed to process and handle high volumes of low value inter-bank payments (Edward, 2000). IBG processes debit and credit payment transactions in bulk, either in an online or offline mode, depending on the payment requirements. The main objective of the system is to enable payments to be made without the need to raise physical supporting vouchers.

The system comprises of the IBG Host system and the IBG Front End System (FES). The IBG Host system is the back-end component of the IBG system, and it captures, validates, clears and sorts the payment instructions received from the registered member banks. “Settlement of these payment instructions is then completed on a net basis” (Edward, 2000). The inward clearing and settlement information are also generated to the receiving banks either in on/offline mode. Endo of day settlement

reports and audit trails as well as clearing and various statistics can be extracted from the system.

FUNCTIONS OF THE INTER-BANK INSTITUTIONAL SYSTEMS

IBG provides the basic electronic funds transfer system upon which the participating member banks can build their own direct debit / credit systems. Banks can offer the payer and the payee improved methods of making payments to and collecting payments from other parties without raising physical supporting vouchers. With a direct debit system, bank customers can make pre-authorized debits to debtor's accounts for fixed or variable amounts on different payment dates or periodically on one nominated date (Flexcube, 2003).

BENEFITS FOR BANKS

The direct credit/debit services, which banks can provide to their customers, are as follows:

- Monthly direct credit of salaries/wages to employees. Employers can specify the credit dates and amount for each employee.
- Companies would be able to make payments to their creditors on nominated dates.
- Bank customers could authorise debit instructions to their banks to effect payments on specified dates on their behalf for regular bills *e.g.* Utilities and telephone bills.

(Michael, 2003)

BENEFITS FOR CUSTOMERS

- Debtors have fewer cheques to issue, less cash to handle and payments would not be overlooked.
- Creditors have fewer cheques and less cash to handle. This results in less risk and additional cost savings to bank customers.
- Creditors and debtors would know in advance exactly when funds would be debited or credited from / to their accounts, resulting in better cash management.
- Creditors and debtors would receive an accurate record of all collections and payment made.
- Companies' accounting procedures would be simplified, freeing their staff for more productive work.

(Michael, 2003)

FUNCTIONAL BANKING SOFTWARE MODULES

Table 2.1

Functional Modules	Description
Current/Savings Accounts	The software has to support a range of Savings, Current and Overdraft account requirements, while maintaining centralised control.
Deposits	Has to support processing of all types of term deposits and handle the complete process through account opening, redemption, renewal, interest and maturity processing.
Loans	Must support commercial loans, retail loans, mortgages and commitments for the entire lifecycle of the loan contract. Should also provide for collateral and lifecycle management through reminders processing and classification of non-performing assets.
Loan Application Processing	Processing loan applications through the various stages of appraisal and recommendation to final acceptance. It should interface with credit scoring and rating systems to validate credit

	ratings.
Loan Syndication	This enables a bank to handle the syndicated loan processing, disbursal, and tracking in various capacities such as a lead bank or syndicate member.
Bills and Collections	Complements the Letters of Credit module, to provide a comprehensive Trade Finance solution. Processes all types of bills, domestic and international.
Letters of Credit	Must process all types of related documents and clean Letters of Credit and through the lifecycle of the contract. Advices and confirmations applicable for each event are also generated automatically. Messages are generated through S.W.I.F.T or any other compatible medium.
Foreign Exchange	Processes all foreign exchange transactions such as spots, forwards and swaps. Real time currency positions are maintained for transactions entered in the system and can be viewed on-line.
Money Market	Supports all money market transactions involving borrowing and lending with corporate firms and central banks and handles all instrument types.
Dealer	A front-office module that handles treasury dealing and integrates with major information providers and provides a hand-off to back-office systems.
Cash and Liquidity Management	Enables corporate customers to manage liquidity in an effective manner. It should support notional pooling and relocate expense and income interests based on parameters that are defined by the bank for that particular account category across his multiple accounts.
Asset Management	This enables the bank to set up funds and invest in various instruments like Securities, Money Market Placements and Loans. All activities during the fund's lifecycle, such as subscription, redemption, dividend payments, and corporate actions can be efficiently managed through this module.
Derivatives	Processes a wide range of derivatives transactions, including Forward Rate Agreements, Interest Rate Swaps, Cross Currency

	Swaps, and equities
Securities	This involves a securities deal and a lifecycle processing system. It enables the bank to capture details of the security deals entered at the front office, process deals and track the life cycle events of holdings in its own or customer's portfolios.

(Flex cube, 2003)

COMMON BANKING FACILITIES

Table 2.2

Component	Description
Funds Transfer	An image capture and retrieval component, which can be used for on-line and back-office signature.
Standing Instructions	The Funds Transfer module handles the entire gamut of inward, outward and in-house foreign and local currency fund transfers and payments.
Electronic Messaging System	Handles outgoing and incoming messages through various media like Mail, and S.W.I.F.T. additional media can be supported by the Media Control System.
Workflow Management	Allows the bank to define the complete workflow mechanism and complex processing rules on the basis of task and role definitions, thereby enhancing the efficiency of banking processes. This works with document and image management system to track collaterals and documents.
Nostrum Reconciliation	Reconciles balances and transactions reported by correspondent banks in their statement of accounts.
Fixed Asset Management	Enables tracking of fixed assets through its lifecycle, including events such as depreciation, revaluation, sales/transfer and disposal of assets.
Expense Processing	Automates processes such as preparing expense budgets, Credit Limits to vendors, Contract Settlements, and Payments to vendors.

(Flex cube, 2003)

TYPES OF E-PAYMENTS USED IN SWAZILAND

There are currently four major categories of electronic payment systems worldwide: online credit card payment, electronic cash, electronic cheques and small payments. Each of these systems has its advantages and disadvantages (Edward, 2000). The electronic payment systems can be divided because of the different types of payment methods and transaction environments. Following is an analysis of the types of electronic cash and other systems used in Swaziland.

Table 2.3 below describes the e-payment systems currently being utilized by the leading institution - Standard Bank Swaziland. These four systems cover the full spectrum of Swaziland's E-payment systems.

Table 2.3

E-Payment System	Description	Services Offered by System	No. Of Standard Bank Units
ATMs (Automated Teller Machines)	A cash-dispensing machine that is linked via leased line to a bank's main banking system. Through the use of magnetic stripe card technology, ATMs offer customers real time access to their bank accounts	Ø Balance Enquiry Facilities Ø Cash Deposit and Withdrawal Facilities Ø Mini-statement issuing Ø Personal Identification Number (PIN) changing facilities	20 ATMs
POS System (Point Of Sale System)	A debit card facility that allows customers holding an appropriate magnetic stripe POS	Direct debits made at retail stores	50 POS Terminals

	card, to debit their accounts at retail outlets, by swiping their card through a POS terminal and inputting the amount to be debited.		
CATS (Customer Access Terminal System)	A PC based facility that allows registered customers to link their PCs to the bank's main banking system and performs enquiries and a limited number of transactions on their accounts.	Ø Statement printing from customer PC Ø Account enquiry facilities Ø Third party payments Ø Inter-account transfers	40 CATS customers
SFI System (Standard File Interchange System)	A file conversion system that accepts electronic input such as salary payment schedules, from external systems, and converts these into data the may be uploaded directly into the bank's main banking system. Effectively SFI systems are used for bulk credits (*e.g.* Salary payments) or bulk debits (*e.g.* cell phone subscription debits)	Bulk debits or credits	20 SFI Corporate customers

Standard Bank Swaziland: E-payment Systems. (Benicasa, 2003)

CONCLUSION

The part illustrates the complexities involved with the banking system as a whole. With these complexities come a substantial amount of generated costs, which the banks have to recover. The recovery process is achieved by means of charges (interest, and service charges) made to clients whom as revealed in chapter 2, represent 12% (Thomson, 2000) of the country's population (distributed between the banks).

It is generally acknowledged in banking circles that, for a third world country, Swaziland has a surprisingly sophisticated banking system. Swaziland is at the cutting edge of electronic banking, with the use of point of sale devices, Cats and, most importantly, effective banking supervision. The visionary and disciplined approach of the Swazi banking institutes has resulted in a stable banking environment, healthy competition between banks and the respect of the international banking community.

But while the wealthy sector of Swaziland's population has at its disposal a world class banking system, 78% (Thomson, 2000) of the population has little or no access to banking services. The extension of banking services to all sections of the population should be both a social and economic imperative.

CHAPTER 3: RESEARCH DESIGN

INTRODUCTION

This dissertation is partially based on the premise that ICT has the potential to the link distributed under-serviced communities into the grander forms of society, and as the national social system is transformed with ICT, these overlooked communities should evolve and adapt in response. According to Gurstein (2003), community informatics (CI) is concerned with these processes of disregarded communities transforming and adapting into the mainstream social system. CI will be used to addresses this process of transformation through a systematic concern of all entities involved, that would bring about the smooth adoption of the proposed (refer to Chapter 5) banking system.

METHODOLOGY

The "positivist" and "interpretivist" research traditions form the basis for many studies in ICT research (Orlikowski & Baroudi, 1991). The qualitative study forms part of a critical empirical research endeavour. This research endeavour commenced with the selection of the Swazi culture, a review of literature pertaining to the culture, followed by the identification of areas where ICT could add value, enabling the livelihoods of the society. Readings based on the history of Swaziland, the culture, demographics, telecommunications infrastructure, technology and access constraints, and the overall economic status of the country helped illustrate the local characteristics, requirements and available opportunities to technically enhance the society's way of living. With the banking industry identified as an area with poor social penetration the selected topic of interest emerged, and as an academic

ethnographic researcher at the time, gaining informants and using them to gain yet more informants in a sequenced bottom-up process, aided in the gathering of data. The emergence of the Swaziland's un-banked mass market as the focal point came about, not through the use of theoretical preconceptions, but instead, the induced theory from the perspectives gained from members of the culture and from observation. Keeping in contact reinforces the validation of the induced theories with the compelling informants of the culture and obtaining their reaction to the developed theory.

The context and problem presented in this dissertation has been constructed with varying combinations of primary and secondary data sources. The methods employed include the study of each of the four major banks in Swaziland, the Central Bank of Swaziland, the role of the Swaziland Government, other micro-lending and credit offering incumbents, and the relevant initiatives that were set up in the aid of servicing and catering to the mass markets' banking needs. The study includes the analyses of documentation available from each of the organisations involved, structured and unstructured interviews, informal discourse with people involved in the banking industry and living in the conditions presented, relevant published material, and four years of observation and surveillance that arose from being immersed in the situation as a potential activist.

In answering the 'who' section of the research question; material regarding influential shareholders such as related articles, internet searches, news paper clippings, annual reports and academic workings based on cultural studies, political science, and urban studies will be utilised so as to gain a broader understanding. In a challenge to discuss the 'why' portion of the research question; information concerning, the need for social development through the use of ICT, the link between the banking industry and the under banked portion of society, the Swaziland government, empirical and factual societal information, and formulate a suitable strategy from the existing literature reviews of the global initiatives, an Interpretivist ethnographic path is predictable. Ethnography is the process of describing a culture or way of life from a cultural point of view and is needed to enhance the CI perspective and analyse the country's society. By spending a considerable amount of time with the people involved in Swaziland's banking industry and those whom are subjected to the

governmental style of rule, establishing a truthful definition of Swaziland's un-banked will help achieve the research goals.

The banking industry has, by far, the most attractive looking buildings in Swaziland, and due to the country's population size, chances of knowing someone inside each of the buildings is high, and helped me gain a sense of the institutional aspects, from not only the banks, but all the mentioned organisations that formed part of this dissertation. The extent to which methods were used varies from general discourse with over a hundred people, interviews with a total of fifteen top ranking officials – in the Swazi Government, the four major banks, and the other various local initiatives, along with the South African Mzanzi project head – years of observation, and four smart card system demonstrations in the study of money circulation.

