



**Nelson Mandela  
Metropolitan  
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**Business School**  
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# **E-commerce as an alternative marketing channel**

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BUSINESS SCHOOL**

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2011**

## **DECLARATION**

This treatise represents my own work and due acknowledgment is given in the references whenever information is derived from another source. No part of this treatise has been or is being currently submitted for another qualification at any other university

Clifford Mounsear-Wilson  
29 August 2011

## **ACKNOWLEDGEMENTS**

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## **ABSTRACT**

Information technology (IT) has become an integral part of the success and globalisation of business over the last two decades. It is hard to imagine how the efficiencies expected in today's fast paced business world could possibly be achieved without the advancements in IT. The most significant of these advancements is arguably the advent of the Internet which has empowered businesses of all sizes by giving them the means to promote their products and services at a relatively low cost in markets that would previously have been inaccessible.

The aim of this study was to assess whether e-commerce represents an alternative channel for a brick and mortar company wishing to follow a market penetration strategy. The study was based around a company, Canoa Eastern Cape, which trades in the office automation industry in the Eastern and Southern Cape of South Africa.

The study investigated the history of Canoa Eastern Cape, focusing predominantly on the growth strategies followed by the business in the past. With a view to the future, growth strategies which could potentially be followed by Canoa Eastern Cape were also investigated. The result of these investigations was a recommendation that Canoa Eastern Cape should follow a market penetration strategy, which will see the business marketing its existing products within its current market by making use of a new distribution channel, more specifically e-commerce.

In order to assess the suitability of e-commerce as a tool within a market penetration strategy a literature study was conducted to get a better understanding of e-commerce and its viability as business tool. The literature study focused on eight core concepts felt to be critical in the evaluation of e-commerce, namely:

- the development of e-commerce over the past years;
- the future of e-commerce;
- whether e-commerce is a financial success or not;
- requirements for e-commerce to be successful;

- products that customers are prepared to buy online;
- industries most affected by e-commerce; and
- demographics of e-commerce users; and
- e-commerce in the office automation industry.

Using the information gained in the literature study as a basis from which to start, an empirical study was conducted. The objective of the empirical study was to obtain data which would be used to assess the level to which e-commerce has been adopted by consumers in the specific geographic area and whether these consumers are willing and able to make use of e-commerce as an alternative to conventional purchasing for the procurement of office automation consumables and office automation equipment. A quantitative research paradigm was adopted, making use of a structured questionnaire to gather information from the sample of Canoa Eastern Cape's customers. The data collected from the empirical study were analysed using univariate and bivariate analysis.

The findings of the empirical study suggested that:

- demographics are a poor indicator of adoption of e-commerce;
- there is a significant adoption rate within the sample:
  - 79.85% of the respondents reported to have used e-commerce before for personal use; and
  - 59.13% reported to have used e-commerce before for business use;
- there is a high rate of willingness to use e-commerce again:
  - 91.09% of the respondents indicating that they would use e-commerce again for personal use; and
  - 80.18% indicating that they would use e-commerce again for business use;
- there is a high likelihood that consumers will buy office automation consumables through an e-commerce channel, with 65.82% of the respondents indicating that they would be likely or very likely to buy consumables through an e-commerce channel;

- there is no significant difference in the adoption rates between the three main areas within the targeted sample, that is, East London, Port Elizabeth and George and Knysna.

Given the findings of the empirical study it is felt that an e-commerce solution does present a viable alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a market penetration strategy.

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## **CHAPTER 1 – E-COMMERCE AS AN ALTERNATIVE MARKETING CHANNEL**

### **1.1 INTRODUCTION**

Firms are constantly striving to improve the returns for their stakeholders and grow sales from year to year. This is abundantly clear in the highly competitive office automation industry in South Africa. As with most industries, firms must look to apply their limited resources to those areas of the business that will yield the best, sustainable returns. Canoa Eastern Cape (Pty) Ltd (Canoa Eastern Cape) is part of a national distribution network. The directors have identified the consumable sales department as the one area which gives consistent returns from month to month, but shows very little growth.

Canoa Eastern Cape is an autonomous entity whose directors are empowered to make strategic decisions that they believe will best serve the stakeholders. As such, the directors make all decisions and assume all risks relating to such decisions, which impact on dealings within the Eastern and Southern Cape.

Canoa Eastern Cape operates primarily in the business-to-business (B2B) environment and currently makes significant use of information and communications technology (ICT) in the form of emails, both for communication and marketing, as well as having a web-site that serves as an information portal for current and prospective customers. From a financial point of view Canoa Eastern Cape makes use of internet banking for all out payments to suppliers, as well as for debit order collections from customers. The challenge now is to take this one step further and implement a system that would allow customers to purchase goods on line, without having to contact a sales consultant to assist them.

### **1.2 PROBLEM STATEMENT**

Grey, Olavson and Shi (2005) point out that the significance of B2B e-commerce was predicted as early as 1998 and that the internet boom created high expectations for the role of e-marketplaces and their potential to enhance supply chain efficiency. The importance of e-marketplaces that enable automated transactions and

collaboration between buyers and sellers, or e-commerce as it is otherwise known, is highlighted by Yu (2007) who states that these e-marketplaces accounted for in excess of US\$ 3 trillion in trade worldwide during 2003. A staggering eighty-six percent (86%) of this trade was in the B2B sector. Only 6.5% of this B2B trade was said to have taken place in Africa and the Middle East.

Whilst there seems to be no doubting the significance of e-commerce and more particularly the B2B trade conducted via e-commerce, Dai and Kauffman (2000) raise the following point that could be of concern to the directors of Canoa Eastern Cape. Through online markets buyers can do one-stop, comparison shopping between thousands of suppliers and select the best source in real-time. This gives firms more flexibility and opportunities of searching for and selecting suppliers, potentially resulting in more attractive pricing. The concern this raises is that profitability will be negatively affected by implementing e-commerce, as pricing will be freely available and the profit opportunities that exist due to “value adds” to the customer will be lost. The ability to differentiate a firms offering from that of their opposition, through personal contact, is also reduced.

The fear of reduced profitability is, to a degree, allayed by Martins and Oliveira (2010) who state that “firms using e-business achieve considerable returns through efficiency improvements, inventory reduction, sales increase, customer relationship enhancement, new market penetration and ultimately financial returns”. In addition to this Chambers, Johnston, Phihlela, Pycraft, Singh and Slack (2010) found that internet selling had a significant impact on the interaction with the customer:

- It increased the reach, being the number of customers who can be reached and the number of items they could be presented with; and
- It increased the richness, being the amount of detail which can be provided concerning both the items on sale and the customers’ behaviour in buying them.

Daniel, Meyers and Wilson (2002) classified firms in terms of the degree to which they had adopted e-commerce. Firms are classified in one of four (4) stages:

- Firms at the first stage are developing their first e-commerce services;

- Firms at the second stage are using e-mail to communicate with customers, suppliers and employees;
- Firms at the third level of adoption have information-based websites operating and are developing on-line ordering facilities;
- Finally, the most advanced adopters have on-line ordering in operation and were developing on-line payment capabilities.

For the advantages of reach and richness (Chambers et al. , 2010) to be realised it is felt that there would have to be a large number of customers operating at a high level of e-commerce adoption, being level three and four as set out by above by Daniel et al. (2002). A concern is that the current level of e-commerce adoption in the Eastern and Southern Cape is possibly not at a high enough level presently to realise these advantages.

One important factor which has been highlighted in the literature is that e-commerce cannot be undertaken if it does not align with the corporate strategy. "In common with any other business activity, e-commerce needs to be guided by corporate strategy. There is a trend that on the road to developing e-commerce, firms may neglect the fundamentals and overlook fundamental business principles and forget the integration with corporation strategy" (Jiang, 2007).

Kwun and Nickels' (2006) research has suggested that gaining a competitive advantage requires users of technology to be early adopters and that higher levels of e-commerce adoption are associated with increased levels of organisational performance. It is this increased organisational performance which Canoa Eastern Cape is looking to achieve.

The literature that has been reviewed clearly indicates that e-commerce has the potential to increase sales and reduce costs within a firm, but at the same time it could reduce margins due to increased competition. One area that the literature reviewed did not sufficiently deal with was the size of investment required to implement an e-commerce solution and whether or not an e-commerce solution can be implemented to serve a small geographical area. The management dilemma is thus, for a firm trading only in the Eastern and Southern Cape, will the expansion into



e-commerce result in sales growth and higher percentage return on investment and will the investment required to implement a system capable of handling the e-commerce functionality be justified?

### 1.2.1 Conceptual framework

In order to achieve sales growth and an increase in percentage return on investment Canoa Eastern Cape has the following three options which it can choose from. It can either:

- employ additional sales staff;
- buy a competitor's business; or
- expand into e-commerce.

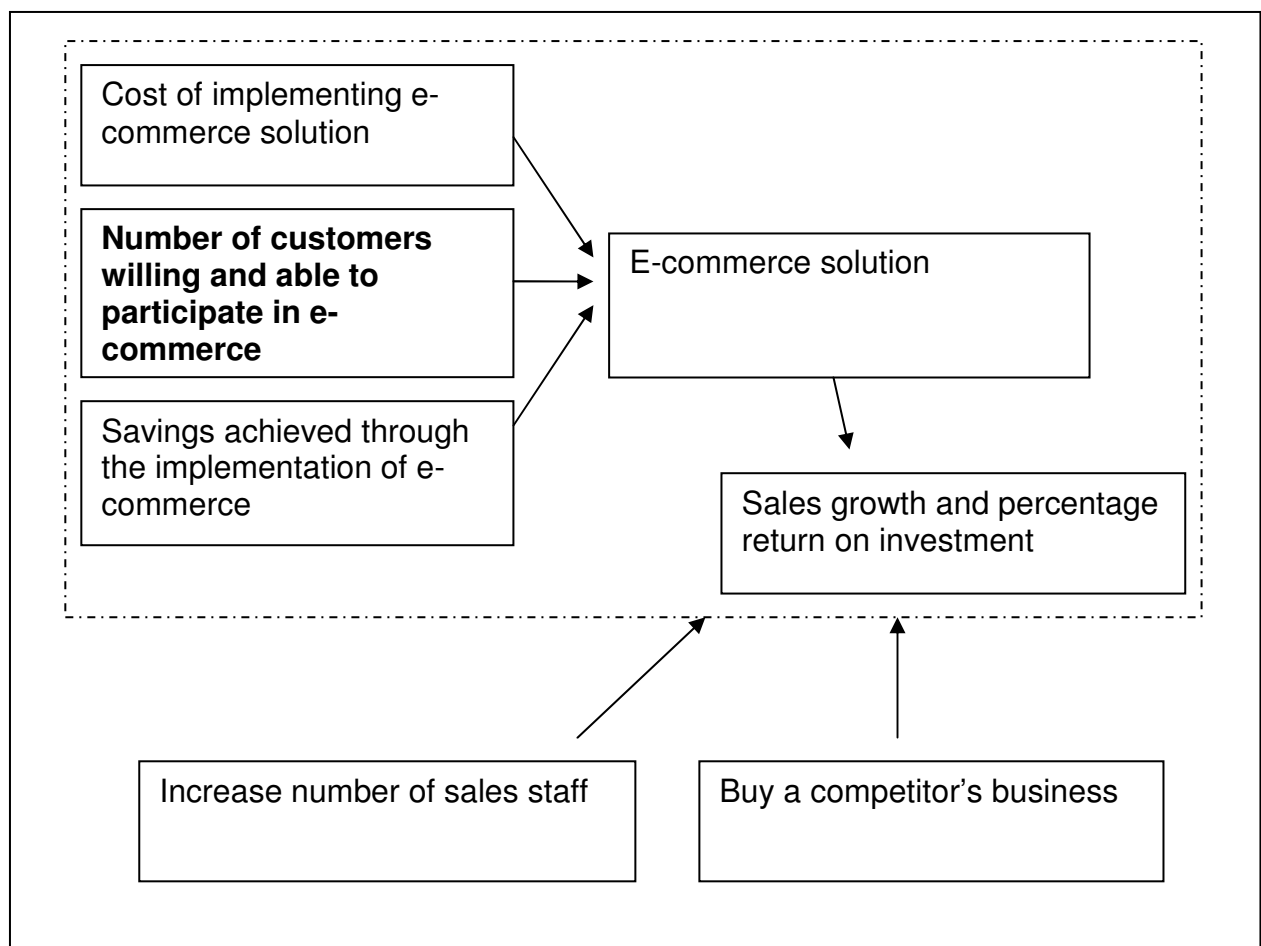


Figure 1.1: Conceptual Framework

Figure 1.1 clearly sets out the three options above. Due to the degree to which Canoa Eastern Cape currently makes use of ICT this research will focus on the option of expanding into e-commerce as a means to grow sales and increase the percentage return on investment achieved by the firm. It is felt that, of the three elements linked to e-commerce as set out in Figure 1.1, this study should focus on determining whether there are sufficient customers willing and able to participate in e-commerce in the Eastern and Southern Cape to justify the investment in an appropriate e-commerce solution.