In order to supply opportunists with a foundation to the enhancement of banking Swaziland's un-banked; information is collected on an empirical qualitative basis. The research approach relies heavily on relevant theoretical investigation, and further structured interviews were conducted to consolidate the analysis of the gathered information. Initially this study commenced with a search for a viable technological solution to banking un-banked communities. This comprised of the analysis of academic and industrial literature based on technological global initiatives and yielded rich insights into the diverse range of technological products and services offered to different societal hierarchies and cultures. All with the attempt to bank the specified market best.

Twelve interviews were conducted for the research completed in 2003, and for the purpose of this dissertation, five supplementary in-depth interviews were conducted, with high-profiled executives, and they are respectively listed below: from the banking industry, Standard Bank Swaziland (Executive Director, Mr. Calvin Maseko), from the Ministry of Economic Planning and Development (Senior Economist, Mr, Sikhumbuzo S. Dlamini), from the Central Bank of Swaziland (Research Manager, Mr. Acute Dlamini), from the Inhlenyelo Fund (Mr. Mike Shongwe) and from the South African Mzansi Initiative (Mr. Charles Mudiwa). From the formal interviews introductory sessions lasted up to thirty minutes. Interviewees were mainly reflexive, offering detailed explanations about the pinpointed subject of

their description and their opinions, elaborating on values and cultural aspects they considered relevant to getting the mass market on board.

The interviews were conducted to gain high level insights into what the banking sector is doing to tackle the un-banked society, what the Swazi Government and their National Development Strategy (NDS) has planned for the financially under serviced areas, how regulation from the Central Bank aims to cater for these people, what local initiatives are in progress and finally, how Swaziland's neighbours are tackling the same issue, respectively.

Interview sessions began with clarifying the objective of the study, and inviting the description of facts and opinions regarding the following areas: the banking industry as a whole, the use of ICT by each of the four major banks, the role of banks and their relation to the nations society, the missions pursued by the banks, the needs of society and the information system involved, the role of the Swazi government and the monarchy along with their requirements, direction, and how they were going to go about meeting those requirements.

The literature survey (Chapter 2) analysed readings based on the workings of the Swazi society and social systems as a unit, along with the consultation of up-to-date initiatives within the scope of servicing the un-banked. Statistical information regarding the initiatives has increased immensely, post 2003, and will be utilised to solidify the proposed way forward.

CHAPTER 4: DATA ANALYSIS

PART I: IDENTIFYING THE UN-BANKED AND THE REASONS THEY EXIST

OVERVIEW

Poverty remains the predominant factor creating the un-banked mass market. However, a sizeable percentage of the population does have enough income to be 'bankable' but isn't – either by choice or by circumstance. The research conducted in 2003 illustrated the plethora of factors causing this, and these relate to; the high illiteracy levels within communities, the unstable incomes of individuals, the poor methods of tracking and locating the whereabouts of individuals with regard to employment or places of residence, lack of financial knowledge, cost of banking (bank charges), general distrust of financial institutes, literacy problems, a lack of government, along with a high population disbursement.

This research expands upon this even further and discusses additional complexities discovered when dealing with the un-banked Swazi, which stem from as high up as the unique political structure that the country has in place and extend to include legislative, governmental and economic factors. Other factors such as banking trends are also discussed.

This chapter first analyses the government system utilised, to illustrate how the nation is regulated (Figure 4.1), followed by a compiled method of market segmentation (Figure 4.2) considering the banking section of the Swazi society.

The system of governance in Swaziland has been identified as suffering from limited practice of essential desirable elements defined in first world countries. Swaziland's traditional system of government coexists with a modern Westminster system and in an effort to identify areas that could impact the implementation of a viable strategy these systems are the focus of this section and are analysed below.

SWAZILAND'S UNIQUE GOVERNMENT AND STYLE OF RULE

SOCIAL HIERARCHY

As one of the two monarchies remaining in Southern Africa the revered institution plays an integral part in the life of the nation and is the focus of most traditional ceremonies and much of the Kingdom's cultural life. Swaziland has a dual monarchy in which the King, or Ngwenyama (Lion), rules in conjunction with the Queen Mother, or Indlovukazi (female Elephant). The King is primarily concerned with matters concerning the state, while the Queen Mother's main role is to uphold the Kingdom's culture and traditional customs.

In a challenge to preserve the core of the Swazi culture, two systems of government (Figure 2.1) are utilised within the borders of the Kingdom – a Westminster system and the traditional Tinkhundla system. Tinkhundla, which is the plural of Inkhundla, is the Siswati word that refers to a 'traditional meeting place'. Whilst the Westernised government system is defined by a wealth of documentation, formal structures and transparent systems, the Tinkhundla system is not, and relies on numerous underlying assumptions and morals, an unwritten set of Swazi law and customs, that are not easily understood or transparent, to anyone outside of the society. The unwritten status of the system brings about undocumented and loosely incorporated government processes, and is enough to act as a catalyst for the addition of more ambiguities and inconsistencies faced by the government. According to the National Development Strategy (NDS) reviewed in 2006, 'many problems experienced by the government relate to the uncoordinated processes in policy formulation and implementation' (NDS, 2006, p.8). The result of the discrepancies creates confusion, 'and the overlap

in responsibilities has resulted in a breakdown of governmental staff discipline and morale… with a degenerating effect on the nation's performance in the public sector…' (NDS, 2006, p.9).

Initially the Tinkhundla were non-political centres aimed at stimulating rural development such as agriculture, roads and resettlement plans and had been lead by ex-servicemen using skills acquired during their military service (Thompson, 2000). This was changed in 1992 by His Majesty King Mswati III, who introduced a revised system; which formally included the Tinkhundla Centres in Swaziland's political dispensation. This change came with a form of democracy, enabling even the country's poor rural society to vote for a representative of their choice and have him directly represent their interests in parliament. In terms of the distribution of power within the system, the Tinkhundla representative system of government has sufficient authority to be able to "…change the government without changing itself" (Thompson, 2002).

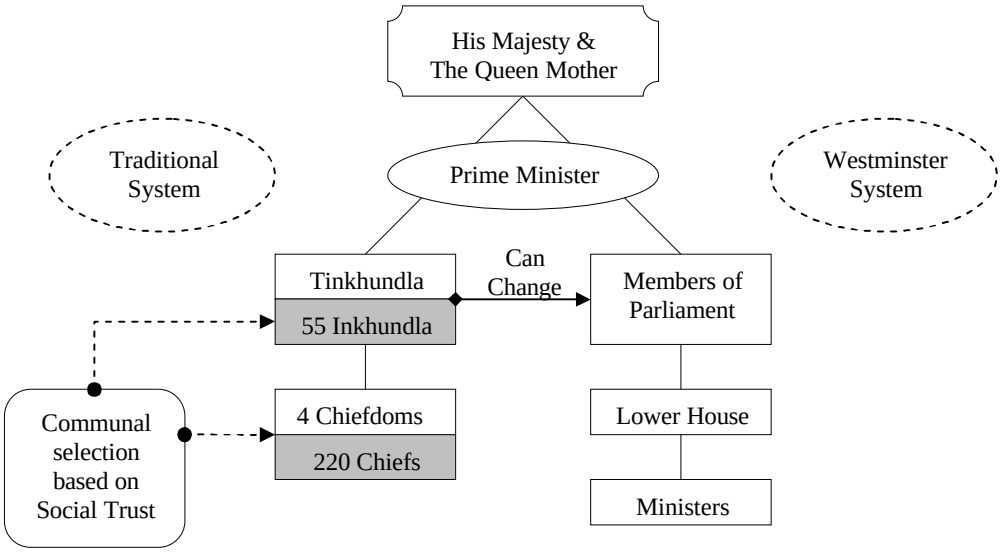


Figure 4.1: Swaziland's Unique Government
Compiled by: *KC Thring, 2006*

The significance of the Tinkhundla system, for the purpose of this research, revolves around the grants issued to each of the Tinkhundla (constituencies in parliament) for various selected projects. Each Inkhundla is granted an equal amount of R70, 000 per

annum (Thomson, 2002), and the methods of project selection vary from constituency to constituency. The basic guidelines revolve around equality of the respective chiefdoms and that funds are allocated fairly, with the hopes of tangible returns. The inability to trace the usage of the funds raises concern about the control of state-issued funds and needs to be addressed in a similar fashion to that which deals with the un-banked society. As it stands, in 2006, a limited monetary policy exists, fuelling the existence of countless untraceable transactions, and ultimately the undesirable economic Grey Area. Access to information concerning the circulation of funds within the monarchy is highly confidential and beyond the scope of this paper.

Another noticeable feature of both the modern and traditional systems of government is the absence of women in decision-making positions. The traditional power structures are particularly dominated by men and similarly, in the modern system, there is a visible under-representation of women in policy-making positions. However, despite the tensions that have sometimes accompanied the persistent and increasing calls for political and economic reform, and in an attempt to avoid the political crisis, Swaziland is a country with a constricted scope, with 'one' traditional monarchy and 'one' cultural identity. In terms of profiling, this makes it easier to place boundaries on the nation and ultimately focus on the under-serviced areas.

AN ANALYSIS OF THE SWAZI SOCIETY

The structure of the dual government system strongly represents the structure of the Swazi society with regard to banking. The compiled framework (Figure 2.2) splits the population into those with rural origin and urban origin. The urban sections of the Swazi society reflect the people with minimal access problems to financial services, and have all the financial facilities within reach. Banking knowledge with regard to these people is sufficient for them to make a calculated choice on whether to be banked or not. On the other hand, the rural un-banked community do not necessarily have simple financial lives. There is no question of their ability to manage the financial environment in which they are placed due to the fact that as individuals, they survive.

But this article is not about the survival of the individual. The focus here is on a financial system that addresses the needs of the un-banked society so as to create a better life for all.

Nevertheless, the poorer sector of the population – including the rural areas, formally unemployed, the elderly, the disabled, *etc.* – have been excluded from a broad range of financial services and as a result have remained the stagnant portion of the country's economy. In explaining the causes of the un-banked community, a link was established relating to the causes of poverty. A distinction was drawn between factors that make individual households vulnerable to poverty and factors that contribute to the impoverishment of communities.

WHAT MAKES INDIVIDUAL HOUSEHOLDS VULNER ABLE?

'Only a small minority of rural residents – in some communities, none at all – are seen to be secure from the constant threat of poverty', (Lwanga, 2000). The majority, whose livelihoods are based on rain-fed agriculture, are always vulnerable to crop failure. Furthermore, with a combination of Swaziland's high prevalence of HIV AIDS and its polygamous culture (where men are allowed to take more than one wife), these households may also be pushed into poverty at any time by death or disability of the husband, who is by tradition the breadwinner. HIV AIDS has also resulted in a higher death rate of young to middle age men, resulting in the failure of children to support their elderly parents. Other 'factors thought to increase vulnerability to poverty were; teenage pregnancies, large families, and polygamy', (CSO, 2000).

FACTORS CONTRIBUTING TO THE EXISTENCE OF AN UN - BANKED SOCIETY

OVERVIEW

'The potential for income generation through the diversified sources be it agricultural or otherwise was perceived to be constrained by government preoccupation with the development of urban areas, at the expense of rural communities', (Albert, & Shabangu, 1999). Neglect has been expressed in terms of Access to and quality of social financial services. Investment, in the transport and communications infrastructure, would provide better access to essential services, to attract more investment and to create rural employment opportunities, along with access to markets, information and banking facilities. The lack of infrastructure and basic services – especially the poor quality and difficulty to access these services – is seen to deter qualified professionals from serving these remote areas, let alone bank them.

LACK OF DEVELOPMENT IN RURAL AREAS

About 10% (NDS, 2006) of the population resides in the two largest cities of Mbabane and Manzini. With the lack of growth in these cities, more than 60% (NDS, 2006) of the urban-rural sector (Figure: 4.2) are to be found in informal and unplanned communities. Less than half have safe piped water, all-weather road access is rare and few houses have electricity.

In all the regions, unpredictable drought proved to be the fundamental cause of community impoverishment by The Common Country Assessment of Swaziland (Lwanga, 2000). Rural development has now become a multi-disciplinary phenomenon, requiring a multi-dimensional approach in enhancing national objectives and activities.

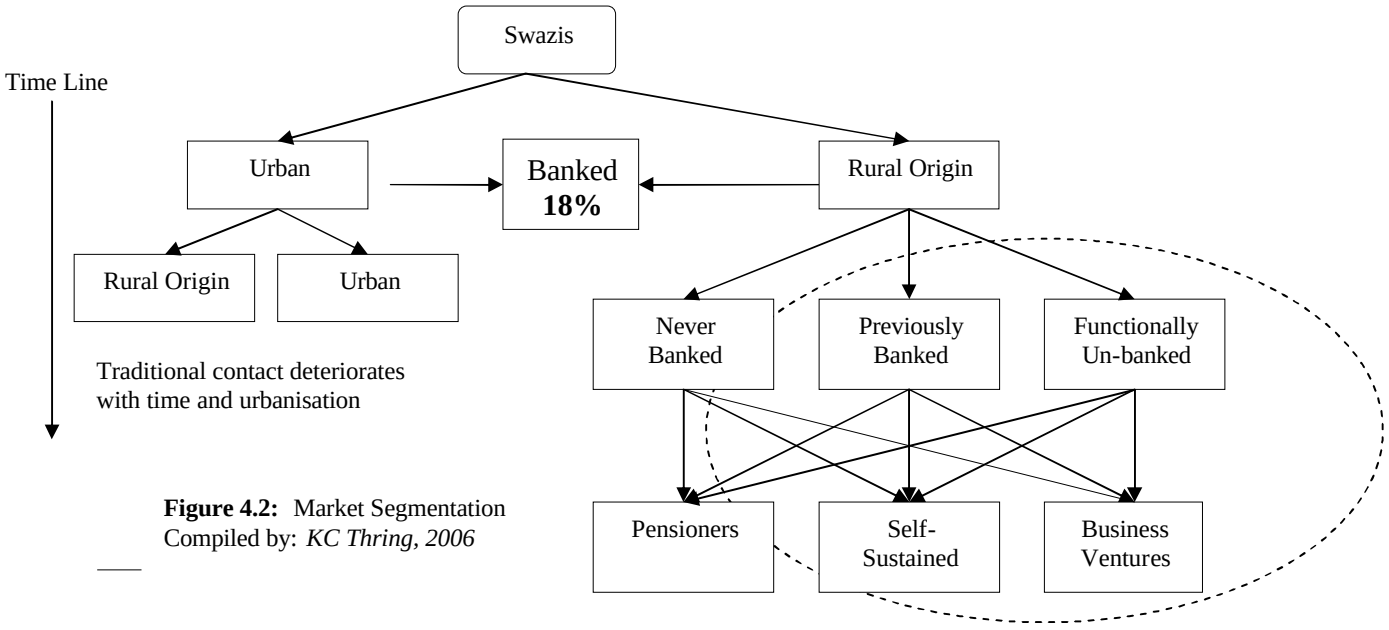


Figure 4.2: Market Segmentation
Compiled by: *KC Thring, 2006*

An analysis of the country's demographics and ICT infrastructure in 2003 revealed Swaziland's capabilities and constraints in specified areas. It was discovered that improvements in any of the sectors that required infrastructural upgrades would be a costly and lengthy process in which efforts have been exerted, but the pace of infrastructural change compared with communal enrichment illustrates languished results.

As Kempson et al. (2004) suggests, there is no single cause for the exclusion (of the poor) and certainly the sole responsibility cannot be laid at the door of financial institutions and their refusal to deal with the un-banked'. Instead, attention needs to be given to the combination of rationale, including the situation of the people, physical access, and the psychological issues directed to the banking industry by the un-banked.

REGULATORY IMPLICATIONS

OVERVIEW

Typically, individuals with a history of bad debt would probably be refused by banks when trying to attain some form of credit or a loan. In some instances, as discovered when analysing the banking products available, the refusal by banks to issue an account to an individual would stem from the strict criteria required by the financial industry and enforced by the Central Bank. According to research conducted by Kempson (2006), a minority of people who do not have a bank account have been refused by baking institutions. This section discusses some regulatory barriers to entry that exist in the Swaziland market.

PROOF OF ADDRESS

In line with the international trend, Swaziland enacted the Anti Money Laundering Act, (Genesis, 2005), which is aimed at preventing money laundering and the combating of financing terrorism and resulted in banks having to obtain proof of address before opening a bank account for an aspiring client. The simplest way for the client to prove this would be to issue the bank with a bill or receipt with the client's name and address on it.

However, according to the survey done by FinScope (2004), 75% of the population live in rural areas, most of which are classified Swazi National Land (SNL). The property structure is relatively underdeveloped, and property is assigned through the local chiefdom system, which has no assignment of formal addresses. As a result, 75% of the society would be excluded from access to a bank account.

BANK REQUIREMENTS

In Swaziland, formal identification by means of the government issued identification card (ID card) or a passport is required for contractual purposes. One of the main criteria for opening a bank account is the individual's proof of identity. To highlight the extent towards which this requirement impacts Swaziland's un-banked, this section discusses an issue the kingdom is currently faced with, one that led to parliament being suspended for a period of four weeks in November 2006. This issue was the following:

In 2005, His Majesty King Mswati III issued an instruction to the Swaziland government that it should make available a compulsory social grant[4] to the elderly, (Times of Swaziland, 2005). Following this, several attempts were made by government to gather and maintain accurate data on pensioners eligible to receive grants. "One of the main challenges faced by government was the accuracy in the unique identification of beneficiaries as most beneficiaries reside outside urban areas and have no formal identification or proof of address, along with the proof of their age. In an attempt to compile a database of eligible pensioners, in 2002 the government employed students from the University of Swaziland, to collate data and called upon all Tinkhundla to gather information on elderly people within their areas. To date the database lists over 60, 000 elderly, most of whom do not have any form of formal identification." (E. Maziya, Director Social Health and Welfare, Swaziland Government)

Having submitted a tender towards a solution for the payment of social grants in December 2006, Standard Bank Swaziland (in particular the Head Of Global Transactional Banking Mr H. M. Thring), advised that the lack of means to uniquely identify and therefore bank Swaziland's elderly, makes the grant payment process tedious, error prone, open to abuse and expensive. Mr. H. Thring also advised that the problem is further compounded by the fact that even younger individuals (siblings to

[4] Prior to this, no social welfare system existed.

the elderly) in rural areas lack identification, as some elderly are bedridden and therefore have to send representatives to collect their grants.

ACCESS AND USAGE

GENERAL

As with all forms of exclusion, there may be both voluntary and involuntary financial exclusion. According to Hawkins, (2005), the terms 'access' and 'usage' have been used to help illustrate this, where, 'Access implies a composite of requirements regarding the supply of financial services', and exemplifies areas such as availability, affordability and the appropriateness of service offered. Considering that there may be a demand for such services – with or without convention – 'it is only when they are consumed that we have usage', (Hawkins, 2005). Thus usage refers to the actual consumption of the financial services.

In Figure: 2.2, the Swazi society is first split into those of urban origin and those of rural origin. In terms of Access, the urban section is in reach of the availability of financial services, but the problem may lie with the appropriateness and affordability of banking products on offer. Hence the supply side of financial products is in abundance but this is not utilised by the public, to an acceptable level that is.

On the rural section of the model, the discussion is enhanced with the lack of availability of financial products and services. In this instance, there could still be a potential demand for financial services but there is no supply – in which the demand can be expressed as intentions, wishes, or the desires of the community. This would describe the never-banked and previously banked section of the diagram. As Hawkins (2005) states, there can be demand where there is no supply for financial services, but there cannot be consumption if there is no access.

The functionally un-banked section of Figure: 4.2, describes the portion of society who do have bank accounts but do not chose to use the financial services to their full potential. For example, these people may be employed and the prerequisite is having

a bank account for salary purposes. The functionally un-banked describe people with idle accounts that would probably use the account once a month for withdrawal purposes only, due to the fact that financial services are deemed to be expensive.

The South African Financial Charter (2005) describes the principles of effective access and the list includes physical access, affordability, and appropriateness of products, simplicity, and non-discrimination from banks. Similarly, according to Feasibility (2005), the reasons that an un-banked society exists, stems from the fact that this portion of society is typically excluded from the mainstream financial sector with the contributing factors being:

1. Bank Terms: Conditions and Charges
2. Access to banking facilities
3. Appropriateness of banking products
4. Simplicity and ease of use

Each of the above hampering factors will be analysed in detail below, applicable to Swaziland's population.

BANK TERMS, CONDITIONS AND CHARGES

Each bank has its own terms and conditions, and Kempson et al (2004), illustrates that there is a range of different terms and conditions that tend to deter the lower income market from opening bank accounts. The most significant example of such barriers is the minimum balance requirement, which in Swaziland ranges between R50 and R5, 000 depending upon the bank being used and type of account being opened. With all four banks, Savings Accounts (as opposed to transactional accounts) are offered to the lower end of the market as they do not attract monthly management fees and have substantially lower transaction fees. All forms of savings accounts, however, have a minimum balance as a requirement, with the least being R50 (ref: pricing manuals obtained from all four banks in Swaziland, including the Swaziland Building Society).

Literature analysed from the published works of Kempson (2004), Hawkins (2005), and Genesis Analytics (2005 & 2003) suggests that levels of bank charges dissuade

the potential lower income market from using transaction accounts. This does not only pertain to the minimum balance requirements. As Kempson (2004) puts it, "some fees have a disproportionate negative effect on the poor, notably, fees for failing to maintain a minimum balance in an account; higher fees for over the counter transactions; monthly lump sum fees which discriminate against those who make few transactions; and high fees if the number of free transactions is exceeded" (Kempson et al, 2004).

According to Hawkins (2005), a debate on affordability of bank accounts in France for "…the unemployed and those on income grants," revolved around the position of the community representatives, who felt no charges should be applied. The banking community proposed a maximum charge of 2 Euros as being reasonable.

According to FinScope (2004), in South Africa some have suggested that bank fees that amount to 2% of an individual's monthly income represent a fair threshold of affordability. Some, however, 'suggest that even 1% of monthly income is too high' (Kumar, 2005). Banks, nevertheless, need to cover their operational costs somehow, and if these costs are not covered, the sustainability of any initiative is questioned. Kumar (2005), suggested the concept of "low – but not zero – fees", which as stated, would 'encourage sustainability and prevent erosion of affordability over time.'

Currently, no banking product exists in Swaziland that is exempt from charges. If the provision to the poorest of the mass market is considered a policy priority, it could require government intervention and subsidy, similar to, for example, the Postbank accounts offered in South Africa.

As at January 2007, Swaziland's cheapest banking account requires a minimum balance of R50, is non-interest earning and incurs charges of R5 per ATM withdrawal (a R20 charge is effected on withdrawals made within branches). With pensioners receiving R80 per month and most of rural populace earning less than this (an average of R1.50 per day – Swaziland Economic Revue 2005) bank charges become a significant contributor to the existence of the un-banked market.