### **1.3 RESEARCH OBJECTIVE**

The primary objective of this research is:

- to establish if an e-commerce solution presents an alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a market penetration strategy.

The following five secondary objectives were considered to be critical elements in the evaluation of the primary objective:

- Determine if customers in the Eastern and Southern Cape of South Africa are prepared to purchase goods and services through an e-commerce channel;
- Determine what the reasons for adoption or the failure to adopt are;
- Profile the demographics of users and non-users, including the industry within which they trade and the entity size;
- Establish if there is a difference between the adoption rate in the East London, Port Elizabeth and Knysna and George areas;
- Establish which of the two groups of products, office automation consumables and office automation equipment, customers would be prepared to buy online.

### **1.3.1 Research Design**

The process outlined below will be followed during the course of this research project:

- Conduct a secondary literature review;
- Construct a questionnaire based on the secondary literature review;
- Review the questionnaire with an expert to assess reliability and validity;
- Improve the questionnaire based on the results of the assessment by the expert;
- Collect data using a questionnaire;
- Capture data in excel computer software programme;
- Analyse data by means of various statistical techniques (Statistica);
- Interpret the findings and make recommendations to management.

### **1.3.2 Research Questions**

For the purposes of this research, and given the research objectives highlighted earlier, the following research questions were formulated:

Q<sub>1</sub> = are customers in the Eastern and Southern Cape of South Africa prepared to purchase goods and services through an e-commerce channel?

Q<sub>2</sub> = what are the reasons for adoption of e-commerce or failure to adopt e-commerce and is there any difference in the adoption between East London, Port Elizabeth, Knysna and George?

Q<sub>3</sub> = what are the demographics of users and non-users, including the industry within which they trade and the entity size?

Q<sub>4</sub> = are customers prepared to buy office automation consumables and office automation equipment online?

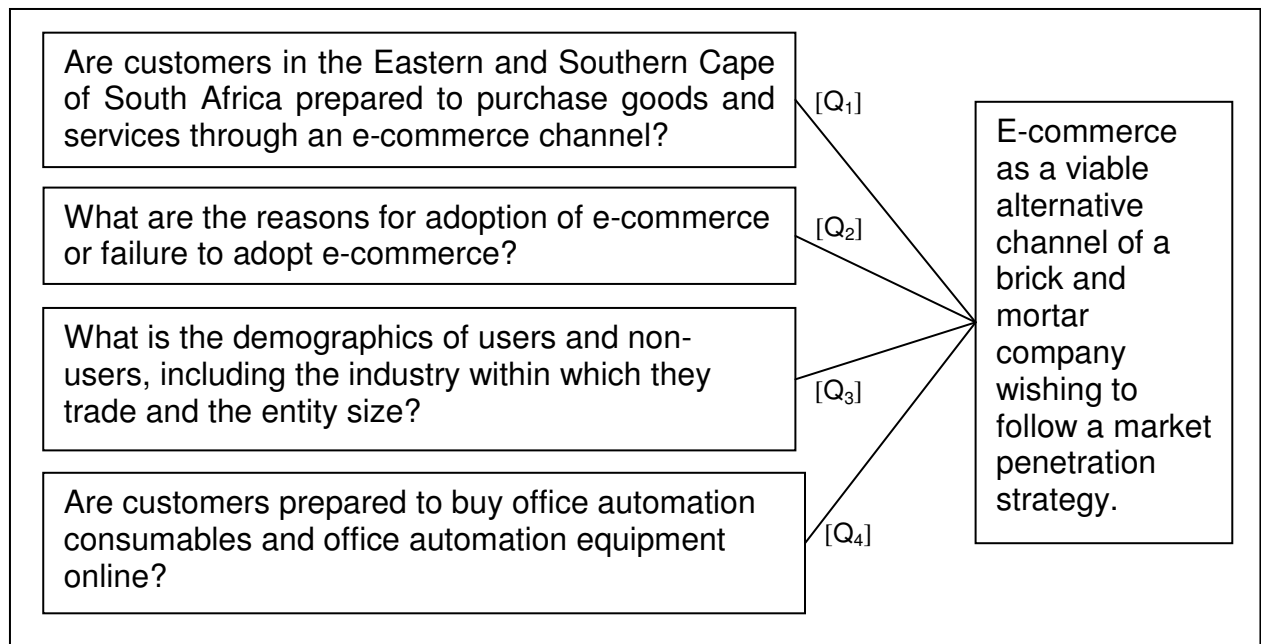


Figure 1.2: Research model to determine the viability of implementing an e-commerce solution

## 1.4 RESEARCH METHODOLOGY

There are two main research paradigms, namely quantitative and qualitative research.

The quantitative paradigm, otherwise known as “positivism” is, according to Collis and Hussey (2009), a paradigm that originated in the natural sciences and rests on the assumption that social reality is singular and objective and is not affected by the act of investigating it. The research involves a deductive research approach with a view to providing explanatory theories to understand social phenomena. Quantitative research looks to test theories by selecting large samples and testing the relationships between the identified variables. The results are objective and can be generalised to the population.

Robinson and Savenye (1996) define qualitative research as research devoted to developing an understanding of human systems, be they small, such as a technology-using teacher and his or her students and classroom, or large, such as a cultural system. Qualitative research studies typically include ethnographies, case

studies and generally descriptive studies. Qualitative research looks to propose theories based on the study of small samples. The results of this kind of research are subjective and open to interpretation. The results of qualitative studies cannot generally be applied to an entire population due to the small sample sizes and the fact that the findings are based on the interaction between the researcher and the subject.

This study will be based in the quantitative paradigm as it looks to test a theory by obtaining data which can be subjected to statistical analysis.

#### **1.4.1 Sample**

In this research non-probability sampling will be used, with convenience sampling being the chosen method due to the fact that it is the least costly and most readily available method of sampling. Due to the fact that this is a quantitative assignment, the sample needs to be large and for this reason the sample will be selected based on the database of customers and suppliers with whom Canoa Eastern Cape currently trades. This database contains in the region of fourteen thousand (14,000) firms and individuals that can potentially be surveyed. These potential respondents are split twenty-two percent (22%) in the East London area, thirty-eight percent (38%) in the Knysna and George area and forty percent (40%) in the Port Elizabeth area. This database is made up of firms that trade primarily in the Eastern and Southern Cape, although there are some entities that have a national and international reach.

A sample of about 7500 entities will be selected from the database, with a selection from each of the three areas, namely Port Elizabeth, East London and Knysna and George. Given that the database has industries listed, the sample will be taken from a variety of different industries. Should a response rate of 3% be achieved this will result in 250 respondents completing the questionnaire. It is felt that this level of responses will be sufficient to allow for statistical analysis.

### **1.4.2 Measuring instrument**

The research questions will be assessed making use of a self-completion questionnaire, an example of which is contained in Annexure A. The questionnaire will include the entity information questions and will be distributed via email and post to the sample identified in section 1.4.1 above. As this is a quantitative study the questions making up the questionnaire will be closed questions, that is, allowing the respondents to choose from predetermined answers where possible. Collis and Hussey (2009) suggest that this approach will aid analysis and will result in better response rates from those sampled as it is less time consuming for the respondent to complete the questionnaire.

The willingness of entities to participate in e-commerce will be measured using the following criteria:

- Prior experience;
- Price expectations;
- Service level expectations.

The ability of entities to participate in e-commerce will be measured using the following criteria:

- Effect of company policy;
- Internet access ;
- Payment methods.

### **1.4.3 Reliability and Validity**

According to Collis and Hussey (2009) reliability is concerned with the findings of the research, which findings are said to be reliable if the research is repeated and the results thereof are consistent with the initial findings. For the purposes of this study the questionnaire will be submitted to an expert for the assessment of the questionnaire's reliability.

Collis and Hussey (2009) describe validity as the extent to which the research findings accurately reflect the phenomena under study. It is important to ensure that

the questions used do in fact measure what they are supposed to measure. As with reliability, the questionnaire will be assessed for validity by the expert.

#### **1.4.4 Data collection**

The questionnaire relating to the customer survey will be delivered to the identified sample by email. This method of delivery has been chosen as it was felt that this will ensure that the questionnaire will reach the desired respondent, and will do so in the most efficient manner. The size of the sample dictated that a cost effective medium be used.

The email that will be sent will contain an introduction and an explanation of the reason behind conducting the survey. Included in the survey will be a link to the questionnaire hosted on survey-monkey, a web based questionnaire service. This method of data collection has been selected as it will produce a comma delimited file with all responses which can be used for data analysis.

#### **1.4.5 Data analysis**

Findings from the primary research will be submitted to the Nelson Mandela Metropolitan University Unit for Statistical Consultation. For the purposes of this research the data analysis will be conducted by making use of the Statistica software.

Initially descriptive statistics, being statistics used to summarise data, will be used to determine if there are patterns within the data accumulated. It is envisaged that statistical analysis will be used to calculate frequency distributions, measure central tendency and measure dispersion within the sample.

The descriptive statistics will be followed by inferential statistics, being statistics that lead to conclusions about the population based on the sample, which will be used to offer answers to the research questions. Based on these statistics conclusions will be made with regards to the research objectives, both primary and secondary.

## **1.5 TERMINOLOGY**

The following terms are deemed to be important and are explained further so as to ensure that they are fully understood

- Consumable sales – the sale of ink and laser printer cartridges and multi-functional cartridges, paper and other office related consumable items. This does however not include stationery such as pens, pencils and files;
- Eastern and Southern Cape – this means the geographical area from Mthatha in the North East to Mosselbay in the South West, with the primary focus being the economic centres of East London, Port Elizabeth, Knysna and George.
- Percentage return on investment (ROI) – this is the entities earnings before interest and tax (EBIT) expressed as a percentage of the total productive assets of the business;

## **1.6 OUTLINE OF THE PROPOSED STUDY**

It is envisaged that the study will have the following structure.

CHAPTER 2: LITERATURE REVIEW – CANOA EASTERN CAPE (PTY) LTD

CHAPTER 3: LITERATURE REVIEW – E-COMMERCE

CHAPTER 4: THEORETICAL MODEL

CHAPTER 5: RESEARCH FINDINGS

CHAPTER 6: DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

## **1.7 SUMMARY**

This chapter has given a brief overview of the focus of the study and the methodology to be followed. The following chapter will introduce Canoa Eastern Cape and look into its history and the primary growth strategies it has followed. It is this history and insight that will be called upon when the recommendations are proposed later in this study.



## **CHAPTER 2 - AN OVERVIEW OF CANOA EASTERN CAPE (PTY) LTD**

The objective of this research is to establish if an e-commerce solution presents an alternative channel for a company wishing to follow a market penetration strategy. In order to give the research focus and give added value to the researcher it was decided to base the research on Canoa Eastern Cape, a company where the researcher serves as the Financial Director.

This chapter will give insight into Canoa Eastern Cape and the journey this company has taken since it started trading in June 1998. An interview was held with the Managing Director, Alan Mounsear-Wilson, to get his reflection on the business and how it has progressed over the last 13 years. In addition to this minutes of directors' meetings were scrutinized, and the company's financials were analysed.

The chapter will commence with a look at the industry, followed by the vision and mission. The history of Canoa Eastern Cape will be dealt with in five parts, namely, the beginning, acquisitions, development and implementation of new customer relations management package and integrated financial information systems solution, split into five companies and financial results. The chapter concludes with an investigation of growth strategies which could be followed by Canoa Eastern Cape into the future.

### **2.1 INDUSTRY**

Canoa Eastern Cape trades in office automation industry, with a focus in four primary segments, being:

- the sale of hardware – this includes PABX systems, printers, photocopiers and multi-functional machines;
- the sale of consumables – this includes paper and printer cartridges;
- technical support – the servicing of equipment sold; and
- rental finance – the financing of equipment sold.

With regard to the hardware mentioned above Canoa Eastern Cape sells and offers after sales service on products manufactured by Canon, Hewlet Packard and

Samsung. On the consumables front Canoa Eastern Cape offers printer cartridges for a wide range of manufacturers and is the biggest supplier of A4 photocopy paper in the Eastern and Southern Cape (Mounsear-Wilson, 2011).

## 2.2 VISION AND MISSION

According to Mounsear-Wilson (2011) the business does not have a formal vision or mission statement, but there is a pledge taken by all staff. The pledge involves each staff member committing to the values of the company and then making an impression of their hand, using poster paint. The pledge, as set out in Figure 2.1, along with the handprints, are displayed in each of the branches.



Figure 2.1: Canoa Eastern Cape's pledge

In addition to this pledge the following quote from Ghandi (1890, cited in Patel, 2007) is seen to be very important by the directors of the business:

A customer is the most important visitor on our premises.

He is not dependent on us. We are dependent on him.

He is not an interruption of our work. He is the purpose of it.

He is not an outsider of our business. He is part of it.