According to Hawkins (2005), countries such as "Denmark, Finland, Spain and the UK" have all placed caps on bank charges that may be applied. These lessons learned from developed countries could be beneficial to Swaziland's case, and by using them as a basis perhaps a feasible way forward could be looked into from the government perspective.

ACCESS TO BANKING FACILITIES

In the urbanised portions of society, access to banking facilities is relatively unproblematic. Swaziland boasts a well-developed urban transport system, 35 bank branch outlets, 72 ATMs, along with access to the Internet and with it, Internet banking.

Physical access to financial services remains a dominant theme in defining access standards, and relates to the absence of financial services in terms of proximity, which, if amplified, decreases the customer inconvenience and increases bank overheads.

Experiments conducted in India, cited in Hawkins (2005), best illustrate the financial service usage when the Financial Regulation body of India imposed the "1:4 licence rule". This rule was imposed to encourage branch expansion to rural and under-serviced locations, and stated "…an Indian bank could open a branch in an already banked location only if it opened four in an un-banked location", (Hawkins, 2005). The rule lasted thirteen years and was revoked in 1990 and during this time "…the average population per branch fell tenfold from 139 790 to 14 671…" (Burgees & Pande, 2003: cited in, Hawkins, 2005). Since the 1:4 licences Law was revoked, the number of people per branch has increased as the unprofitable branches in rural areas closed.

According to Hawkins (2005), "an increase in the number of access points may not be sufficient to improve the usage of banking facilities – it is linked to affordability and appropriateness". While Swaziland could provide basic services in each of the 55 Tinkhundla, the literature suggests that the approach would be far more successful if it

were to consider the income levels of the Tinkhundla communities, with the positioning of access points at the areas with the most profitable populations.

Research based on rural areas tends to highlight physical access problems, whilst research conducted in semi-developed and urban areas does not rate location as a primary constraint to financial access. Kempson (2006) suggests that the lack of physical access to a branch "is a significant psychological barrier to the utilisation of financial services".

APPROPRIATENESS OF BANKING PRODUCTS

The research conducted by Hawkins (2005), suggests that many people on low incomes feel that banks are not interested in their needs and that the banking services offered are not for them. Like any product, the appropriateness of banking products must relate to the needs of a specified market sector. According to Hawkins (2005), the underlying issues surrounding this are that "the supply of services cannot be seen independently from demand if actual consumption is to improve".

The Standard Bank Head of Global Transactional Banking (GTB) (Mr. H.M. Thring, 2006) advises that historically banks' primary sources of income came from the offering of credit facilities and from the collecting of deposits. As low-income earners have not, in the past, qualified for credit or kept sufficient amounts in the form of deposits, they have been naturally bypassed as being markets for banks worldwide. With this, their unique needs were generally excluded from the design of most banking products.

"With transactional banking now becoming the theme in many banks, and with it being a volume driven source of revenue, it is envisaged that banking the previously un-banked will be a common trend throughout most retail banks, as this market is where the volumes lie" (H.M. Thring, 2006). To confirm H.M. Thring's (2006) comments, he advised that the Standard Bank Group throughout its 17 African points of representation has recently appointed Transactional Banking Heads.

It is envisaged therefore that with this trend, more focus will be placed on the identification of the needs of currently un-banked, following which the appropriate products will be developed.

Moving off the African continent, according to Kempson *et al* (2004), the German bankers Association introduced an 'Everyman' account, providing people with basic transactions but no credit or overdraft facilities. "…800 000 such accounts were opened between 1996 and 2000 … and it has been acclaimed that the majority of the new account holders were students rather than low-income individuals", (Kempson et al (2004). Such account structure if feasible to banks for students could also prove feasible for other income earners.

SIMPLICITY AND EASE OF USE

The South African Financial Charter (2005) commits to "structuring and describing financial services in a simple and easy to understand manner". This is crucial with regards to the supply of financial products offered. According to Hawkins (2005), 'simple and understandable conditions play a key role in ensuring the appropriate provision of financial services'. With this, the level of illiteracy (with regard to banking and technology) in rural areas also serves as a contributor to the existence of an un-banked market.

Education regarding financial services offered is essential. Financial service providers should ensure that their financial products are understandable in the portions of society where there is a lack of knowledge of financial products and services.

CONCLUSION

The analysis of the society in terms of access and usage above suggests areas to be considered in order to increase the adoption of financial services in Swaziland. Improvements in any of these sectors would be a lengthy and costly process in which

efforts are being exerted, but the pace of infrastructural change compared with the communal enrichment reveals languished results.

Financial service providers should re-think product design and the distribution systems that aim to increase the accessibility of those that do not have access to financial products in both urban and rural areas. This would entail finding new ways to reduce transaction costs for the user and supplier, and introducing new product features that suit the needs and lifestyles of the mass market. A new focus by banks towards transactional volume revenues as opposed to credit offerings and deposit collections will be key factors in the design of new products and delivery channels.

Government's role in supporting incentives that will facilitate the development and entry of innovative types of financial services is imperative to banking the un-banked. This includes, but is not limited to, ensuring that the correct infrastructures exist in rural areas to accommodate these initiatives. Government's role in removing legislative barriers to entry, whilst maintaining international acceptable banking standards, is also crucial to the process.

PART II: INDIVIDUAL CHANGE AT THE GRASS ROOT LEVEL

Understanding the individual at the grass root level, from a cognitive and affective perspective, and how to appeal to these elements, forms part of the process of change at the grander societal level in the quest for a viable solution. Individuals have to change in order for the national society to change. This in turn boils down to the individual's cognitive and affective change, which begins with the individual and transcends to the communal and societal level. In an attempt to gain a deeper understanding of individual change, along with a multi-viewed perspective on the matter of individual change, a model (Figure: 4.3) below, adopted from Smollan (2006) will be analysed.

The model illustrates that changes brought about at a societal manner, such as the introduction of the local Swazi identity card system, initiate individual cognitive responses, namely: negative, positive, and mixed or neutral evaluations. According to Smollan (2006), these are 'mediated by perceptions of the favourability of the outcomes, and the justice, scale, pace, and timing of the change'. The cognitive reactions shape and are shaped by affective responses, such as those mentioned in Chapter 2, *i.e.* negative, positive *etc.*

From the view of the society, before individual behaviour occurs, people tend to consider the implications of their behavioural alternatives, *e.g.* the individual would look at consequences of skipping the whole tedious process of obtaining the national identity card and analyse the significance. The engagement of the individual's resistant behaviour would rarely occur without the consideration of the personal possible ramifications.

The cognitive, affective and behavioural reactions would be altered by factors from within the individual, such as 'emotional intelligence, disposition, change stressors, and previous experience of change …' (Smollan, 2006: p. 145), which place the individual outside his/her comfort zone. From Figure 4.3, the types of change responses mentioned are similar and will be analysed below.

NEGATIVE RESPONSES

In an attempt to get the un-banked to think differently, adopt and utilise an unfamiliar system, the anticipated *negative responses* to the system are worth analysing, in an effort to counter the response. Negative responses arise when the individual experiences strong cognitive reactions. These depend on the degree to which the schemata changed determines the degree of negative emotions felt, the degree of fear and anger, and to what extent the individual will go in order to reject the change. According to Turnley and Feldman (1999) (cited in. Smollan, 2006), "rejection is a term that encompasses but is not confined to the term resistance, and manifests itself in many ways: disloyalty, neglect, exit, or intention to quit, lower trust, active campaigning against the change initiative, deception, sabotage, violence and

aggression, go slows, refusal to adopt the initiative *etc.* According to Piderit (2000), 'the negative cognitive and affective responses are often well-intentioned…' with the well being of the individual at the centre of the response.

POSITIVE RESPONSES

Positive responses are related to the changes the individual believes would be beneficial, firstly to themselves, the immediate surroundings and place of residence, to the designated community, and then extended to national society. According to Smollan (2006), 'positive cognitions should lead to positive emotions that could range in intensity from exhilaration and enthusiasm to pleasure and contentment (cited in French, 2001). Getting the un-banked individual to 'believe' that the adoption of a new financial system would benefit his/her personal space, and be a valuable transition for others in the same predicament, could evolve into additional socially positive behaviours from the individual, obtaining ever more individuals.

MIXED RESPONSES

Mixed responses: People in a specified Tinkhundla that experience mixed cognitive evaluations from differing aspects of the change initiative '…may demonstrate positive, negative, neutral or mixed behaviours' Smollan, 2006. The individual's keenness for a specific instance of change is directly correlated to the method of deliverance utilised by the change initiator. The delivery method is the key for the initiator to successfully get the change accepted on the communal individual's cognitive level.

Cognitive and affective change can be seen as the smallest components of personal change. They represent the fundamental building blocks of change on the grander social collective level, and will be analysed in more depth from Van Tonder's (2004) perspective below.

COGNITIVE CHANGE

As defined in Chapter 2, Cognitive change can be referred to as "…the modification of pre-existing cognitions that are ordered in the form of meaning structures" – schemata (Van Tonder, p.118). Contextualising the theory involves making it relevant to this specific task at hand. At the individual level, a person could receive 'word' that there is a new banking system available that caters to his/her specific needs, and, subsequently, "memory functions will stimulate the recall of the relevant schema with its associated meanings" (Van Tonder, 2004). This provides the interpretative context on top of the retrieved information and builds on that in order to make sense and validate the information provided. Lastly, the schema provides "a preconscious resource for guessing or reconstructing an event or object when memory functions fail."

Based on this perspective, if change is consistent with the individual's mental representation or schemata, the change would not affect or alter the individual's knowledge and would not shift him/her out of his/her comfort zone. This would basically imply minor changes in the individual's life, *e.g.* a statement in the Times of Swaziland announcing the workings of the financial system and how it could benefit the people at the grass root level. Changes of this magnitude do not reflect changes in the structure of the individual's schemata, and can be related to *Type I,* incremental or gradual changes. The "learning process inherent in the building up of schemata will, over a period of time, extract further schemata or modify existing ones on the basis of analysing repeated events…" (Van Tonder, 2004: p. 120), that are similar in nature.

With the introduction of a new banking system, the informative build up about the new system will impact the individual's schemata, and allow the individual to register numerous new insights, slightly altering the person's understanding of how things will be in the future, but not registering significant or high level changes (Alpha change). Thus, from the article in the Times of Swaziland, individuals with a deeper understanding could inform others with less knowledge, through explicit discourse on the topic, providing an adaptive transformational momentum for the system.

Van Tonder (2004: p.121), suggests that Gamma change related to the "hard-earned schema that has been developed over extended periods of time is altered…" so it can no longer be regarded as the same schema (view Chapter 2). The reference is to Swaziland's trust based society: this was when communal individuals did not have registered identification cards and people were, thus, identified by the communal understanding of who that person is. This informal system was substituted by the identity card system, drastically replacing the individual's schemata and slightly altering the way society interacts as its coherent whole. With the introduction of the identity card, society's definition of who the individual was is no longer relevant, removing indigenous cultural aspects throughout the transition.

Recognising that for change to be successful at the societal level, it would entail the changing of one million plus individualised schemata, change at scales as large as that may become extremely complex and challenging, and requires a thorough analysis of what is being taken away from society, and if it is in line with where we ultimately want society to be.

AFFECTIVE CHANGE

Communal individuals in Swaziland look up to, trust, and value the judgement of the Tinkhundla system. Affective change deals with the creation of relationships that provide the foundation for personal growth, which is mainly hindered by dysfunctional relationships. Van Tonder (2004) refers to the phrase "affective change" as resembling a flowing river – the individual's affect or mood is always changing state. Input from the Tinkhundla system should continuously add value to the lives of the communal individuals.

The topic of affective change is viewed from the "context of an emotional or affective reaction and response" (Van Tonder, 2004), and in order to establish the adoption of a viable financial solution, the Tinkhundla system would be the gateway for implementation success, in an appeal for the individual emotional adaptation of the system. Emotions are, in a way, the coping mechanisms used by people to adapt to changing situations, and need to be taken into consideration when formulating a viable method of financially serving the lower end market.

CONCLUSION

Change elements at the individual level of the mass market have been identified so as to help with the provision of knowledge about what the actual individual could potentially be faced with, amid the introduction of a new and improved financial system that fits into their way of life. Understanding the individual at the grass root level, from a cognitive and affective perspective, and how to appeal to these elements, forms part of the process of change at the grander societal level in the quest for a viable solution.

PART III: LOCAL INITIATIVES TO SERVICING LOWER-END MARKETS

OVERVIEW

Banking in Swaziland is concentrated in the main centres and on the highest income levels with very little banking penetration beyond the main towns. According to FinScope (2004), the three foreign banks have a very limited view of what they consider to be the bankable market and do not consider a significant expansion of their customer base as a feasible option.

Discussed in this chapter, the local initiatives have a broader view of the market; they clearly understand the customer base and have been quite innovative in trying to provide products that meet the requirements of the people. Examples of the innovativeness are using cattle as collateral and methods of bringing Swazi National Land into the process of gaining access to loans.

Numerous projects have been undertaken as a reaction to the disturbing situation in Swaziland both by government and other non-bank local financial organisations and will be analysed below.

MICRO-LENDERS

Micro lending forms part of the non-bank financial services offered to the public and has only recently been made legal into the social system. Within the borders of Swaziland, the 'limited monetary policy autonomy brings to the fore the importance of the role of fiscal policy' (Central Bank, 2006). Registration of moneylenders is currently required by the government, but according to Genesis Analytics (2003), "…only eleven moneylenders were registered with the Ministry of Finance", (Genesis Analytics, 2003), which in turn merely represents a minute portion of the true number of moneylenders distributed throughout the country. Without a solid monetary policy in place, exploitation by loan sharks to the public would increase.

The workings of the registered moneylenders revolve around the provision of monetary loans to employed people, and on rare occasions or special cases, to self-employed people. Due to the lack of monetary policy "…it is legal in Swaziland for micro-lenders to take possession of a client's bankcard and PIN…, in an attempt to ensure repayment" (Genesis Analytics, 2003).

As a general rule of thumb amongst the lenders, a maximum of 40% of a client's monthly salary is required as repayment of the loan and the interest rates are between 30% and 40% per month (Genesis Analytics, 2003). According to Charles Mudiwa (2006), Head of the Mzansi Project in South Africa, "the micro- lending industry has always been attractive to the African market", and through general discourse with members of the banking staff in Swaziland, it was discovered that even bank staff members utilise micro lending facilities – despite the fact that the interest rates are much higher than banks. This view of the major banking sector needs to be addressed and the perceptions of the financial markets by the un-banked need to be changed.

NON-GOVERNMENTAL ORGANISATIONS

THE IMBITA INITIATIVE

The gendered financial division[5] in Swaziland still firmly favours men over women. Although women's participation in the labour market is increasing and the range of work they do is broadening, the demand of the male-dominated society prevents fundamental changes for most women with regard to the access of funds. A statement by King Mswati III, conducting a seminar to conservative traditional religious leaders, on the notion of equal rights for women went "*What rights? God created people and He gave them their roles in society. You cannot change what God has created. This is an abomination before God*" (Trusler, 2003). Another example of the unfair treatment of women is the fact that women are not entitled to Swazi National Land unless they are married, in which case the entitled land is placed the husband's name, he being the registered owner. In the case of a widow, the land would be placed in the name of the eldest son. In light of this the Imbita initiative was formed.

The Imbita NGO was formed to tackle the lack of financial services offered to women. Their focus is on the provision of savings and lending schemes, from which withdrawals can only be done twice a year, January and September, which represents the school fee payment period of the year in order to enable the saving of school fees. The Imbita system is set up in such a way that earlier withdrawals are possible, but in this case the client forfeits any interest due.

The establishment of the Imbita initiative forms part of the non-registered banking services and it is not registered as a bank. The noted difference is that Imbita is not allowed to utilise the client's savings for further lending as banks do. Supplementary credit has to be raised through donor funding or loans from registered banks for this purpose. According to the Imbita brochure, the customer must save for first, three and then twelve months respectively in order to gain access to the personal loan. The deposited savings can be utilised as collateral for loans up to five times the amount

[5] The monarchy represents a male dominated system. This is in turn filtered throughout society to the extent that females would not be able to own property without the presence of a male as the owner.

saved. As a result, saving money is compulsory for the client to qualify for a loan. The encouragement of saving by the un-banked sector can only be a step in the right direction in terms of disseminating banking information to a sector of the population with limited knowledge in this regard.

Another prerequisite to being a member of Imbita is that you have to sign up as a member (R50 registration, and R10 per annum). Training is provided to applicants including the fundamentals of banking, with topics such as budgeting, credit, and cash along with how loans are handled. The training lasts a day for those who are interested and the loan applicant is then asked to create a budget and cash flow projection for the required loan, and the repayment options are based on that and calculated accordingly.

According to the Treasurer of the Imbita Women's Finance Trust, Ms. Makhosazana Mabuza (2006), they "currently have about 8200 members, of which about half are active savers with savings of R1.5 million". As opposed to the micro lenders, the loans issued from Imbita are at a constant interest rate of 28% per annum and the interest on savings is paid at commercial bank interest rates with an increased 1%.

With regard to the development of the people and the sustainability of the loan-issuing process, due recognition should be granted to the Imbita committee. One of their major problems relates to their centralised method of operation and the need to increase their scope to a larger portion of the Swazi society. Their response to this may be to decentralise their services and open more branches (FinScope, 2004). But this is a costly process and would only end up requiring them to adopt registered bank charges, and risk losing potential customers, thus not solving the problem.

THE INHLANYELO FUND

This Inhlanyelo fund was formed and initiated by Standard Bank, the Swaki Group and Mr. N. Kirsch who each contributed generously to the development of the fund. The main aim of the Fund is to offer loans to the lower-end of society that are not feasible for the major banks. The selection of prospective applicants is administered

through the leadership of the Tinkhundla constituencies (Shongwe, 2006). Each of the 55 constituencies is issued E100, 000 to grant loans to small entrepreneurs at the grassroots level.

To counter the numerous problems banks have with banking the un-banked, the Inhlenyelo Fund produced a unique system that closely ties in with the Swazi way of life. An interview conducted with Mike Shongwe, the Executive Director of the Inhlenyelo Fund, helps to illustrate the workings of the system, and is presented below:

First the applicant has to produce a viable project plan, which could in turn uplift the community. The applicant then appears before the Chiefdom[6] or local inner-council and presents his idea to the Community Leadership Committee for pre-selection. The committee comprises the Chiefdom *Indvuna* (local chief), the elected *Bucopho be-Nkhundla* (Head of the inner-council) from the Chiefdom *etc.* Emphasis is based on their personal knowledge and the reputation of the applicant being pre-selected for recommendation to the management committee of the Inhlenyelo Fund.

After the applicant is registered with the Inhlenyelo Fund (IF), further assessment is undertaken by IF management coupled with project site visits by the Inkhundla committee. The IF Management team conducts the final project and loan appraisal, and a list of successful applicants is issued to the constituency and the payout date is finalised. When the project starts repaying the loan, the loan repayment funds are revolved and loaned out again in the selected constituencies.

From the development perspective, the fund aims to build up under-serviced entrepreneurs in order to prepare them, ultimately, for the mainstream formal banking system. The successful credit record attained from business conducted with the Inhlenyelo fund is gradually transferred to the formal financial institutions. As with the Tinkhundla system, no collateral is required and the level of trust attained from the local leadership (who are involved in the screening) determine the approval of the loan. The involvement of the community substitutes the requirement of collateral for

[6] Each Chiefdom represents one of the 55 Tinkhundla regions in Swaziland.

peer pressure, *i.e.* if the loan is not repaid and no tangible assets materialise, the whole community is let down by the failure of the individual.

LOCAL FINANCIAL SERVICE COOPERATIVES

According to FinScope (2004), the cooperative movement is a major group in Swaziland and a large number of people save and obtain credit from these various institutions. Most of the cooperatives fall under and are supervised by the Minister of Agriculture through the Cooperatives Societies Act.

There are numerous types of cooperatives within the borders of Swaziland, but the ones focussed on for this research are the Savings and Credit Cooperatives, as they provide financial credit and savings services to members of the public. For the members, monthly saving is compulsory and there are different levels that are defined to suit each member's saving ability *e.g.* R60, R30 or R20 per month.

Members are allowed to borrow up to twice the money saved with the cooperative and according to the FinScope study (2004), '…larger cooperatives may have a wider variety of products, including short-term loans, emergency loans, school fee loans and larger long-term loans'. Examples of the larger cooperatives in Swaziland are Asikutulisane, Swaziland National Association of Teachers (SNAT), Lubane, Green Pastures, and Sibonelo. For the workings and costs of the Asikhutulisane Savings and Credit Cooperative, and the Phaphamani Maswazi Savings and Credit Cooperative, refer to Appendix F.

According to the Act, the Cooperatives mentioned are required to:

- Register with the Commissioner of Cooperatives
- Submit annual financial reports
- Have a common bond amongst members
- Only take savings from and issue loans to members – they could receive additional loans from banks to increase lending capacity. This is not encouraged though.
- Have a common bond amongst members

CONCLUSION

The analysis of the selected organisations above reveals that the local initiatives do have a broader view of the requirements of the mass market; clearly understand their targeted customer base, and have been quite innovative in trying to provide products that meet the requirements of the people. The recognised sector, where the local initiatives seem to be lacking, refers to the utilisation of technology for increased effectiveness and efficiency of their products.

THE SYSTEMS THINKING APPROACH

Most social systems are complex and becoming increasingly more so. The problems and challenges facing Swaziland's un-banked do not exist in isolation and undoubtedly, interrelate with one another. The detailed analysis of the un-banked society can only reach its peak, once we look beyond the individual systems and obtain a broader perspective; compounding the individual issues and viewing them as a coherent whole. The 2003 feasibility study (Thring, 2003) focussed on the un-banked portion of society in isolation from the environment in which the market emerged and provided limited understanding. Realising the interrelationships between the respective individual systems requires the application of different perspectives and with this said *Systems Thinking* will be used to help illustrate the causes of the un-banked community.

According to Systems thinking theory, a change in one aspect of a system requires changes in other aspects of a system. Hence in any attempt to change a society, this needs to be taken into account. The traditional, fragmented way of thinking in Swaziland, as opposed to a holistic way, contributes to the problem and hopefully the analogy described below will illustrate some of the pitfalls involved with the traditional fragmented way:

> *One day Anne-Marie receives a letter from the bank informing her that their records reflect that there have been no chargeable transactions on her account over the past few months and that her account balance was extremely low. She is then further informed that should she not make a deposit soon, the bank would levy a fee of five dollars against her current balance that stood at twenty dollars at the time.*
>
> *Extremely distressed at this news she, together with her mother (Anne-Marie was eight years old) rushes to the bank with her piggy bank in hand to make a deposit. After waiting in line they finally reached the teller to make the deposit. The flustered teller then suggested that she'll count the coins when things are less busy and then make the deposit for them.*
>
> *A few days later, Anne-Marie receives another letter from the bank informing her that they had just deducted five dollars from her account -- essentially confiscating 25 per cent of her net worth! Apparently the clerk had misplaced the piggy bank and the deposit was never made. Consequently the bank system, in an attempt to get rid of an unproductive, unprofitable account, got rid of seven accounts without being aware of it, including two very profitable ones.*
>
> **Accessed online:** 11 January 2007
> [http://www.ed.psu.edu/insys/ESD/systems/thinking/SysThink.htm]

In the example illustrated above, if the bank had utilised the Systems Thinking approach, they would have realised that the eight year old could not have been earning her-own income, and therefore, had to have been part of a larger income earning market or source. The banking staff could have established that this particularly small '…account was more than a profit-and-loss transaction, but rather a dynamic system in itself …independent with, and impacted by the conditions and functions of all other system'. To the banking staff and system as a whole, Anne-Marie was merely an isolated unprofitable bank number taking up space in the system. To a systems thinker, she is an essential subsystem of a grander whole.