We are not doing him a favour by serving him. He is doing us a favour by giving us the opportunity to do so.

Davidson (2011), the sales director for the Port Elizabeth office, confirms that this “mission and vision” are reinforced with the teams on a monthly basis at the awards evenings, where the Sales Directors from each area address their teams and speak about the month that passed and then acknowledge those that have performed best.

## **2.3 HISTORY**

### **2.3.1 The beginning**

As per the Certificate of Incorporation issued by the Registrar of Companies (1998a) Moorestoc Investments (No 1) (Pty) Ltd was incorporated on 13 May 1998. On 4 June 1998, as reflected in the Certificate of change of name of company, Moorestoc Investments (No 1) (Pty) Ltd underwent a name change, with the new name being Canoa Eastern Cape (Pty) Ltd (Registrar of Companies, 1998b). Included in the special resolution dealing with the change of name, the main object and main business of the company was changed to the import and export, sales and servicing of office machinery in all its aspects (Mc Lintock & Mounsear-Wilson, 1998). The Mounsear-Wilson Family Trust, represented by Alan Mounsear-Wilson (Alan), and the Trawaral Trust, represented by Terence Leigh Mc Lintock (Terry), each purchased 60 ordinary par value shares of one rand each (Watson, 2011).

Alan started in the office automation industry in 1974 where he was employed at Nashua, one of the pioneers of the office automation industry in South Africa. Terry and Alan worked together in their early careers at Nashua and became well known and respected within the office automation industry (Mounsear-Wilson, 2011).

According to Mounsear-Wilson (2011) the establishment of Canoa Eastern Cape (Pty) Ltd came about as a result of a number of factors. Firstly, the Canon business in Port Elizabeth was being poorly run and was not profitable. This resulted in the business owing their main supplier, Canoa Importers (Pty) Ltd, a substantial amount of money, with no realistic prospects of liquidating these debts. Secondly, it was Terry, the owner of Canoa Importers (Pty) Ltd, vision to create a strong distribution network throughout South Africa so as to reduce the risk of Canon Inc, the international company, being able to enter the South African market directly and destroy his business. This perceived risk was reduced by changing the structure of the business. The “head-office” structure that has been built up in Johannesburg was reduced and replaced with a focus on ensuring that each region had a strong management team to grow into the future. Terry went about regaining 100% ownership of the distribution outlets, with only a couple of exceptions to this practice, Canoa Eastern Cape being one of these exceptions. At this time Alan was the MD of Canoa Importers.

In June 1998, Canoa Eastern Cape employed 30 people. The team was made up of consumable sales representatives, hardware sales representatives, service technicians and administrative staff.

### **2.3.2 Acquisitions**

Due to the fact that limited growth could be achieved via organic means, the directors of Canoa Eastern Cape have always been open to opportunities that arose in terms of buying businesses within the office automation industry. Below are the acquisitions that Canoa Eastern Cape undertook between 1998 and 2010:

- **Border Typewriter Company (Pty) Ltd (BTC) Port Elizabeth.**

In July 1999, having been in business for just over a year, Canoa Eastern Cape undertook its first acquisition. Canoa Eastern Cape was afforded the opportunity to buy out a competitor who had branches in both East London and Port Elizabeth. The deal was initiated by Canoa Kwa-Zulu Natal (Pty) Ltd, who at the time were in control of the Canon operation in East London. Coull (1999), the Financial Director

of Canoa Kwa-Zulu Natal (Pty) Ltd, confirmed that the amount of R 450,000 which was paid by Canoa Eastern Cape for the Port Elizabeth region of Border Typewriter Company (Pty) Ltd was for the future revenue stream of the service contracts acquired in the region. Mounsear-Wilson (2011) states that this deal increased the base of service customers and revenues for Canoa Eastern Cape and also added a new range of products to their product offering, that being the Riso range of duplicators and their consumables. As part of the deal the staff members of BTC Port Elizabeth were incorporated into the Canoa Eastern Cape business. A number of these people added, and continue to add, significantly to the business.

- **Canon East London.**

The Canon branch in East London was run by Canoa Kwa-Zulu Natal (Pty) Ltd, but this proved to be inefficient due to the distance and the fact that the management of Canon Durban did not see this office as a significant contributor to their overall performance. Given the success that had been achieved in Port Elizabeth by Canoa Eastern Cape, the decision was taken by Terry that Canoa Eastern Cape should take over the East London office. The “blue print” from Port Elizabeth was used to make sure that the operation in East London was streamlined, and the various areas were maximised, using the existing staff. Robert Mounsear-Wilson, who at the time was the stores controller in Port Elizabeth, was appointed the operations manager of the East London branch and Sean Kelly, a senior hardware sales representative in the East London office, was appointed Sales Manager. The branch was responsible for all purchasing of stock, the sale thereof, collection of outstanding debt and the technical support to all customers in the area covering the Transkei and the Border area. All other administrative functions were centralised in Port Elizabeth (Mounsear-Wilson, 2011).

- **Canon South Western Districts - George and Knysna.**

The Canon South Western Districts takeover was similar to that of East London in that the operation, trading as Garden Route Office and Digital Solutions (Pty) Ltd was not performing well under the current management and had deteriorated to the point where all the hardware sales staff had resigned. The management at the time claimed that the area was not capable of producing significant hardware sales and

had decided that the focus of the business was going to be consumable sales. As with East London, Terry decided that it would be best if Canoa Eastern Cape take over the business. This also now ensured that there were four main regions within the Canoa group, namely Western Cape, Eastern and Southern Cape, Kwa-Zulu Natal and Central region. The Canoa Eastern Cape blueprint was implemented, along with a replacement of the management team. Chantelle Caldicott, a previous consumable sales representative at the George office, was appointed as the Operations Manager. Marcel de Ridder, a sales representative from the Port Elizabeth team who was identified by Alan as having the potential to be a good leader, was appointed as Sales Manager in the George Office. Hanno Rein, the hardware sales representative in Knysna, was appointed as the Sales Manager for the Knysna area. This region has performed well and was awarded the “Region of the Year” award for the 2008, 2009 and 2010 years at the Canoa Eastern Cape annual awards evenings (Mounsear-Wilson, 2011).

- **Datatec’s Riso business – George.**

The directors of Canoa Eastern Cape resolved that the Riso business operated by Datatec Minolta in the Southern Cape be purchased for the amount of R 450,000 (Mc Lintock, Mounsear-Wilson & Mounsear-Wilson, 2004). Datatec Minolta, the Minolta dealer in George was Canoa Eastern Cape’s leading competitor in the Riso market in the South Western Districts area. The opportunity to purchase this Riso business arose due to the fact that Konica and Minolta, two manufacturers within the office automation industry, were in the process of consolidating on an international basis and Minolta had decided to change their strategy, from having a dealer network, to buying up all their major dealers and converting them to branches. The Riso product range did not fit into Minolta’s proposed product offering, and was therefore put up for sale (Mounsear-Wilson, 2011). This acquisition was somewhat different to any of the other acquisitions as it was purely the purchase of a service base, and a base of consumable and hardware customers. There were no staff taken over and the business was simply absorbed into Canoa Eastern Cape’s George operation (Mounsear-Wilson, 2004).

- **Henque 3286 CC trading as Olicomm.**

In late 2006, Alan was approached by a business broker in Port Elizabeth to find out if he would be interested in buying the Olivetti dealer in Port Elizabeth, which was operated by Henque 3286 CC and traded as Olicomm. This was seen as a perfect opportunity to absorb a small competitor in the Port Elizabeth market into the Canoa Eastern Cape business. The Canoa Eastern Cape management team felt that Olivetti would not appoint another dealer in the Port Elizabeth area as the barriers to entry were significant in a market that was already serviced by a large number of competitors (Mounsear-Wilson, 2011). In September 2006 it was resolved by the directors of Canoa Eastern Cape that the purchase of the business operated by Henque 3286 CC, for an amount of R 1,600,000.00, be approved (Mc Lintock, Mkukwana, Mounsear-Wilson & Mounsear-Wilson, 2006). Henque 3288 CC's staff were retained to ensure that there was continuity and that the customers had familiar faces to deal with, but the business was moved from their offices in 6<sup>th</sup> Avenue Newton Park to Canoa Eastern Cape's Port Elizabeth offices at 80 Mangold Street in Newton Park. The business consisted of about 200 customers who had service contracts and who bought consumables and hardware (Mounsear-Wilson, 2011).

### **2.3.3 Development and implementation of new customer relations management package and integrated financial information systems solution.**

During early 2006 a decision was made to change the customer relations management (CRM) package used by Canoa Eastern Cape. Up to this point the branches had all operated independent CRM and financial systems. The information from the financial system, Front Office Manager, was then accumulated and manually entered into Pastel to facilitate the financial reporting (Mounsear-Wilson, 2011).

With future growth in mind, it was decided to implement a fully integrated system that would enhance the efficiencies and allow the business to grow through the creation of a competitive advantage, being the efficient use of the information that would be available within the system (Mounsear-Wilson, 2011). The directors of Canoa Eastern Cape passed a resolution, in May 2006, to purchase a customer relationship management software package, being Sales Logix and a financial software package,

being Sage Line 500, from Business Connexion (Pty) Ltd. These two software packages were estimated to cost R400,000 (ex VAT) and with an additional R365,100 (ex VAT) to be spent on the installation thereof (Mc Lintock, Mounsear-Wilson & Mounsear-Wilson, 2006(a)). The initial go live date was planned for the weekend of 3 to 5 November 2006, but this did not materialise (O’Kennedy, 2006). The system finally went live in April 2007. It took a further 24 months, during which time the business suffered as a result of the disruption and the lack of focus on the key success factors of the business, for the system to become acceptably stable (Mounsear-Wilson, 2011).

Having successfully completed the implementation, the management of Canoa Eastern Cape are satisfied that they have indeed created an IS solution which gives them a competitive advantage (Mounsear-Wilson, 2011).

#### **2.3.4 Split into five companies**

According to Mounsear-Wilson (2011) he decided in 2006 to split Canoa Eastern Cape into five separate companies. The aim was three fold:

1. to afford management the opportunity to hold shares and thus incentivize them to remain with the company;
2. to set up an employee trust which would hold shares on behalf of the employees, allowing the employees to share in the profits generated by the businesses;
3. create a vehicle for the introduction of a BBBEE shareholder.

Pursuant to a directors’ resolution taken by Mc Lintock, Mounsear-Wilson and Mounsear-Wilson (2006(b)) four new entities were established. The purpose of the entities was as follows:

1. Canoa Eastern Cape (Pty) Ltd – rental finance and administrative functions for the group;
2. Smart Office Services Eastern Cape (Pty) Ltd (SOS) – after sales service to all customers in the East London/Border, Port Elizabeth and South Western Districts areas. The SOS branding falls in line with a nationwide initiative to



create a multi brand service vehicle, with the ability to service all types of office automation equipment;

3. Ndenza OA (Border) (Pty) Ltd – sale of hardware and consumables to customers in East London and the surrounding areas. They operate as the Canon Business Centre in this area, with an office at Beacon Bay.
4. Ndenza OA (EC) (Pty) Ltd – sale of hardware and consumables to customers in Port Elizabeth and the surrounding areas. They operate as the Canon Business Centre in this area, with an office in Newton Park.
5. Ndenza OA (SWD) (Pty) Ltd – sale of hardware and consumables to customers in George, Knysna and the surrounding areas. They operate as the Canon Business Centre in this area, with offices in George and Knysna.

As it transpired the second objective behind setting up the entities failed as the staff did not see the value in the shares held by the employee trust. In 2008 the staff were made an offer and opted rather for the shares to be transferred back to Canoa Eastern Cape and in return a pension fund was established which better met the staff expectations and allowed them to see the exact valued they were accumulating with less risk (Mounsear-Wilson, 2011).

Similarly, the BBBEE objective was also not a success. After a number of failed attempts to attract and retain the right BBBEE partner, it was decided that the businesses would be better served by concentrating on the other elements of the BBBEE scorecard, such as procurement, employment equity, enterprise development and social responsibility in order to obtain their BBBEE certification (Mounsear-Wilson, 2011).

The splitting of Canoa Eastern Cape in five separate entities coincided with the development and implementation of the new customer relationship management software package. The new entities started trading in April 2007.

### **2.3.5 Financial Results**

This section will give a brief review of Canoa Eastern Cape's audited financial statements up to the point that the business was split as discussed in 2.3.4 above.

The objective of this review is to give an indication of the growth within the business over the years.

Table 2.1: Turnover and profit before tax

Year Ended	Turnover (R)	% Growth	Profit (Loss) before tax (R)	% Growth
June 1999	7 713 027		-698 945	
June 2000	12 922 100	68%	198 380	
June 2001	13 953 646	8%	247 090	25%
June 2002	25 354 516	82%	331 975	34%
June 2003	34 883 228	38%	645 414	94%
June 2004	47 888 507	37%	754 509	17%
June 2005	57 968 846	21%	1 156 603	53%
June 2006	62 293 650	7%	2 723 880	136%
June 2007	61 111 596	-2%	5 772 225	112%

(Annual Financial Statements, 1999-2007)

Mounsear-Wilson (2011) attributes the rapid growth achieved in Turnover between the year ending June 1999 and the year ending June 2007, as reflected in Table 2.1, in large part to the acquisitions that have been described earlier in this chapter. These acquisitions, combined with a passion by management to improve systems and processes and ensure that the IS systems that are in place are used to give a competitive advantage, have ensured that significant advancements have been made.

As no suitable acquisition opportunities have presented themselves since the last acquisition in 2007, the directors are looking to alternate means of growing the Turnover of the business. One area which has been identified as a potential growth area is the exploitation of e-commerce both from a consumable sales, being printer ink cartridges, paper and the like and a hardware sales point of view (Mounsear-Wilson, 2011).

Table 2.2: Expenditure on Fixed Assets

Year Ended	Expenditure on Fixed Assets
June 1999	205 415
June 2000	165 939
June 2001	527 237
June 2002	453 371
June 2003	2 486 848
June 2004	4 699 164
June 2005	9 104 100
June 2006	4 520 592
June 2007	2 925 041

(Annual Financial Statements, 1999-2007)

The expenditure on fixed assets, as indicated in Table 2.2, is relevant as it reflects the stakeholders' willingness to commit resources to the growth of the business. As can be seen from the year ending June 2003 onwards, there has been a significant investment each year in assets to improve and grow the business.

## 2.4 GROWTH STRATEGIES

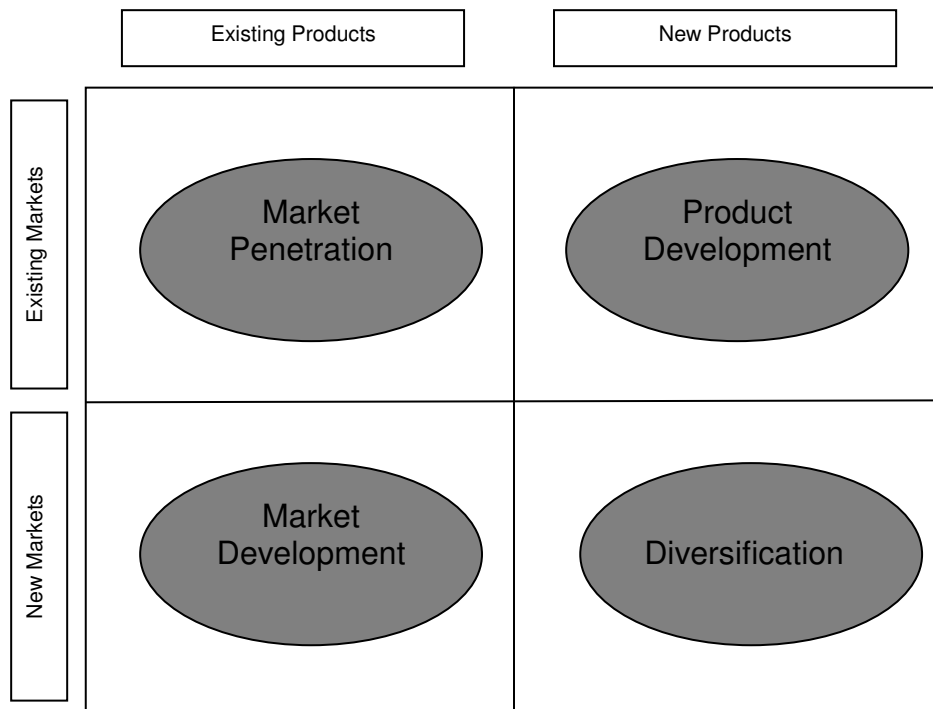
Having highlighted the growth strategies followed by Canoa Eastern Cape in the past, which were primarily acquisitions based, it was felt important to consider appropriate strategies for growth into the future. Two growth strategies have been reviewed in an attempt to give direction to the future growth strategies within Canoa Eastern Cape, namely the Ansoff Growth Matrix and the McKinsey Growth Model. These models will be dealt with in greater detail below, with specific focus on those areas that it was felt were appropriate to Canoa Eastern Cape.

### 2.4.1 The Ansoff Growth Matrix

The Ansoff Growth matrix is a tool that helps businesses to decide on their product and market growth strategy. Ansoff's product/market growth matrix suggests that a

business' attempts to grow depend on whether it markets new or existing products in new or existing markets (Tutor2u, n.d.(a)).

Figure 2.1: Ansoff Growth Matrix



(Tutor2u, n.d.(a))

The output from the Ansoff product/market matrix is a series of suggested growth strategies. Discussions with Mounsear-Wilson (2011) indicated that Canoa Eastern Cape is looking to sell their existing products within their existing market. This would mean that Canoa Eastern Cape would be looking to follow a Market Penetration Strategy.

According to Tutor2u (n.d.(a)) market penetration seeks to achieve four main objectives:

- Maintain or increase the market share of current products – this can be achieved by a combination of competitive pricing strategies, advertising, sales promotion and perhaps more resources dedicated to personal selling;
- Secure dominance of growth markets;

- Restructure a mature market by driving out competitors. This would require a much more aggressive promotional campaign, supported by a pricing strategy designed to make the market unattractive for competitors;
- Increase usage by existing customers – for example by introducing loyalty schemes.

A market penetration marketing strategy is very much about “business as usual”. The business focuses on markets and products it knows well. It is likely to have good information on competitors and on customer needs. It is unlikely, therefore, that this strategy will require much investment in new market research (Tutor2u, n.d.(a)).

#### 2.4.2 McKinsey Growth Model

This model is similar in some respects to the Ansoff Growth Matrix. However, it looks at growth strategy from a slightly different perspective. According to Tutor2u (n.d.(b)) the McKinsey model argues that businesses should develop their growth strategies based on four core aspects:

- **Operational skills** - these are the “core competences” that a business has which can provide the foundation for a growth strategy. For example, the business may have strong competencies in customer service, distribution and technology;
- **Privileged assets** - these are those assets held by the business that are hard to replicate by competitors. For example, in a direct marketing-based business these assets might include a particularly large customer database, or a well-established brand.
- **Growth skills** - these are the skills that businesses need if they are to successfully “manage” a growth strategy. These include the skills of new product development, or negotiating and integrating acquisitions.
- **Special relationships** – these are those relationships that can open up new options. For example, the business may have especially strong relationships with trade bodies in the industry that can make the process of growing in export markets easier than for the competition.

The model outlines seven ways of achieving growth (Tutor2u, n.d.(b)). The two approaches which are considered most appropriate given Canoa Eastern Cape’s situation are:

- **Existing products to existing customers**

The lowest-risk option is to try to increase sales to the existing customer base. This is about increasing the frequency of purchase and maintaining customer loyalty;

- **New delivery approaches**

This option focuses on the use of distribution channels as a possible source of growth. Are there ways in which existing products and services can be sold via new or emerging channels which might boost sales?

## **2.5 SUMMARY**

Canoa Eastern Cape is a financially sound, customer focused business that has been in operation since 1998. The management team within Canoa Eastern Cape has always strived to be leaders, not followers, in their industry. A commitment to sound business practices and the growth of the business have created a platform from which this business can take advantage of opportunities that present themselves. Having considered the most appropriate growth strategies, it is thought that a market penetration strategy should be followed, which will see Canoa Eastern Cape marketing its existing products within its current market by making use of a new distribution channel. With this in mind chapter three comprises a literature study investigating e-commerce and its suitability as a marketing channel, with special focus on the industry and geographic location within which Canoa Eastern Cape operates.

## **CHAPTER 3 – E-COMMERCE – A LITERATURE STUDY**

This chapter comprises a literature study, the aim of which is an investigation into what e-commerce is, where it has evolved from and where is it headed, along with a look at the financial viability of e-commerce and key success factors in the implementation of an e-commerce solution. This literature study will form the base of the empirical study. The results of the study will assist the decision makers within Canoa Eastern Cape to objectively assess their readiness to enter the e-commerce market, the potential impact of e-commerce on Canoa Eastern Cape's business and the suitability of e-commerce as a means of achieving market penetration.

The chapter will commence with a look at definitions of e-commerce. This is followed by an investigation into the history of e-commerce, including a look at the development of the World Wide Web, the progress of e-commerce from its inception in 1994, the appeal of e-commerce and the impact and adoption of e-commerce in developing nations. The future of e-commerce is examined with particular reference to infrastructure in South Africa, the evolution of m-commerce and social networking. The chapter continues with an assessment as to the financial success of e-commerce, including a review of the financial results of Amazon.com Inc. The requirements for e-commerce to be successful are investigated with particular focus on management, consumer needs and business operations. The chapter concludes with a look at products customers are prepared to buy on-line, industries most affected by e-commerce and demographics of e-commerce users.

### **3.1 DEFINITIONS**

The Oxford Dictionaries (2011) defines e-commerce in a most simple, yet complete manner, as commercial transactions conducted electronically on the Internet. This definition is supported by Jobodwana (2009) who defines e-commerce as a term referring to all forms of commercial transactions that involve individuals and organisations based on the electronic processing of data. It is the process of trading across the internet.

In order to further illustrate what e-commerce is Rosner (2002) breaks down the definition of e-commerce into three distinct parts:

- Firstly, e-commerce presupposes the existence of a business transaction;
- Secondly, the parties to such a transaction will maintain contact through electronic means rather than conventional ways of communication;
- Lastly, e-commerce is designed to create a more effective business environment.

Holsapple and Singh's (2000) study resulted in a further perspective on the definition of e-commerce which they refer to as their taxonomy's five categories of e-commerce:

- **Trading view** – in so far as the term 'commerce' connotes market-based activities, e-commerce tends to be associated with computer-based means for performing commercial transactions – buying and selling;
- **Information exchange view** – e-commerce not only enables exchange of money for products and services, but does so via exchanges of information. Information can be considered as characterising the substance of a market transaction, and can itself be the commodity being bought and sold. Beyond this, information transfer can occur prior to a transaction (e.g. to support underlying decisions) or following a trade (e.g. to assess it);
- **Activity view** – a third class of e-commerce definitions is composed of those that recognise the use of technology in accomplishing a variety of business activities including, but not limited to trading. The notion of 'commerce' is extended to encompass not only the use of technologies for transaction execution but also for pre-sale and post-sale efforts, decision support, maintaining/cultivating business relationships plus a host of ancillary activities;
- **Effects view** – the foregoing categories are concerned with what and how aspects of e-commerce. They focus on what is done (trading, other activities) and how it is done (technology-based information exchanges). A fourth category of definitions emphasises the why aspect of e-commerce: its goals, reasons and effects. Effects of e-commerce appear in all areas of business, from customer service to logistics to new product design. It facilitates new



types of business processes for reaching and interacting with customers, suppliers and partners. It can reduce overhead costs generated in the process of managing orders and interacting with trading partners. E-commerce can maintain and increase market shares, lower product cycle times, facilitate collaboration, improve service quality, reduce response time and so forth;

- **Value-chain view** – a fifth group of e-commerce definitions clusters around the value-chain concept. The value chain model identifies technologically and economically distinct activities (called ‘value activities’) that an organisation performs in the course of doing business. E-commerce is seen as the value-creating use of technology. It supports or performs value activities (which overlay trading and other business activities) in an effort to enhance competitiveness.

The differences between e-commerce and a traditional “brick and mortar” business were highlighted by Pather, Remenyi and De La Harpe (2006). They identified six factors that they believe differentiate the two:

- a brick and mortar-retailing model is essentially a collection model – the business procures products from suppliers and the customer goes to the business to “collect” the goods. However e-tailing is a delivery model – customers don’t collect but they receive;
- e-commerce is a direct marketing business. All direct marketing principles are applicable whereas brick and mortar use distribution marketing. This is a very critical difference to the brick and mortar environment;
- the demand on speed in the e-commerce environment is much greater – customers are not tolerant if products are not available in the same way that they can be with a brick and mortar business;
- packaging in e-commerce is crucial as the business is responsible for delivery of goods;
- the database is a major difference e.g. a brick and mortar retailer is not as concerned about customer databases in the same way as the e-commerce business. Accurate data pertaining to delivery addresses, email addresses, correct products etc. are of paramount importance;

- a very sound relationship with suppliers is required to ensure that the suppliers understand the importance of supplying accurate product data.

The definitions above share a common theme, which is that e-commerce has to do with commercial transactions which are concluded using technology, the most common form of which is the internet, with the aim of improving financial performance.

## **3.2 HISTORY OF E-COMMERCE**

### **3.2.1 Development of the World Wide Web**

The Internet is one of the most important innovations of the 20<sup>th</sup> century (Scott Morton, 2006). In a world where information and information technology have become the engine of economic growth (Darely, 2003) and with the internet clearly at the centre of e-commerce according to the definitions provided, it is important to understand when this technology came into being and how it has been adopted by businesses and individuals worldwide as a means of communication and trade.