APPLYING SYSTEMS THINKING TO THE BANKS

In providing and maintaining a first world banking system, the banks in Swaziland are required to keep up an international standard. This requires that the banking system in place be on a par with international standards at all times. The traditional banking methodology focuses on the separation of the individual components of the banking system into their constituent parts. This results in a cyclic (illustrated in Figure: 4.4) pattern of:

- Technology changing,
- Technology chasing,
- The introduction of new products and services, and ultimately,
- Price increases.

But regardless, all four of the major banks compounded clientele still fall short of achieving 20% of Swaziland's working population. Systems thinking, in contrast, would focus on how the banking system interacts with the other constituents of the national system - a set of elements that interact to produce behaviour - of which it is a part.

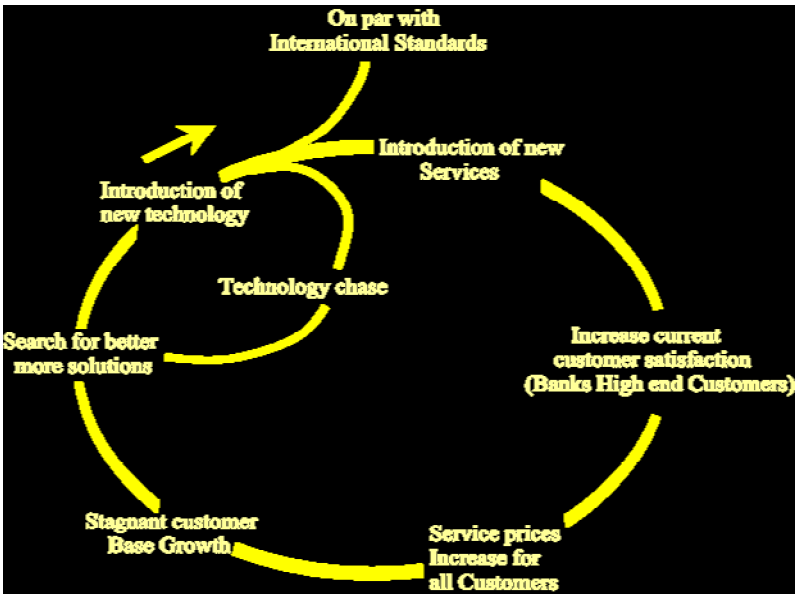


Figure 4.4: Traditional Banking – The Cyclic Pattern
Compiled by KC Thring, 2004

This means that instead of isolating smaller and smaller parts of the banking system, systems thinking would aid the analysis, by expanding its view to take into account larger and larger numbers of interactions of the system as a whole. The outcome is a strikingly different conclusion to those generated by traditional banking forms of analysis, due to the fact that the banking system is dynamically complex and has a great deal of influence from other external sources.

PUTTING IT ALL IN PERSPECTIVE

With the increase in usage of financial services illustrated in Table 4.4, a commendable effort by the banking industry is evident. On the surface they seem to be doing everything right. However, from an Interpretivist perspective, they are having difficulty in realising how to handle the mass market. The use of systems theory could aid in illustrating how the problem is being exacerbated and realise more powerful actions that could be taken to unravel the situation. By tackling the problem from a holistic perspective, the respective parties could then think of new possibilities that they had not produced previously, in spite of their best efforts.

The analysis conducted in 2003 (Thring, 2003), illustrated the networked complexities involved within the banking system as a whole and only briefly discussed the workings of the government and the other local initiatives. The main complexities identified with the banks were the substantial amount of generated costs, which the banks have to recover. The recovery process is achieved by means of charges (interest, and service charges) made to clients who, as revealed earlier, represent 16% (Genesis, 2005), of the country's population (distributed among all four banks – Standard Bank, FNB, Nedbank, and SwaziBank).

In order to cater for the mass market, each one of the six constituencies illustrated in Figure: 4.5 (the Monarchy, mass market, Swazi Government, Central Bank of Swaziland, other financial service-offering incumbents, the four major banks), require

some form of change, and some of the changes are interrelated. From an analysis perspective, the complex problems that each party is challenged with can be segmented and handled accordingly, in line with the holistic strategy, making it easier to come up with a solution that eliminates as many problems as possible by all involved.

Figure: 4.5 below**,** depicts the issues and challenges faced by each of the parties related to banking the un-banked. From the top, in terms of national decision making, the Monarchy, as well as the two sides to Government, are faced with the responsibility of constant maintenance of a stable and healthy economy. In line with banking the un-banked, a financial solution that caters for the lower income earners, records the income generated from all income brackets, and allows for individual savings and pensions, could significantly benefit the government with accurate tax recordings, generating a higher tax income – while at the same time, empower the under-serviced population by providing them with a system that benefits their banking needs. With the current lack of infrastructure in Swaziland, the higher tax income generated could be used to enhance the available infrastructure along with the provision of the much-needed basic social needs of society.

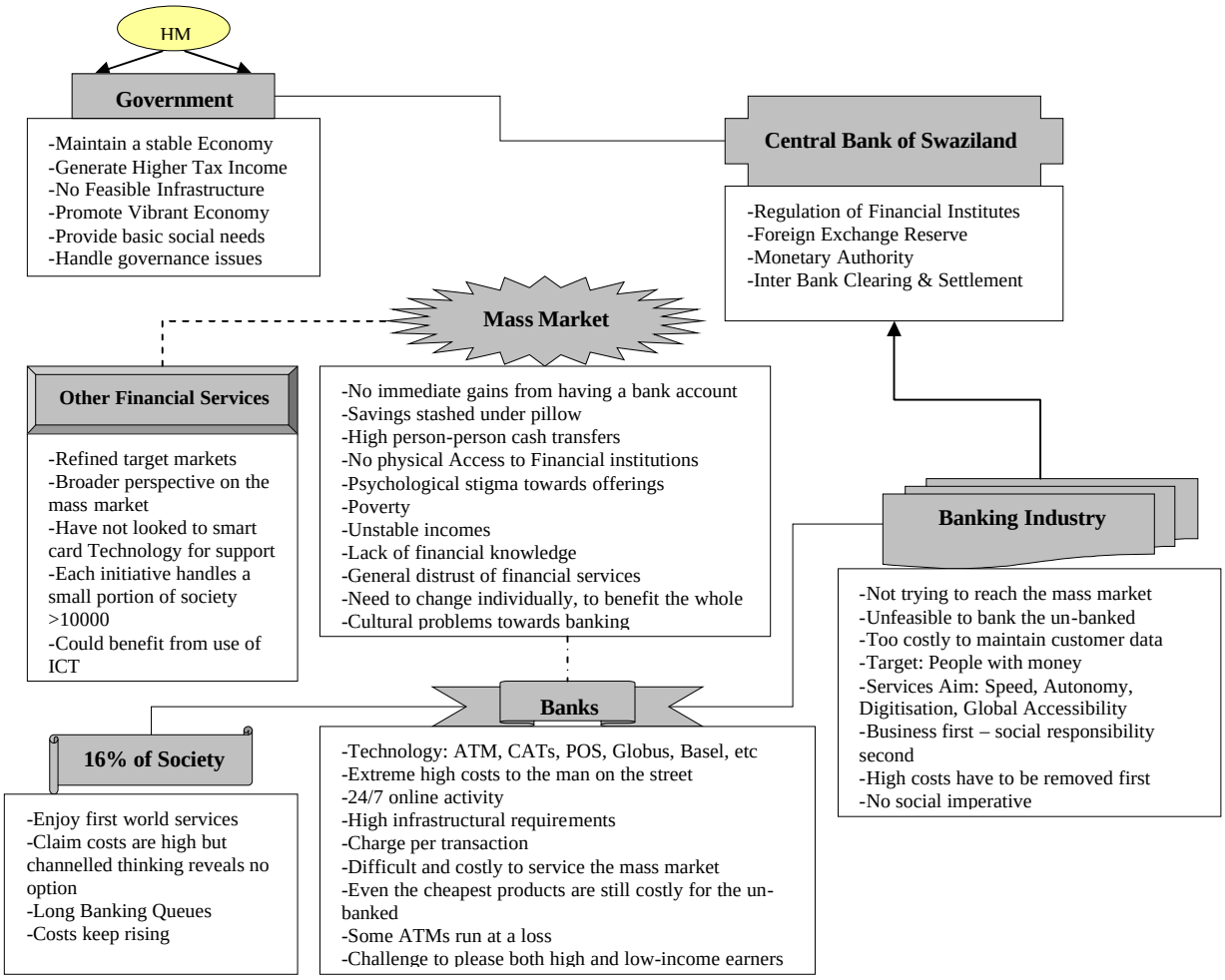


Figure 4.5: The challenges faced by parties involved in banking the un-banked
Compiled by KC Thring, 2006

The Banking Industry along with the respective banks are clear on the fact that they are making no attempt to bank the mass market, due to the fact that the lower income earners are too costly to maintain and bank. The main targets of the banking industry are people categorised as being self-sufficient[7], medium to high income earners – reinforcing the fact that business comes first and the perceived social responsibility, last.

[7] This refers to people with their own source of income.

Pricy sophisticated banking systems include technological components such as ATMs, CATs, POS systems, Globus, Basel, and many more high maintenance systems that require 24/7 online activity. High infrastructural requirements are passed down to the potential customer and, according to Genesis (2005), these have proved too costly for the mass market. Much can be accredited to the banks and it is generally acknowledged in banking circles that, for a third world country, Swaziland has a surprisingly sophisticated banking system. Swaziland is at the cutting edge of electronic banking coupled with the effective banking supervision. The visionary and disciplined approach of the Swazi banking institutes has resulted in a stable banking environment, healthy competition between banks and the respect of the international banking community. But while the wealthy sector (16% of Society) of Swaziland's population has at its disposal a world class banking system, approximately 70% of the population has little or no access to banking services. The extension of banking services to all sections of the population should be both a social and an economic imperative.

From the banking perspective, expensive equipment results in an increase in bank charges. Alternative solutions – as a starting point – that could be looked at in this regard are, e.g. smartcard technologies that transfer the masses of data stored by the banks into the clients' pockets. This option would remove the need for massive, expensive data storage equipment reducing the cost to service the community.

The Other Financial Services mentioned, are those discussed in Chapter 4; the Micro-Lenders, the Inhlenyelo Fund, the Imbita initiative, *etc.* and consist of organisations with a defined target market. The knowledge obtained from these different initiatives in terms of the various target markets available within the Swazi society, would be assisted by the final proposed technological solution, or any technological form of identifying clients and processing their accounts. Even though each initiative handles a small portion of society, the contribution they have made towards the generation of a financially knowledgeable society cannot be understated.

Finally, we mention the challenges faced by the mass market. The high person-to-person cash transfer rate helps illustrate that there are no immediate gains for the individual when it comes to utilising the services provided by financial institutes. The

high cost of banking is enough for the mass market to simply abscond, and stash their money where they are most comfortable, e.g. under their pillows. Costs aside, the psychological barrier that the mass market associates with banking services (as confirmed by Mr. Charles Mudiwa, 2006), combined with the lack of financial knowledge, tends to create a general stigma of distrust towards the services offered, and as Mr. Mudiwa (2006) puts it "…guys from the rural areas would come into town, look at the bank buildings and think these places are for white people only…".