In his article entitled “The Internet's Big Bang - TIME's Annual Journey: 1989” Cerf (2009) explains how in 1989 the internet was just beginning to emerge as a commercially available service, but it lacked standardised systems for formatting, storing, locating and retrieving information. Cerf (2009) goes on to point out that Tim Berners-Lee solved these problems by writing Hypertext Transfer Protocol (HTTP), a computer language for communicating documents over the Internet, and by designing a system to give documents addresses. Tim Berners-Lee also created the first browser — calling it the WorldWideWeb — as well as a language (Hypertext Markup Language, or HTML) for creating Web pages and the first server software allowing those pages to be stored and accessed by others.

Wei (2005) states that there were over 786 million Internet users worldwide at year-end 2003 – up from about 259 million Internet users at year-end 1999 and that the worldwide Internet penetration rate increased up to 12.48 percent at the end of 2003 – up from 4.32 percent at the end of 1999. The Central Intelligence Agency of the

United States of America (2009), in their World Fact Book, list the number of internet users as at 2009 as being 1,819.8 million. The list of 216 countries making up this total are headed by China with 389 million users, United States with 245 million users, Japan with 99 million users, Brazil with 76 million users and Germany with 65 million users. The highest ranked African country on the list is Nigeria in 9<sup>th</sup> position with 44 million users. South Africa is ranked 54<sup>th</sup> with 4.4 million users. The Internet users and penetration rate as at 30 June 2010 are reflected in Table 3.1.

<b>WORLD INTERNET USAGE AND POPULATION STATISTICS</b>						
<b>World Regions</b>	<b>Population (2010 Est.)</b>	<b>Internet Users Dec. 31, 2000</b>	<b>Internet Users Latest Data</b>	<b>Penetration (% Population)</b>	<b>Growth 2000-2010</b>	<b>Users % of Table</b>
Africa	1 013 779 050	4 514 400	<b>110 931 700</b>	10.90%	2,357.3 %	5.60%
Asia	3 834 792 852	114 304 000	<b>825 094 396</b>	21.50%	621.80%	42.00%
Europe	813 319 511	105 096 093	<b>475 069 448</b>	58.40%	352.00%	24.20%
Middle East	212 336 924	3 284 800	<b>63 240 946</b>	29.80%	1,825.3 %	3.20%
North America	344 124 450	108 096 800	<b>266 224 500</b>	77.40%	146.30%	13.50%
Latin America/Caribbean	592 556 972	18 068 919	<b>204 689 836</b>	34.50%	1,032.8 %	10.40%
Oceania / Australia	34 700 201	7 620 480	<b>21 263 990</b>	61.30%	179.00%	1.10%
<b>WORLD TOTAL</b>	<b>6 845 609 960</b>	<b>360 985 492</b>	<b>1 966 514 816</b>	<b>28.70%</b>	<b>444.80%</b>	<b>100.00%</b>

Table 3.1: World Internet Usage and Population Statistics (Miniwatts Marketing Group, 2011)

The statistics reflected in Table 3.1 clearly show that the developing nations are lagging in the internet adoption rates, with Africa having a penetration rate of only 10.9%. On the positive side, Africa has shown the greatest growth in the number of internet users between 2000 and 2010, being 2357.3%.

These statistics reflect the magnitude of the growth in internet usage from the start in 1989. While the torrid pace of growth is almost certain to diminish, it is nevertheless clear that consumers are enthusiastically adopting this new technology (Scott Morton, 2006).

### 3.2.2 The progress of e-commerce

In order to be useful the internet needs complementary innovation. The complementary innovations that matter in this instance are business models that allow online access (the ISP) and provide the goods, services or information the consumer wants (websites), using some convenient method of payment (Scott Morton, 2006).

The progress of e-commerce is highlighted in an article entitled “E-commerce turns 10” in which Gilbert (2004) listed a number of e-commerce milestones during the period 1994 to 2004:

- August 11, 1994 – Arguably the first e-commerce transaction. NetMarket sells a copy of Sting’s “Ten Summoner’s Tales” for \$12.48;
- August 22, 1994 - Pizza Hut launches a test version of “PizzaNet”, initially only available only to residents of Santa Cruz, California;
- December 15, 1994 – Netscape Communications launches its first commercial browser, Navigator;
- July 16, 1995 – Amazon.com starts selling books online – operating from a two bed-room house;
- 1995 – Microsoft adds Secure Sockets Layer protocol to its fledgling Internet Explorer browser, and eBay conducts its first auction on Labor Day;
- 1998 – Cable modems become widespread. More than 500,000 U.S. customers have high speed cable. Almost 60,000 people have DSL;
- Holiday season, 1998 – Among revelers is America Online, which says it generated \$ 1.2 billion for its retail partners;
- 1999 – The U.S. Department of Commerce begins segmenting e-commerce statistics. (In 1999’s fourth quarter, \$ 5.3 billion was spent online.);
- June 21, 2003 - Amazon ships more than 1 million copies of “Harry Potter and the Order of the Phoenix” – heralded as the largest one-day distribution of a single item in e-commerce history;
- April 28, 2003 – Apple Computer launches iTunes, the first note in a concerted effort to bring digital music to e-commerce;
- June 2004 – Almost 57 million taxpayers filed their 2004 tax returns by computer according to the IRS;

- Also in 2004 – Shoppers will spend \$144 billion online this year.

Given that these milestones only deal with the first ten years of e-commerce they highlight two notable facts. Firstly, e-commerce is a rapidly changing and advancing means of commerce and secondly, the economic impact of e-commerce is significant and cannot be ignored.

The rate of adoption of the internet as a vehicle for commerce has been significant, with Gnuschke (2000) reporting that Shop.org (the trade association for e-tailers) estimated that there were 30,000+ active e-tail web sites. Another indication of the size and progress made with regard to e-commerce was that Wei (2005) reported that there were over \$5,000 e-commerce sales per Internet user worldwide at year-end 2003 – up from about \$1,600 e-commerce sales per Internet user at year-end 1999. Confirmation of this growth is given by Doherty and Ellis-Chadwick (2010) who point out that online shopping is now estimated to be the fastest area of internet usage and its growth rates, over the past decade, have continued to rise and have far exceeded those achieved through traditional channels.

### **3.2.3 What is the appeal of e-commerce?**

- **Customers**

E-commerce appeals to customers because, as pointed out by Maamar (2003), customers now have more opportunities to be informed about current trends in the market before making any decision. Another key benefit to customers is that they have access to a large number of potential suppliers, as highlighted before and are able to compare products and prices. This increased access to information is echoed by Doherty and Ellis-Chadwick (2010) who state that although no obvious trends have been observed towards “perfect competition”, there is growing evidence that power, in the electronic market-place has shifted towards the consumer.

Scott Morton (2006) highlights a number of ways in which consumers benefit from the use of the internet:

- Websites that make traditional sales generate consumer surplus through availability, variety and convenience to the consumer;
- Price comparison sites allow consumers to quickly and easily gather price quotes from a variety of sellers, which results in the consumer paying a lower price;
- Information sites provide information that the consumer can use to pick an appropriate activity or execute a task more efficiently; often these sites save consumers time in mundane tasks such as buying tickets, checking the weather, or getting driving directions;
- Likewise, matching sites (such as eBay) improve transactions by hugely increasing the quality of the match compared to the local garage sale.

The shopping process in real life is definitely a social one where people can get advice and share their experiences with others. In an attempt to deal with some of the obstacles to e-commerce, several experimental technologies (for example, software agents, Web services) that aim at supporting users are now available. The purpose of these technologies is to attract more consumers and encourage them to participate in online business (Maamar, 2003). With the advent of Social Networking Sites the “social” element of the e-commerce process has in a large way been addressed, with the likes of Facebook, Twitter and Second Life.

Ching and Ellis (2006) bring to the fore the darker side of e-commerce, which could also be seen as appealing to potential customers, when they point out that in the emerging world of e-commerce, institutional safeguards are all but absent and the threat of opportunism runs high. With fresh information and quotes but a few emails away, potential traders can surf the Web for the best deals and abandon commitments with the ease anonymity and distance provide.

While it is clear the Internet increases price competition so that consumers pay less for products, it also improves daily life by increasing the variety, quality and availability of products and information. These gains are particularly useful to people with high transactions costs (busy, rural) and uninformed people (Scott Morton, 2006).

- **Suppliers**

The Internet has provided businesses of all sizes with opportunities to expand their market base, improve operational efficiency, create new links with trading partners, and provide better customer service, amongst other benefits (Hassanein & Head, 2006).

Suppliers enter into e-commerce with the objective of increasing revenue by reaching markets that they previously would not easily have had access to. Findings by Doherty and Ellis-Chadwick (2010) indicate that a retailer's overall financial and strategic performance could be positively affected by the addition of an internet channel. In a study conducted by De Klerk and Kroon (2005) the most important reasons for e-commerce and international trade included profit (86 percent), access to strategic markets (64 percent) and international association by means of relationships (61 percent).

The networking capacities that underlie e-commerce have the potential to enable these businesses to overcome their informational barriers by increasing the speed, richness and volume of information flows between a given enterprise and other market actors. The outcome of this should normally lead to better inter-firm information flows and increased market reach (Molla & Heeks, 2007).

By enabling direct marketing of goods to clients (including those in global markets), direct purchasing from suppliers and better sharing of information with partners, e-commerce could not only reduce costs but also significantly increase firm control over its place in the supply chain (Molla & Heeks, 2007).

Whilst the factors listed above may be attractive it seems that the decision to enter the e-commerce market is often as a result of pressures from the supplier's environment, rather than from the benefits that are expected from participating in e-commerce. This fact is highlighted by Molla and Licker (2005) who say that e-commerce responds to the principles of network externalities in that the drivers of adoption are more often found in the social system of the organisation than in the attributes of the innovation. For instance, pressure from a business's market forces

(suppliers, clients and other partners) has been identified as one of the key drivers for the adoption and subsequent level of utilisation of e-commerce.

### **3.2.4 E-commerce in developing nations**

The information supplied to this point has dealt primarily with e-commerce within developed nations. Given that this study looks at the feasibility of e-commerce in South Africa, it is important to get an understanding of the differences between the uptake of e-commerce in developed and developing nations.

There is a consensus that businesses in developing countries have been slow to adopt e-commerce (Molla & Licker, 2005). In an article by Pather, Remenyi and De La Harpe (2006) it is highlighted that South Africa was not immune to the e-commerce hype and according to the Department of Trade and Industry, expectations that the Internet would boost South Africa's economy and revolutionise the market by allowing small firms to compete equally with larger rivals, did not materialise. This failure of e-commerce in South Africa is echoed by Molla and Heeks (2007) whose findings about the benefits of e-commerce for businesses in South Africa suggest that, by and large, the potential for e-commerce in developing countries is not being realised. In relation to the literature-based conceptualisation, it was found that the majority of businesses did not appear to have obtained e-commerce benefits in terms of expanding their access to markets, improving their reach or linkages to customers or suppliers, or in relation to cost savings or other efficiency gains.

It is important to identify possible reasons for this supposed failure. In their article "Perceived E-Readiness Factors in E-Commerce Adoption: An Empirical Investigation in a Developing Country", Molla and Licker (2005) highlight the fact that previous studies of e-commerce in developing countries identified technological, social, cultural, legal and institutional constraints as major inhibitors of e-commerce adoption.

From a technological point of view, world indicators can be used in determining South Africa's position regarding e-readiness development. The average world



indicators for telephone mainlines, 157,3 per 1000 people and the availability of personal computers, 68,3 per 1000 people, are much higher than the South African indicators of 125 available telephone mainlines per 1000 people and 54,7 personal computers available for every 1000 people (De Klerk & Kroon, 2005). Further to these statistics it was also reported by Wei (2005) that developed countries had internet penetration rates above 25% and developing countries below 10%. Table 3.2 below sets out the population and internet usage statistics for Africa as at 30 June 2010. The poor internet penetration is highlighted by the fact that there are 57 countries displayed, but only 15 have internet penetration rates of 10% or higher. This corroborates the findings by Wie and alarmingly shows that this situation has not improved significantly in five years.

<b>INTERNET USAGE STATISTICS FOR AFRICA</b>						
	<b>Population</b>	<b>Internet Users</b>	<b>Internet Users</b>	<b>Penetration</b>	<b>User Growth</b>	<b>% Users</b>
<b>AFRICA</b>	<b>(2010 Est.)</b>	<b>Dec-00</b>	<b>Latest Data</b>	<b>(% Population)</b>	<b>(2000-2010)</b>	<b>in Africa</b>
Algeria	34 586 184	50 000	4 700 000	13.60%	9,300.0 %	4.30%
Angola	13 068 161	30 000	607 400	4.60%	1,924.7 %	0.50%
Benin	9 056 010	15 000	200 000	2.20%	1,233.3 %	0.20%
Botswana	2 029 307	15 000	120 000	5.90%	700.00%	0.10%
Burkina Faso	16 241 811	10 000	178 200	1.10%	1,682.0 %	0.20%
Burundi	9 863 117	3 000	65 000	0.70%	2,066.7 %	0.10%
Cameroon	19 294 149	20 000	750 000	3.90%	3,650.0 %	0.70%
Cape Verde	508 659	8 000	150 000	29.50%	1,775.0 %	0.10%
Central African Rep.	4 844 927	1 500	22 600	0.50%	1,406.7 %	0.00%
Chad	10 543 464	1 000	187 800	1.80%	18,680.0 %	0.20%
Comoros	773 407	1 500	24 300	3.10%	1,520.0 %	0.00%
Congo	4 125 916	500	245 200	5.90%	48,940.0 %	0.20%
Congo, Dem. Rep.	70 916 439	500	365 000	0.50%	72,900.0 %	0.30%
Cote d'Ivoire	21 058 798	40 000	968 000	4.60%	2,320.0 %	0.90%
Djibouti	740 528	1 400	25 900	3.50%	1,750.0 %	0.00%
Egypt	80 471 869	450 000	17 060 000	21.20%	3,691.1 %	15.40%
Equatorial Guinea	650 702	500	14 400	2.20%	2,780.0 %	0.00%
Eritrea	5 792 984	5 000	250 000	4.30%	4,900.0 %	0.20%
Ethiopia	88 013 491	10 000	445 400	0.50%	4,354.0 %	0.40%
Gabon	1 545 255	15 000	98 800	6.40%	558.70%	0.10%
Gambia	1 824 158	4 000	130 100	7.10%	3,152.5 %	0.10%
Ghana	24 339 838	30 000	1 297 000	5.30%	4,223.3 %	1.20%
Guinea	10 324 025	8 000	95 000	0.90%	1,087.5 %	0.10%
Guinea-Bissau	1 565 126	1 500	37 100	2.40%	2,373.3 %	0.00%

<b>INTERNET USAGE STATISTICS FOR AFRICA</b>						
AFRICA	Population (2010 Est.)	Internet Users Dec-00	Internet Users Latest Data	Penetration (% Population)	User Growth (2000-2010)	% Users in Africa
Kenya	40 046 566	200 000	<b>3 995 500</b>	10.00%	1,897.8 %	3.60%
Lesotho	1 919 552	4 000	<b>76 800</b>	4.00%	1,820.0 %	0.10%
Liberia	3 685 076	500	<b>20 000</b>	0.50%	3,900.0 %	0.00%
Libya	6 461 454	10 000	<b>353 900</b>	5.50%	3,439.0 %	0.30%
Madagascar	21 281 844	30 000	<b>320 000</b>	1.50%	966.70%	0.30%
Malawi	15 447 500	15 000	<b>716 400</b>	4.60%	4,676.0 %	0.60%
Mali	13 796 354	18 800	<b>250 000</b>	1.80%	1,229.8 %	0.20%
Mauritania	3 205 060	5 000	<b>75 000</b>	2.30%	1,400.0 %	0.10%
Mauritius	1 294 104	87 000	<b>290 000</b>	22.40%	233.30%	0.30%
Mayotte (FR)	231 139	---	---	---	---	0.00%
Morocco	31 627 428	100 000	<b>10 442 500</b>	33.00%	10,342.5 %	9.40%
Mozambique	22 061 451	30 000	<b>612 500</b>	2.80%	1,941.7 %	0.60%
Namibia	2 128 471	30 000	<b>127 500</b>	6.00%	325.00%	0.10%
Niger	15 878 271	5 000	<b>115 900</b>	0.70%	2,218.0 %	0.10%
Nigeria	152 217 341	200 000	<b>43 982 200</b>	28.90%	21,891.1 %	39.60%
Reunion (FR)	822 986	130 000	<b>300 000</b>	36.50%	130.80%	0.30%
Rwanda	11 055 976	5 000	<b>450 000</b>	4.10%	8,900.0 %	0.40%
Saint Helena (UK)	7 670	n/a	<b>800</b>	10.40%	n/a	0.00%
Sao Tome & Principe	175 808	6 500	<b>26 700</b>	15.20%	310.80%	0.00%
Senegal	14 086 103	40 000	<b>923 000</b>	6.60%	2,207.5 %	0.80%
Seychelles	88 340	6 000	<b>33 900</b>	38.40%	465.00%	0.00%
Sierra Leone	5 245 695	5 000	<b>14 900</b>	0.30%	198.00%	0.00%
Somalia	10 112 453	200	<b>106 000</b>	1.00%	52,900.0 %	0.10%
<b>South Africa</b>	<b>49 109 107</b>	<b>2 400 000</b>	<b>5 300 000</b>	<b>10.80%</b>	<b>120.80%</b>	<b>4.80%</b>
Sudan	41 980 182	30 000	<b>4 200 000</b>	10.00%	13,900.0 %	3.80%
Swaziland	1 354 051	10 000	<b>90 000</b>	6.60%	800.00%	0.10%
Tanzania	41 892 895	115 000	<b>676 000</b>	1.60%	487.80%	0.60%
Togo	6 199 841	100 000	<b>356 300</b>	5.70%	256.30%	0.30%
Tunisia	10 589 025	100 000	<b>3 600 000</b>	34.00%	3,500.0 %	3.20%
Uganda	33 398 682	40 000	<b>3 200 000</b>	9.60%	7,900.0 %	2.90%
Western Sahara	491 519	---	---	---	---	0.00%
Zambia	12 056 923	20 000	<b>816 700</b>	6.80%	3,983.5 %	0.70%
Zimbabwe	11 651 858	50 000	<b>1 422 000</b>	12.20%	2,744.0 %	1.30%
<b>TOTAL AFRICA</b>	<b>1 013 779 050</b>	<b>4 514 400</b>	<b>110 931 700</b>	<b>10.90%</b>	<b>2,357.3 %</b>	<b>100.00%</b>

Table 3.2: Internet Usage Statistics for Africa (Miniwatts Marketing Group, 2011)

From the information contained in Table 3.2 it can be seen that South Africa has the 4<sup>th</sup> highest number of internet users in Africa with a total of 5.3 million users, but only

ranks 12<sup>th</sup> with regard to the penetration rate, which is 10.8%. This information highlights the fact that should a South African business wish to enter the e-commerce market, selling to South African consumers, they will need to carefully look at their target market and assess the level of e-readiness within that market. Failure to do such investigations will significantly increase the risk of the e-commerce venture failing.

Molla and Heeks (2007) make the point that the reality of e-commerce benefits in a developing country appear to contrast sharply with some of the dominant theoretical perspectives and the more optimistic literature that seems rooted in potentiality rather than actuality. They believe that expectations should be muted about what e-commerce can deliver for developing country firms. This is not to suggest that practitioners - business staff, consultants, business advisors or even policymakers - should turn against e-commerce. However, they do need to stay aware of its opportunity costs and see it as one business improvement initiative among a number of options, rather than as “the solution.”

Notwithstanding the poor outlook for e-commerce in developing nations presented above, Darely (2003) made an interesting observation by saying that failure to be “fully engaged” in the internet and emerging e-commerce puts sub-Saharan African businesses at a serious disadvantage.

### **3.3 THE FUTURE OF E-COMMERCE**

This section will look at the way forward for e-commerce and how potential future developments will impact decisions made by prospective entrants to this market.

#### **3.3.1 Infrastructure in South Africa**

Jobodwana (2009) reported that wider access to broadband, ADSL and 3G accesses have boosted internet connectivity, with the number of South African internet browsers increasing by 121 percent in two years, from 1.8 million in May 2005 to 3.8 million in May 2007, according to research firm Nielsen/NetRatings.

These figures are a positive move as they serve to address some of the issues highlighted as factors holding back the progress of e-commerce in South Africa.

One of the largest infrastructure improvements over the last few years was the completion of the Eastern Africa Submarine Cable System (EASSy). On 5<sup>th</sup> August 2010 Dr. Angus Hay, CTO of Neotel announced, on behalf of the EASSy Cable Management Committee, that the EASSy system has entered commercial service on 30<sup>th</sup> July 2010 (EASSy, 2010a). The World Bank Group (2011) describes EASSy as an initiative to construct and operate a submarine fiber optic cable along the east coast of Africa to connect eight coastal countries and island nations to each other and to the rest of the world. EASSy will be the first optical fiber connection for most of these countries to the global optical fiber network. EASSy is expected to significantly increase the supply of high quality reliable broadband capacity while simultaneously reducing wholesale bandwidth costs and supporting a parallel reduction in end-user prices for telecommunications service which will boost regional competitiveness and enable Africa to participate more fully in the global information economy. This is expected to help provide the conditions for growth of existing businesses and to attract new enterprises which need modern low cost connectivity. In a statement released by Chris Wood, CEO of WIOCC and Co-Chair of the EASSy Management Committee, EASSy (2010b) announced in December 2010 that the Eastern Africa Submarine Cable System will be upgraded in 2011, more than doubling the current available capacity on the system.

### **3.3.2 Mobile Electronic Commerce**

As early as 2002 mobile electronic commerce (m-commerce) has been seen as a major future trend, where mobile phones and personal digital assistants (PDA) would be used to further the reach of e-commerce (Anumba & Ruikar, 2002).

The next stage for telecom companies in partnership with businesses is to allow users to buy and sell without being connected to any wired network. M-commerce is the new trend and is expected to drive the future development of e-commerce. Being able to buy and sell goods and services over mobile devices is an important step

towards achieving an anywhere, anytime paradigm. Location and time will no longer constrain people from completing their transactions (Maamar, 2003).

The comments by Maamar (2003) are supported by Jobodwana (2009) who states that M-commerce is emerging in Africa and South Africa especially as either a complement or an alternative to e-commerce as originally conceived, though there are arguments that mobile telephone technology "m-commerce" will surpass "e-commerce" as the method of choice for digital commerce transactions.

This trend towards mobile commerce is highlighted by Doherty and Ellis-Chadwick (2010) when they remark that retailers will also face growing pressure from consumers to allow their services to be accessed flexibly from a growing array of mobile devices, as they want to be able to shop on the move.

With regard to mobile advertising it is believed that while people may not be buying on their smartphones now in huge numbers, mobile commerce is poised to take off. "The smartphone is to mobile advertising what broadband was to the PC. Pre- and post-broadband, it is night and day and mobile commerce will go through the same type of transition. Mobile purchasing is small today, but we do believe the technology is aligning to make it much more prevalent. As smartphones become a bigger part of the market, and users become more confident, mobile e-commerce will gain traction," said Gian Fulgoni, chairman of comScore (Megna, 2009).

In an attempt to highlight the potential of m-commerce the number of mobile cellular users was extracted from the Central Intelligence Agency of the United States of America's (2009) World Fact Book. The number of mobile cellular users worldwide was reported as being 4,849.4 million in 2009. This is over two and a half times the number of internet users reported in the same publication. The list of 220 countries making up this total are headed by China with 747 million users, India with 670 million users, United States with 286 million users, Russia with 230.5 million users and Brazil with 174 million users. The highest ranked African country on the list is Nigeria in 16<sup>th</sup> position with 73 million users. South Africa is ranked 26<sup>th</sup> with 46.4 million users. From these figures it is safe to say that there is significant potential for

m-commerce, particularly, it would seem, in the developing nations where this form of technology is significantly more prevalent than the normal internet users.

### **3.3.3 Social Networking**

According to Brown, Broderick and Lee (2007) word of mouth has greater impact on product judgments, attitude formation and decision making than formal marketing communications. The importance of this statement regarding the power of word of mouth, and the link to social networking is highlighted by Doherty and Ellis-Chadwick (2010) who comment that with millions of people around the world, from an ever widening age profile, spending ever more time communicating with their “friends” via sites, such as Facebook, it is very likely that the power of social networking will continue to expand and have far greater affect on modern consumers’ online shopping behaviour.

“The social networking feeding frenzy shows no signs of stopping. Better make sure your business is on the bandwagon -- and not just standing in the way. Maybe there's a bubble waiting to pop here. Maybe not. Unless you're an investor, who cares? When the dot-com bubble burst, the underlying business model was still sound and it still changed how the world did business. The social networking industry is driving a whole series of equally profound business changes. It's not that you're throwing out the book on customer service, sales and marketing. It's just that the book has a bunch of new chapters -- and maybe a very different ending (McKenzie, 2011)”. These comments make it quite clear that Social Networking, in whatever form, is having and will continue to have a significant influence on the way in which e-commerce is conducted in the future.

### **3.4 IS E-COMMERCE A FINANCIAL SUCCESS?**

With this ultimately being a study into the viability of implementing an e-commerce solution it was deemed important to investigate whether e-commerce solutions are in fact able to deliver a financial benefit to an entity, primarily through the reduction of costs, improvement of efficiencies and the increase in revenues.