Swaziland is a nation defined by its culture. Culture is in itself, an element of the larger social system and as the understanding of these systems begins to expand, the limited perception of what were previously considered boundaries, has broadened. The Systems thinking analysis does not undermine the importance of the individuals that form the substance of each system. Embracing the diversity of the element of individualism and how we respond to change in our lives, would aid towards a higher level of comprehension, with regard to the responses exacerbated by the people who would need to adopt the change, and will be analysed in detail below.

CHAPTER 5: THE SMART CARD SOLUTION

OVERVIEW

Over the past three decades or so, a huge amount of investment has been put into the conventional Swazi banking solutions available (Appendix B), including: buildings, hardware, software, personnel – and as it stands, the entire process is irreversible. Dealing with the current situation, and discovering how to bank the un-banked with technology as the catalyst, is notoriously difficult and the results of conventional solutions are often poor enough to create discouragement about the prospect of ever effectively addressing them.

The research conducted in 2003 (Thring), proposed a viable smart card solution. The technological solution still holds strong, in terms of feasibility, as the technological method of serving the lower end of the financial market and will be revised in detail below. What the research in 2003 did not take into account was the critical cultural richness possessed by the country's social system and the refined solution presented, and proposes an achievable approach to financially servicing Swaziland's un-banked community.

ADDING VALUE TO BANKING SWAZILAND'S MASS MARKET

When analysing the mass market at the individual level, the recognised 'needs' only relate to the acquiring of cash. In terms of financial services they need a viable method of receiving cash due to them. The earning of interest and credit offerings does not pertain to the mass market and is of no recognised concern. The concept of

having to make deposits and pay bank charges is more than enough to deter the mass market from utilising commercial financial facilities.

WHO BENEFITS FROM BANKING THE UN -BANKED?

In recognising and acting on the challenges faced in banking the un-banked, entrepreneurs and other interested financial service providers could ultimately increase profits[8] from this sector, by gaining new business from existing customers and by adopting the new clientele from the untapped market. The un-banked would benefit if '…more effective outreach by the major banks gives them a suitable level of access to cost-efficient products and services but additional asset building opportunities' (Seidman *et al*., 2005).

THE UNIVERSAL ELECTRONIC PA YMENT SYSTEM

WHAT IS THE "UNIVERSAL ELECTRONIC PAYMENT SYSTEM"?

The Net1 Universal Electronic Payment system (UEPS) is a fully integrated method of electronically transacting with money, with all the benefits of using cash but with none of the attendant risks. 'It can replace all the current financial delivery systems such as paper money and coins, credit and debit cards, cheques and pass books' (Aplitec, 2003).

The primary purpose of the UEPS was to deliver an alternate method of banking that would allow financial institutions to provide a wide range of services to all citizens regardless of their financial position. It was clear that traditional banking services were designed for the upper market income groups. This situation was exacerbated by the card associations, which only targeted 14% of the world's population, as their

[8] Banking the un-banked involves the processing of volumes. In order to make a profit more work needs to be done by processing larger volumes of small financial transactions.

credit facilitation services could only be provided to those that qualified (BMI-T/IDC African ICT Forum, 2003).

The reason for the above was, and remains the fact, that the general cost incurred for processing transactions is higher than that which can be afforded by the mass market. Attempts have been made to create lower cost products. These, however, lack functionality, are still relatively very expensive and do not in any way address the fundamental needs of the targeted market. Taking the above into consideration, the UEPS was designed to address three major factors, being affordability, functionality and accessibility.

THE CONCEPT

The NET1 System is a simple delivery mechanism that manages the flow of funds between financial service providers, clients and merchants. The loading of a client's card and the transaction between a client and a merchant takes place off-line in isolation from the financial institution. 'Virtually every payment transaction will therefore succeed' (Aplitec, 2003). Clients and merchants are issued with a pre-programmed smart card to be used for both receiving and delivering electronic funds. The smart card has a microprocessor integrated circuit (chip) embedded into the plastic.

The UEPS does not rely on central computer systems, or back-up sites, as every card in the system can transact offline at the same time with no service degradation. This is another feature, which removes the significant costs of real time processing used by all four commercial banks in Swaziland.

The UEPS utilises biometric verification to grant access to the card in the form of fingerprint technology. Because of its simplicity and its offline characteristics, UEPS can be implemented anywhere where the intended client base operates. There is no need for clients to travel long distances to access their "bank". Their bank is their card and any point of contact can provide some or all of their banking requirements

(BMI-T/IDC African ICT Forum, 2003). Problems resulting from Swaziland's disbursed population would therefore be minimised.

To make the NET1 model possible, many technical areas had to be researched and many new inventive steps created (Aplitec, 2003). These general areas included cryptography, mathematics, security, hardware designs, decentralized processing, etc. and new inventions incorporated multiple audit trials, offline loading, automatic recovery, decentralized hot card file management and many others. The FTS has been acclaimed by leading cryptographic authorities around the world as the most innovative and secure protocol ever invented to manage offline and online smart card related transactions (BMI-T/IDC African ICT Forum, 2003).

BROAD OVERVIEW OF THE SYSTEM COMPONENTS

FINANCIAL INSTITUTIONS

For the system to function effectively, the financial institutions would work in conjunction with the proposed solution. The main purposes of the banks would be the loading and settling of funds on the client and merchant smart cards.

MERCHANTS

The merchant card could be held by any merchant (shopping outlet – grocery store, booth, kiosk, public transportation, shopping booth) willing to adopt the system. The one major benefit for the merchants would be a decrease in the amount of cash funds available on site. This would make it safer for the merchants in case of a theft loss, and it would also reduce the deposit fees incurred by merchants to financial institutions. This deposit fee increases with the amount deposited (Hancock & Humphrey, 1997). Settling of the merchant account would be done through the banks and spending of the client's funds would be achieved through the merchants. A

simplified example is illustrated in Figure 5.3 below where all transactions are transacted through an EFT (Electronic Funds Terminal) device.

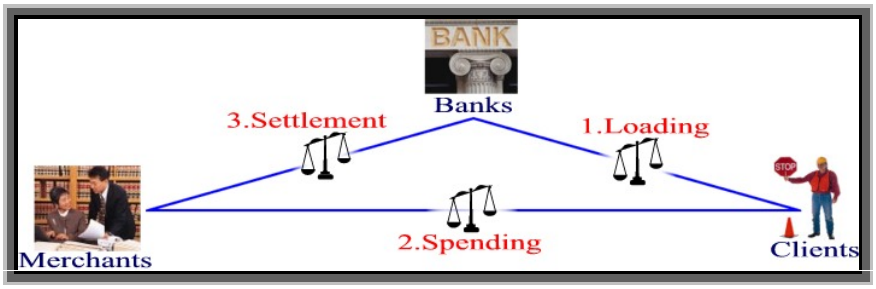


Figure 5.1: Aplitec Smart Card Solution.
Compiled By K.C. Thring

CLIENTS

The client smart card could be loaded through any of the financial institutes, through the clients' employee's merchant card, or any other willing merchant.

LOADING METHODS

1. **Direct Funds Load (On-line Transaction):**

The financial institution can load funds directly onto the client's smart cards. The memory of the client's smart card would be "loaded" with funds from any financial facilities available to the client, such as current account, overdraft facility, savings account, mortgage bond, or in the case of the un-banked – a cash transaction. This method would be suitable where banks are in close proximity of the client (Aplitec, 2003).

2. **Direct Agent Load (Off-Line Transaction):**

The client can receive funds from a valid UEPS agent (registered merchant). Approved UEPS agents are cardholders who have pre-loaded funds onto their smart

cards and have the ability to transfer these funds from their smart cards to other cardholders' cards. These funds would immediately be available to the client.
An example of an agent would be an employer. The transaction would take place by funds transfer from the agent's card to the client's card.

3. **Can be divided into a two step Process**

Step 1: An agent loads funds onto his/her card using the on-line transaction method described above.
Step 2: The client inserts his/her smart card into an EFT device. Once the necessary passwords/fingerprints have been presented, the amount requested by the client will be debited from the agent's smart card memory and transferred to the memory of the client's smart card (Aplitec, 2003).

SPENDING

Once funds have been loaded, the funds on the client's smart card can be used at a merchant. The transaction takes place between the client and the merchant smart cards using an off-line terminal – looks similar to a POS device.

The electronic value of the transaction will transfer from one card to the other. The parties to the transaction do not have to be concerned with security paraphernalia such as signatures, verifications, authorizations, hot cards, fraudulent notes, and credit terms. The merchant would not have to carry any float and would always be offered the right amount.

SETTLE

The funds collected by the merchant would then be credited to the merchant's bank account. The "settlement' process could take place at the closing time of the business or at any other time convenient to the merchant by means of batch processing.

ADDRESSING THE PROBLEMS IDENTIFIED IN BANKING THE UN-BANKED

Information Technology Managers of Swaziland's two largest banks, namely Standard Bank Swaziland and the Swaziland Development Bank, both advise that the costs of servicing the mass market are high due to a variety of reasons, the main ones being:

- High overheads involved in servicing such markets
- High illiteracy levels within such markets
- Reluctance to use technology
- Lack of feasible means to uniquely identify individuals within the mass market
- Unstable incomes of individuals
- Poor ways of tracking and locating the whereabouts of such individuals with regards to employment or places of residence
- Low transaction volumes per individual and lack of high revenue generating products per individual (making it not worthwhile for financial institutes to service this market)

The proposed solution minimizes running costs by replacing the need for real time processing with that of offline processing. As previously mentioned, this is achieved by storing customer information on a smartcard as opposed to having it on a centralized real time database. Transaction information is captured on merchant smartcards and is downloaded in batches to a centralized system periodically at the merchant's convenience. Card data downloads may be performed at the merchant's premises or at any other site that hosts a NET1 POS terminal with a line link to the bank's central server. Merchants may, if they wish, purchase completely offline POS terminals for use in their stores and then share amongst themselves one online terminal through which their merchant cards may be inserted in turns to download data. As offline NET1 POS terminals need only facilitate card-to-card transactions and do not need inbuilt modems and costly encryption/decryption inbuilt systems they typically cost between R40 – R80, whereas most other banking POS terminals range from R6000 upwards (Belamont 2003).

Low infrastructural costs complemented with the easy distribution of delivery channels, makes the NET1 solution ideal for extending banking services to rural or lowly populated areas. Furthermore, with minimal infrastructural expenses, banks are in a position to reduce transaction charges made to customers and as such, provide services at a profit even to the lower earning populace. As such markets form the greater part of the Swazi and most other populations, transaction volumes (and consequently bank revenues) may be increased, making the provision of such services highly profitable.

Over and above cost reduction benefits, Net1's solution is further made attractive to the un-banked as it's biometric identification mechanism reduces the need for customers to memorize passwords and/or access codes. Biometric identification minimizes the literacy requirements for the usage of such technology whilst also enhancing the security of the system. With minimum literacy requirements and enhanced security features, the solutions attractiveness to end-users is increased thus reducing their reluctance to use technology.

Biometric identification also enables banks to identify and trace customers confidently, eliminating the need to link their customers through passport and other forms of ID numbers Swaziland's mass market clientele often do not posses.

SHORTCOMMINGS OF THE NET1 SOLUTION

Although the solution proposed by NET1 addresses many of the problems inherent in trying to bank the un-banked, several setbacks exist that may discourage banks and governments from readily adopting it. This section describes such mitigating factors.

Problem 1: Although the NET1 solution is able to successfully cater for the offline debiting and crediting of customer accounts, it is not a fully fledged banking system and therefore does not cater for the many other services offered by banks. Banks wishing to adopt the solution therefore, would still need to keep and pay annual

license fees for, their existing banking system in order to continue providing their full range of services. The total solution therefore may be costly.