From the literature studied it is evident that there is strong sentiment that e-commerce has not delivered on the expectations of lower costs and greater revenue generation. This negative sentiment towards the benefits of e-commerce seems to be prevalent throughout the last decade.

In 2000 Gnuschke (2000) highlighted concerns about the profitability of e-commerce ventures and e-tailers in particular. The rise in total revenues in these entities were eclipsed by increased costs associated with advertising in traditional media venues, expanded warehousing, shipping, sales discounts and staffing costs were more than offset. The figures were alarming, in that it was reported that the average e-tailer spends \$45 to get a one-time customer who spends \$35.

In their article entitled "Evaluating e-Commerce Success -- A Case Study" Pather, Remenyi and De La Harpe (2006) highlight a number of large South African organisations whose participation in e-commerce ran into problems forcing them to close. The likes of Broadcast Interactive Group, Shoppingmatrix.com, the SPAR national supermarket chain and the banking venture Blue Bean and Twenty20 were all South African e-commerce ventures that did not last very long, either due to investors pulling out, poor sales or cash flow problems.

In a study conducted by Molla and Heeks (2007) it was found that respondents believed that the benefits of ecommerce were limited to communication improvements, an improved company image and improved process speed. E-commerce was not seen by the businesses surveyed to reduce the costs related to operations, purchasing and recruitment, marketing or the maintaining of information. In addition to the failure of e-commerce to reduce costs, the majority of those surveyed claimed not to have realised an increase in revenues and felt that e-commerce did little to improve supplier relationships, nor did it improve customer loyalty or customer retention.

Despite these pessimistic outlooks on the financial success of e-commerce ventures expressed above there are those entities that have proved that e-commerce can in fact realise good profits and lead to the creation of a financially sound entity.

**AMAZON.COM, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(in millions)

	Year Ended December 31,		
	2009	2008	2007
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	\$ 2 769	\$ 2 539	\$ 1 022
OPERATING ACTIVITIES:			
Net income	902	645	476
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation of fixed assets, including internal-use software and website development, and other amortization	378	287	246
Stock-based compensation	341	275	185
Other operating expense (income), net	103	-24	9
Losses (gains) on sales of marketable securities, net	-4	-2	1
Other expense (income), net	-15	-34	12
Deferred income taxes	81	-5	-99
Excess tax benefits from stock-based compensation	-105	-159	-257
Changes in operating assets and liabilities:			
Inventories	-531	-232	-303
Accounts receivable, net and other	-481	-218	-255
Accounts payable	1859	812	928
Accrued expenses and other	300	247	429
Additions to unearned revenue	1054	449	244
Amortization of previously unearned revenue	-589	-344	-211
Net cash provided by (used in) operating activities	3293	1697	1405
INVESTING ACTIVITIES:			
Purchases of fixed assets, including internal-use software and website development	-373	-333	-224
Acquisitions, net of cash acquired, and other	-40	-494	-75
Sales and maturities of marketable securities and other investments	1966	1305	1271
Purchases of marketable securities and other investments	-3890	-1677	-930
Net cash provided by (used in) investing activities	-2337	-1199	42
FINANCING ACTIVITIES:			
Excess tax benefits from stock-based compensation	105	159	257
Common stock repurchased		-100	-248
Proceeds from long-term debt and other	87	98	115
Repayments of long-term debt and capital lease obligations	-472	-355	-74
Net cash provided by (used in) financing activities	-280	-198	50
Foreign-currency effect on cash and cash equivalents	-1	-70	20
Net increase in cash and cash equivalents	675	230	1517
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 3 444	\$ 2 769	\$ 2 539

Figure 3.1: Amazon.com Inc – Consolidated Statements of Cash Flow (Amazon.com Inc, 2010)



For the purposes of this review Amazon.com Inc has been used as an example of an entity that has realised significant financial gains from trading by means of ecommerce. Amazon.com Inc was incorporated in 1994 and opened its virtual doors on the World Wide Web in July 1995. Amazon.com Inc seeks to be Earth's most customer-centric company for three primary customer sets: consumers, sellers, and developers. In addition, they generate revenue through co-branded credit card agreements and other marketing and promotional services, such as online advertising (Amazon.com Inc, 2010).

Some notable highlights from 2009:

- Net sales increased 28% year-over-year to \$24.51 billion in 2009. This is 15 times higher than net sales 10 years ago when they were \$1.64 billion in 1999;
- Free cash flow increased 114% year-over-year to \$2.92 billion in 2009 (Bezos, 2010).

Figure 3.1 shows that during the three years reflected the company generated significant positive cash flows from its trading activities, which resulted in an increase in cash reserves of \$ 2,512 million.

From a profit point of view, Figure 3.2 shows that Amazon.com Inc achieves a gross profit percentage of 22% and a net profit percentage of 3.6%. In addition to this Amazon.com Inc has shown an increase in Net sales of nearly 30% as well as an increase in excess of 30% in Net income over the last two years.

Amazon.com Inc's success in the e-commerce industry may partly be as a result of their significant size and as suggested by Karakaya and Shea (2008), larger firms have more slack resources in order to absorb the risk involved with e-business and are more likely to achieve economies of scale.

**AMAZON.COM, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in millions, except per share data)

	Year Ended December 31,		
	2009	2008	2007
Net sales	\$ 24 509	\$ 19 166	\$ 14 835
Cost of sales	18 978	14 896	11 482
Gross profit	5 531	4 270	3 353
Operating expenses (1):			
Fulfillment	2 052	1 658	1 292
Marketing	680	482	344
Technology and content	1 240	1 033	818
General and administrative	328	279	235
Other operating expense (income), net	102	-24	9
Total operating expenses	4 402	3 428	2 698
Income from operations	1 129	842	655
Interest income	37	83	90
Interest expense	-34	-71	-77
Other income (expense), net	29	47	-8
Total non-operating income (expense)	32	59	5
Income before income taxes	1 161	901	660
Provision for income taxes	-253	-247	-184
Equity-method investment activity, net of tax	-6	-9	-
Net income	\$ 902	\$ 645	\$ 476

Figure 3.2: Amazon.com Inc – Consolidated Statements of Operations (Amazon.com Inc, 2010)

Doherty and Ellis-Chadwick (2010) point out that if one thing has become very clear in the first 15 years of internet retailing, it is that there is always the opportunity for the innovative and dynamic company, that has read the market well and has an effective business model, to make a strong impact, and in so doing, grow very big and powerful, very quickly. The experiences of organisations such as Amazon.com Inc and eBay highlight that the internet can prove to be a very fertile environment if organisations have good ideas, supported by an appropriate set of core competencies and capabilities.

An interesting observation made by Scott Morton (2006) is that the criterion for operating a website is not necessarily that it is profitable in a free-standing way, but

that having it makes the entire corporation better off. This clearly shows that the website must complement the “brick and mortar” business carried on by the entity, and should not be assessed separately.

### **3.5 REQUIREMENTS/PREREQUISITES FOR E-COMMERCE TO BE SUCCESSFUL**

From the literature that has been studied there are a number of factors that have been identified as requirements or prerequisites to ensure a successful e-commerce venture.

#### **3.5.1 Management**

For a company to successfully engage in using technology, such as an e-Commerce initiative, Karakaya and Shea (2008) suggest that it is helpful for both the top management of the company to be supportive (enthusiastic) and for people in the company to have ongoing experience with current technology (keeping up with technology trends).

E-commerce is just, when all is said and done, another kind of business.... So the success of e-commerce businesses will hinge largely on the art of management even as it enabled by the science of technology. The scarce resource will be, as it is in practically all business, the building block of the free enterprise – entrepreneurial, and increasingly managerial, talent (Rayport cited in Gnuschke, 2000).

Molla and Licker (2005) point out that once an organisation moves to adopt interactive e-commerce systems, the commitment of its managers, especially those at the top, appears to drive how far and how fast it moves up the maturity ladder of e-commerce. Here, time to adoption and speed are indirectly inferred from differences in the level of e-commerce adoption at a particular time. Lack of commitment, especially by top executives, is one of the chief obstacles affecting IT implementations.

It has recently been found that the adoption of e-commerce amongst retailers, is primarily driven by management support and strategic fit, whilst its perceived success requires retailers to deploy a portfolio of appropriate resources and capabilities, in support of its online operations (Doherty & Ellis-Chadwick, 2010)

### **3.5.2 Consumer needs**

In terms of what consumers want to see at online stores, 64 percent say product details are important, 60 percent said incentives were an important feature, followed by easy site navigation with 46 percent and product reviews with 42 percent (Megna, 2009).

Obstacles that face novice users often upset them and the whole e-shopping experience ends in frustration. Instead of supporting users, IT can make things more complex. As a direct consequence, users may simply turn to the competition or decide to go back to the traditional way of shopping: ask friends to accompany them, visit shops, talk to vendors and bargain for better deals. It should be noted that once IT is introduced into the process, the “social context” is ignored. One of the challenges that need tackling in the near future is how to integrate the social context into the development of any user-oriented systems (Maamar, 2003).

In a B2C e-commerce context, customer service and trust in an online vendor are of the utmost importance. It stands to reason therefore that service quality and trust are two additional dimensions to consider in addition to the traditional dimensions of system quality, information quality, user satisfaction, perceived usefulness and use/intentions to use. Given the variety of products and services on offer to e-commerce consumers, using frequency of use as a general measure of e-commerce success is problematic. Frequency of use is also dependent on the nature of products and services being purchased. For example, online grocery shopping might be conducted more frequently than purchase of airline tickets for some. Assessing customer intentions to continue using an e-commerce system is perhaps a better measure of success, as it reflects repeat business regardless of product/service. It also treats behavioural intentions as a post-adoption phenomenon, as is required for evaluating success of a system (Brown & Jayakody, 2008).

### **3.5.3 Business operations**

According to the study conducted by Pather, Remenyi and De La Harpe (2006) the following four areas of business operations are deemed to be critical to the success of the e-commerce business:-

- At all costs the electronic shop-front must be kept open and active 24/7/365 – this includes ensuring the availability of a hot-site. Site under construction notices and other distractions by which the shop-front is not available are extremely counter-productive to the business. The electronic shop-front needs to be as attractive as possible and have as wide an appeal as possible;
- Agility and flexibility - the IS infrastructure must allow for the business to be agile in responding to product updates to the web-site, advertising of specials etc. Changes have to be made immediately. Any substantial lead-time involved represents lost revenues;
- An effective, efficient, database infrastructure is essential for a successful online retailing business. An on-line shop lives by its twin databases. These are the product database which represents the inventory in the shop front and needs to be both up-to-date and error free and the client database which represents the main market opportunities. The product database needs to be seamlessly connected to the procurement and delivery systems to ensure that the correct items are delivered on time;
- IT and business stakeholders need to think together, and engage in joint decision making across all areas of business – including “non-IT” issues. There is just no room for a “culturegap”.

### **3.6 PRODUCTS THAT CUSTOMERS ARE PREPARED TO BUY ONLINE**

As part of the assessment of the viability of Canoa Eastern Cape opening an online outlet for their products it is important to establish what products are seen to be suitable for online sales.

It has become clear that there are certain market segments, such as travel, consumer electronics, hobby goods and media goods, in which internet retailing has

really made a very significant impact (Doherty & Ellis-Chadwick, 2010). For the purposes of this study it has been decided that, due to the large array of products marketed online, rather than looking at specific products, it would be better to look at the product attributes that are seen to be complimented by e-commerce.

Hassanein and Head (2006) put forward that in the pre-purchase phase, consumers go through a process of evaluating the merits of the product in question. The outcome of this process determines whether they make a purchase decision. The exact nature of the evaluation process depends in part on the attributes of the product. Hassanein and Head (2006) identify several classification schemes for categorising on-line products:

- **Search products versus experience products:** Search attributes are product features that a consumer can obtain full information about and assess before purchase. Experience attributes, on the other hand, are features that require a consumer to actually come into direct contact with the product (e.g., taste, fit). The boundary between search and experience products is fluid, because product exhibition and sampling may enable consumers to turn experience attributes into search attributes. Moreover, items that are experience products in physical channels can be transformed into search products in electronic channels;
- **Digital versus non-digital products:** digital attributes can be experienced on-line at relatively low cost while non-digital attributes entail physical inspection by the customer;
- **Geometric, material, or mechanical products:** This classification is based on the sensory dimensions used by customers in evaluating products. Geometric products are products that consumers mostly evaluate on a visual basis (e.g., picture frames, utensils, computer peripherals), whereas material products are typically evaluated with the sense of touch (e.g., linens, clothing, towels). Mechanical products comprise products that consumers are inclined to interact with in the pre-purchase phase (e.g., cell phones, personal digital assistants, toys).
- **Infrequently purchased durables, frequently purchased nondurables, or entertainment/apparel products:** Infrequently purchased durable goods

(e.g., appliances, consumer electronics, furniture) are products where consumers want retailers to provide detailed product information and excellent service. Frequently purchased nondurable goods (e.g., groceries, health items, office supplies) are products where consumers want to have fast, convenient shopping experiences. Entertainment (e.g., books, toys, games) and apparel goods are products where consumers want to have fun and entertaining shopping experiences.