Problem 2: The NET1 solution utilizes NET1's patented card-to-card transacting concept as opposed to the card-to-machine methodologies used by the majority of ATM or POS systems in existence today. Banks wishing to adopt the solution therefore would not be able to take advantage of their existing infrastructures (ATM and POS networks) and would need to implement an additional network of NET1 capable electronic delivery channels, which again adds to the overall solution cost.

Problem 3: Although the NET1 solution is an offline batch processing system and as such eliminates the costs associated with real-time processing, the system still requires the use of a centralized backend system to store customer and transactions information as a contingency, should customers loose their smartcards. The setup and ongoing support of the backend systems utilized is relatively costly when compared to other aspects of the solution. An ideal solution would replace such a contingency system with a less expensive one.

CONCLUSION

The majority of the Swazi population resides in rural small population areas disbursed throughout the country. Through article assessments and interviews, the research has proven that as a result of this, the solutions implemented are too costly to be extended to provide banking services to the majority of the Swazi population, as revenues generated through transaction volumes do not exceed the high costs of maintaining their associated delivery channels (branch networks, ATM & POS networks etc).

It has been proposed that to successfully bank the un-banked, future-banking solutions should incorporate several revolutionary ideas and technologies such as those developed and patented by NET1 Solutions. Broadly, banking solution vendors should have the following targets in mind when enhancing or developing their systems to cater for the mass market. Newer systems should facilitate:

i. Offline processing in order to eliminate overheads associated to real time processing. This necessitates the storage of client account information on portable media (*e.g.* smartcards)

ii. Distributed processing, and remove entirely the need for centralized processing

iii. Biometric identification:

   a. To reduce the literacy levels necessary to perform banking transactions (removal of password requirements) and,

   b. To minimize fraud.

iv. Cost effective delivery channels (NET1 POS terminals are in the range of R40 – R80 as opposed to standard POS machines that often cost above R6, 000 or ATM machines that may exceed R250, 000 per machine)

v. AC power supplies to delivery hardware components (NET1 POS terminal may be battery operated and therefore can more widely distributed)

The proposed system promotes the smart card as a personal, portable but secure banking account that can be loaded with funds through salary or wage payments, pension or welfare benefits distribution systems, unemployment insurance payments and cash. The card can also be utilized by the mass market to budget and effect payments at Points of Service (POS). Most of the functions provided operate in off-line environments, that is, without the need to communicate with the card issuer at the time of the transaction.

Dr. *E. E. Ngalande* (BMI-T/IDC African ICT Forum 2003), the governor of the Malawi Central Bank pointed out that the Aplitec solution was rich in functionality, which when implemented, would enhance the lifestyle of all Malawians. It was felt that the Aplitec solution provides a unique and powerful financial instrument that can be offered to the people of Malawi regardless of their financial standing. The similar paradigm could be utilized in the Swazi nation due to similarities between the two countries (size, population, economic output, employment *etc.*) and adapted to the cultural lives of the Swazi public.

Considering that more than half of Swaziland's population remains un-banked due to the banking costs incurred, infrastructural requirements, demographical status *etc*, and the proposed solution illustrate the potential to bank the overlooked community. The Aplitec solution is not in direct competition with the banking institutions, and poses no threat, but works in conjunction with the institutes in order to spread communal reach to its maximum potential. This research paper could not possibly cover every aspect of the subject, but should at least form a basis that could be worked from in the near future.

APPENDIX A: Swaziland at a Glance

Swaziland at a Glance	
Estimated Total Population (2001)[1]	1,035,456
Estimated Population > 16 (2001)[2]	548,792
Estimated Unemployment (2001)	40%
Total Employment (Formal & Informal) (2000)	111,578
of which:	
Formal Sector Employment (2000)	93,962
Non-Private Sector Employment (2000)	32,853
Total Employment (Formal & Informal) + subsistence farming	270,000
% of Population in Urban Areas (2001)	23%
% of Population <16	47%
Population growth (average for last decade)	3.2%
Estimated % of Population with HIV/AIDS (2002)	34%
Inflation (2001)	7.5%
GDP per capita (2001) (Emalangeni)	9,286

APPENDIX B: Banking Products in Swazil and

Examples of Bank Products in Swaziland		
Bank	**Product Name**	**Description**
SwaziBank	Overdraft Facility	Short term lending facility linked to Current Account subject to application and approval. Stable income or eligible businesses and good account history required. Interest charged on utilised portion only. Repaid anytime without penalty.
SwaziBank	Corporate/Government guarantee Scheme	Organisation places deposit with Bank to be loaned to their staff. Individual recommended by employer, bank will do independent assessment of application. For housing, personal or ca loans. Organisation and Bank signs agreement with regard to the operation of the scheme.
SwaziBank	Corporate lending/Corporate Overdrafts	Linked to current account. Customer can overdraw account to agreed or authorised amount.
SwaziBank	Agricultural Loans	Available to farmers for farm purchases, farm development and sugar can plantations.
SwaziBank	Syndicated Lending	The Bank will spread and/or share the responsibility with other Financial Institutions.
SwaziBank	Venture Capital Financing	Provides long term committed share capital to help unquoted companies grow and succeed. Swazi Empowerment tool for local Swazis.
SwaziBank	Foreign Exchange	Business can perform all foreign deals through Letters of Credit Bills of Exchange and also buying and selling of Foreign Currency
SwaziBank	Autoeasy Vehicle Finance: Instalment Sale	Personal and company use. Deposits referred to as installments are not tax deductible. Insurance, licence, certificates etc are individual's responsibility. Full use of vehicle. Age vary between new to 10 years old, Cash contribution 10 % - 35 % and repayment periods 24 to 60 months. First premiums to be paid before it is released to individual and renewed annually for duration of installments.
SwaziBank	Autoeasy Vehicle Finance: Financial Lease	For business purposes. Lessee gets usage of vehicle. Upon expiry vehicle is returned to bank or can be purchased from the bank for the outstanding value or nominal amount agreed by SwaziBank. Or enter into secondary rental agreement on the same vehicle. Insurance, licence, certificates etc are own responsibility. Full use of vehicle. Rentals due on first of every month.

APPENDIX C: Use of Financial Services

Financial product	Never had	Used to have	I have it now	I don't have but others in household have	Don't know	Not answered
An ATM card	66.9	4.3	16.1	7.8	5.0	0.0
A Post Office Savings Account	88.6	0.5	0.2	0.2	10.6	0.0
Savings/Transaction account from a bank	33.9	16.2	35.3	12.4	2.2	0.0
Mortgage bond or housing loan from a bank	88.1	1.3	2.2	0.5	7.9	0.0
Current or Cheque account	86.3	1.3	4.1	1.7	6.5	0.2
Debit card	84.8	0.0	0.2	0.0	15.1	0.0
Credit card – Visa/ Master/ American Express/ Diners Club	84.1	0.2	1.8	0.3	13.6	0.0
Garage card/ Petrol card	89.4	0.0	0.5	0.0	10.1	0.0
Transaction/ Transmission account	83.4	1.2	2.3	0.8	12.3	0.0
Fixed Deposit account	87.3	2.6	3.6	2.3	4.1	0.0
Vehicle finance from a bank	90.2	1.0	0.7	1.2	7.0	0.0
Loan from a bank	88.6	5.0	4.1	0.8	1.5	0.0
Call account with a bank	92.9	0.3	0.3	0.3	6.0	0.2
An overdraft at the bank – personal	90.2	0.3	0.2	0.2	9.1	0.0
An overdraft at the bank – for your business	90.4	0.3	0.0	0.2	9.1	0.0
Loan from a registered micro-lender	92.9	3.6	2.8	0.3	0.3	0.0
Loan from an unregistered money lender	83.3	11.6	4.0	0.8	0.3	0.0
Membership of a *stokvel*/ motshelo or savings club	71.4	4.6	19.5	3.6	0.8	0.0
Loan and/or savings from a NGO	93.0	1.2	2.0	0.2	3.3	0.3
Account with a store	61.4	16.9	16.1	5.3	0.3	0.0
Loan and/or savings from Savings and Credit Co-operative	87.4	2.5	6.5	2.2	1.5	0.0

Table 7: Use of financial services (saving, transaction and credit)

Source: FinScope Swaziland 2003 (Question 41)

APPENDIX D: Use of Credit offering Financial Services

Financial product	Never had	Used to have	I have it now	I don't have but others in household have	Don't know	Not answered
Mortgage bond or housing loan from a bank	88.1	1.3	2.2	0.5	7.9	0.0
Current or Cheque account	86.3	1.3	4.1	1.7	6.5	0.2
Credit card – Visa/ Master/ American Express/ Diners Club	84.1	0.2	1.8	0.3	13.6	0.0
Transaction/ Transmission account	83.4	1.2	2.3	0.8	12.3	0.0
Vehicle finance from a bank	90.2	1.0	0.7	1.2	7.0	0.0
Loan from a bank	88.6	5.0	4.1	0.8	1.5	0.0
An overdraft at the bank – personal	90.2	0.3	0.2	0.2	9.1	0.0
An overdraft at the bank – for your business	90.4	0.3	0.0	0.2	9.1	0.0
Loan from a registered micro-lender	92.9	3.6	2.8	0.3	0.3	0.0
Loan from an unregistered money lender	83.3	11.6	4.0	0.8	0.3	0.0
Membership of a *stokvel* / motshelo or savings club	71.4	4.6	19.5	3.6	0.8	0.0
Loan and/or savings from a NGO	93.0	1.2	2.0	0.2	3.3	0.3
Account with a store	61.4	16.9	16.1	5.3	0.3	0.0
Loan and/or savings from Savings and Credit Co-operative	87.4	2.5	6.5	2.2	1.5	0.0

Table 12: Use of financial services (credit)
Source: FinScope Swaziland 2003 (Question 41)

APPENDIX E: Banks of Swaziland

Name	Address
Standard Bank Swaziland	Standard House, Swazi Plaza Mbabane
First National Bank Swaziland (FNB)	Head Office, 2nd Floor Sales House Building Swazi Plaza, Mbabane
NedBank Swaziland Limited	Head Office, NedBank Centre, Swazi Plaza, Box 68, Mbabane
SwaziBank	Engunini Building, Gwamile Street, Mbabane
Central Bank Swaziland	Central Bank Building, Warner street, Mbabane

Compiled by K.C. Thring, 2003

APPENDIX F: The Operations of Cooperatives

EXAMPLES OF COOPERATIVES:

Asikhutulisane Savings and Credit Cooperative:

This is one of the biggest SACCOs.

Membership:

- Minimum age is 18 years.
- A E300 joining fee is required.

Loans:

- Members only become eligible for loans after six months.
- The maximum size of the loan is based on the member's investment with the Society in the form of shares, permanent savings and normal savings.
- Loans include personal, business, building, school fees, mortgage, farming and several others and are processed within 2 days.

Savings:

- Members must save a minimum of E10 in normal savings.
- A minimum of E120 per annum in permanent savings is required.
- A member can hold shares valued at not less than E100 and not more than E300 for the duration of membership.
- Special deposits, similar to demand savings, are available to approved members.

Phaphamani Maswazi Savings and Credit Cooperative:

This cooperative was formed by and for employees from the Swaziland Railway (SR).

Objectives:

- To promote and improve the standard of living for SR employees.
- To provide loans to members at affordable interest rates.
- To invest in micro-project development by investing in members' projects.

Loan Terms:

- Joining fee of E30.
- Monthly subscriptions of not less than E60.
- Shares of E500.
- Savings depend on the ability of each employee.
- Lending ratio of 1:2 of employee total contributions.
- Repayment period is 36 months.

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