In a study conducted by Eppright and Hawkins (2009) it was established that the following traits, amongst others, would render a product suitable to be sold online:

- products that do not require informational input from available salespeople;
- products that do not require in-person demonstration;
- the product has to be shippable;
- frequently purchased items should be less prominent in electronic commerce due to the lack of a feasible distribution model;
- the importance of sensory product attributes to product purchase may limit the online suitability of certain product categories;
- unfavourable offline shopping experiences related to certain product categories, also identified as shopping enjoyment, may lead consumers to buy these types of products online.

Eppright and Hawkins' (2009) views are echoed by Trialogue (2003) where it is stated that it is clear that the online medium is better suited for some product sales than others. It generally amounts to products where "touch and feel" confirmation prior to purchase is not a prerequisite. They go on to say that those companies that survive will be the ones selling a commodity that people really need, goods that are easy to display online, "grudge" goods for which people would prefer not to waste time on a shopping expedition and those that are easy to package and deliver physically – from baked beans to books to bottles of wine.

### **3.7 INDUSTRIES MOST AFFECTED BY E-COMMERCE**

Chen (2005) identifies the sectors that are forecast to be most affected by e-commerce as being those whose products have a high price-to-bulk ratio (such as music CD's), commodities (such as routine business flights) and intangible, information products that can be delivered electronically (such as software). When the effect is reviewed, as a percentage of sales, the biggest impact is on the manufacturing and wholesale sectors. The industries most affected, being those where over 15% of sales resulted from e-commerce, are:

- Manufacturing:
  - Beverage and Tobacco;
  - Textile products;
  - Electrical;
  - Computer and electronic products;
  - Chemicals.
- Wholesale:
  - Drugs;
  - Automotive equipment;
  - Apparel.
- Services:
  - Travel arrangements and reservation.

Interestingly the impact of e-commerce is seen to be less than 1% for all industries within the retail sector.

Molla and Heeks (2007) reported that the results of their research within the South African context indicated that no one sector benefitted more from e-commerce than other sectors.

### **3.8 DEMOGRAPHICS OF E-COMMERCE USERS**

Despite the promise of a global market place offered by the internet, there are significant regional and national differences between markets and the market is



currently heavily skewed toward the developed countries of the West, in particular English-speaking countries (Chen, 2005).

Scott Morton (2006) claims there are different rates of adoption across different demographic groups, with the elderly being less likely to use the Internet than the nonelderly and minority consumers also being less likely to have access to the Internet.

Initially internet consumers tended to be young, male, well educated and earning middle to high incomes. This has over time, in the American and European population, changed, with the demographics of internet users beginning to resemble that of the country's population. This suggests that the longer the internet is present in a country, the wider the percentage of the country's population will be that begins to use the service (Chip & Ismail, 2008). Given the international demographics, it is interesting to note that the average sub-Saharan African user (a) works for a non-government organisation, private company or university, (b) is male, and (c) is well educated. In addition, he lives in an urban area and speaks either English, Spanish, or French (Darely, 2003). According to Doherty and Ellis-Chadwick (2010) recent research tends to suggest that in terms of their personal profiles – age, gender, education, salary, etc – internet shoppers are no longer likely to be greatly different to their off-line counterparts.

A number of authors (Chen, 2005; Chip & Ismail, 2008) concur that the demographics and rate of adoption between the developing nations and the developed nations, when it comes to internet users, differ significantly. This “digital divide” comes about primarily due to the disparity in the economic welfare between developed and developing nations, and should be measured, as set out by Trialogue (2003), according to the use of information and communication technology, since technology is ultimately worth little if it is not used correctly. As pointed out by Darely (2003) the data relating to sub-Saharan Africa appears to underline and confirm the fact that the socio-economic indicators for many countries in the region are below par. The factors considered by Darely (2003) as having an impact on internet access and use are literacy levels, life expectancy, per capita income, electricity consumption per capita and car use per thousand. All of these factors

within the Africa continent point towards low internet access and use. Unless these statistics improve, Internet access and use will continue to be low.

Although South Africa is included in the developing nations, the picture is not all doom and gloom for South African e-business practitioners, because, as reported by Chen (2005), the networked readiness index (NRI) prepared by the World Economic Forum sees South Africa ranked at 37 out of a total of 102 countries worldwide in 2003. The NRI measures the degree of preparation of a nation or community to participate in and benefit from information communication technology (ICT) developments.

### **3.9 E-COMMERCE IN THE OFFICE AUTOMATION INDUSTRY**

A search of the internet reveals that the incorporation of e-commerce is alive and well within the office automation industry on an international level. In an attempt to show how e-commerce is being incorporated in the offerings of office automation companies, two of major international office automation companies, namely Xerox and Canon, have been investigated and examples of how they are using e-commerce are set out below.

- **Xerox**

Xerox Corporation (2011) advertise a B2B e-commerce solution. They offer a Xerox-hosted private portal which is login- and password-protected website for online purchasing where only authorised employees can make purchases. They have ensured ease of use by aligning with procurement systems such as SAP, Oracle, Perfect Commerce and Ariba.

The Xerox Corporation (2011) sales pitch, as set out below, highlights the positives associated with e-commerce which include the convenience and ease of use:

“Your authorized buyers can log in to your very own Xerox-hosted extranet site and place orders 24/7 at your company's negotiated prices. We will create a personalized landing page for you, branded with your company's logo, with links to a comprehensive suite of online

purchasing and account management capabilities. Your users can also create their own "My Favorites" shopping list for easy reordering of common items."

- **Canon**

Liebman (2010, cited in Brohan, 2011), Canon USA's executive vice president and general counsel, pointed out that online communication and e-commerce have increasingly become the norm for several market segments, so it is critical in today's evolving business environment that a company's online presence be streamlined and easy to use, while also serving as a information-rich, brand communicator.

Canon USA, an arm of the Japanese camera manufacturer Canon Inc, launched m.USA.Canon.com in September 2009. This is a mobile website devoted to customer reviews of everything from camcorders to copiers to binoculars. The site accesses all reviews posted by customers on Canon's e-commerce site with the aim of assisting customers during the research and purchase process in stores (Deatsch, 2009).

In July 2010 Canon USA launched their redesigned e-commerce site. The updated site has improved features and functions, more relevant content and faster navigation (Brohan, 2010).

### **3.10 SUMMARY**

It is clear from the literature study conducted that e-commerce has come a very long way since its inception in 1994 with the first recorded transaction initiated and concluded entirely by electronic means. With 5.3 million internet users in South Africa alone, it would seem that use of e-commerce as a complement to an established "brick and mortar" business would be essential for any business wishing to secure growth into the future. Given the volume of transactions and the size of the e-commerce market, \$144 billion in 2004, it would seem to be a case of "when to get involved" rather than "if a business should get involved".

From the literature studied it appears that the products offered by Canoa Eastern Cape, particularly the office automation consumables, are suitable for sale through an e-commerce website as they exhibit the traits that would render a product suitable to be sold online. They are relatively low in price, they do not require informational input from available salespeople, they do not require an in-person demonstration and they are shippable.

A major factor which would need to be carefully researched is the e-readiness of the company's target market and their willingness to transact in an e-commerce environment. This would seem to be the defining factor in determining whether or not a venture into the e-commerce market would be of benefit to the company.

Chapter four will now deal with the research methodology followed in the accumulation of the primary data. The chapter will define the research objectives, both primary and secondary, the paradigm within which the research is based and processes followed in conducting the research.

## **CHAPTER 4 – RESEARCH METHODOLOGY**

### **4.1 INTRODUCTION**

Insight into Canoa Eastern Cape, the progression of e-commerce and the potential impact of e-commerce on Canoa Eastern Cape have been set out in Chapter two and three. The literature study creates the basis upon which the research objectives are defined. This chapter sets out both the primary and secondary research objectives. Having defined the research objectives an appropriate research paradigm is discussed which will allow the gathering of information for analysis, with reference to the literature studied, with the aim of drawing conclusions with regard to the research objectives. The process of conducting the research is also discussed, including the sample, the development of the research instrument, the administering thereof and the reliability and validity of the research.

### **4.2 RESEARCH OBJECTIVES**

Properly formulated, specific objectives will facilitate the development of the research methodology and will help to orientate the collection, analysis, interpretation and utilisation of data (International Development Research Centre, n.d.).

The primary objective to be addressed by this study is:

- Establish if an e-commerce solution presents a viable alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a market penetration strategy.

The following five secondary objectives were considered to be critical elements in the evaluation of the primary objective:

Customer focus

- Determine if customers in the Eastern and Southern Cape of South Africa are prepared to purchase goods and services through an e-commerce channel;
- Determine what the reasons are for adoption or the failure to adopt;
- Profile the demographics of users and non-users, including the industry within which they trade and the entity size;

- Establish if there is a difference between the adoption rate in East London, Port Elizabeth, Knysna and George;
- Establish which of the two groups of products, office automation consumables and office automation equipment, customers would be prepared to buy online.

### **4.3 RESEARCH PARADIGM**

Collis and Hussey (2009) define a research paradigm as a philosophical framework which guides how scientific research should be conducted. Williams (1998) states that in management or organisational research the term paradigm encompasses three levels:

- The philosophical level, being basic beliefs about the world;
- The social level, where guidelines exist as to how a researcher should conduct their endeavours and lastly;
- The technical level, that is, the methods and techniques ideally adopted when conducting research.

The two extremes with regard to research paradigms are the qualitative or anti-positivist paradigm and the quantitative or positivist paradigm.

#### **4.3.1 Qualitative Paradigm**

Anti-positivism emphasises that social reality is viewed and interpreted by the individual according to the ideological positions possessed. Therefore knowledge is personally experienced rather than acquired from or imposed from outside (Dash, 2005).

#### **4.3.2 Quantitative Paradigm**

As put forward by Dash (2005) the positivist paradigm of exploring social reality is based on the philosophical ideas of the French philosopher August Comte, who emphasised observation and reason as means of understanding human behaviour. The positivistic paradigm thus systematises the knowledge generation process with

the help of quantification, which is essentially to enhance precision in the description of parameters and the discernment of the relationship among them.

Krauss (2005) states that according to the positivist epistemology, science is seen as a way to get truth, to understand the world well enough so that it might be predicted and controlled. The world and the universe are deterministic, meaning that they operate by laws of cause and effect that are discernable if we apply the unique approach of the scientific method. The positivists believe in empiricism, the idea that observations and measurement are the core of the scientific endeavour.

#### **4.3.3 Paradigm to be followed in this study**

Having considered the two paradigms it was clear that this research must be grounded primarily in the quantitative paradigm as the aim is to accumulate evidence from a sample, the results of which can then be used to predict and control the impact of e-commerce on Canoa Eastern Cape.

### **4.4 CONDUCTING THE RESEARCH**

This research will follow the survey methodology. More specifically this will be an analytical survey. According to Collis and Hussey (2009) in a positivist study, a survey methodology is designed to collect primary or secondary data from a sample, with a view to analysing them statistically and generalising the results to a population, with an analytical survey determining whether there is a relationship between variables.

#### **4.4.1 The sample**

The sample is a subset of a population. In a positivist study, the sample is chosen to be representative of the population from which it is drawn (Collis & Hussey, 2009).

For the purposes of this study the sample for the customer survey was extracted from the database of customers that Canoa Eastern Cape maintains. The sample was constructed based on all those people who had been identified as either a

hardware or consumable contact within an account in the Canoa Eastern Cape database. The sample was constructed to include only those who had an email address. These hardware or consumable contacts are effectively the people responsible for procurement within the entities for which they work. The sample created resulted in 7764 people being surveyed. The sample was made up of 1540 out of the East London area, 3023 out of the Port Elizabeth area, 933 out of the Knysna area and 2268 out of the George area. In order to generalise the findings from this sample to the population it is assumed that this sample is representative or similar to the population.

#### **4.4.2 Development of the research instrument**

Collis and Hussey (2009) identify the questionnaire and the interview as the two most widely used methods of data collection in positivist studies. Due to the size of the sample it was decided to make use of a questionnaire in this study to collect data.

- **Questionnaire**

A questionnaire is a list of carefully structured questions, which have been chosen after considering testing with a view to eliciting reliable responses from a particular group of people. The aim is to find out what they think, do or feel because this will help address your research questions (Collis & Hussey, 2009).

According to Collis and Hussey (2009) there are two major problems associated with using questionnaires in survey:

- The first is questionnaire fatigue. This refers to the reluctance of many people to respond to questionnaire surveys because they are inundated with unsolicited requests by post, mail, telephone and in the street;
- The second problem is what to do about non-response bias, which can be present if some questionnaires are not returned. Non-response bias is crucial in a survey because your research design will be based on the fact that you are going to generalise from the sample to the population.



- **Customer survey**

With the options considered and having taken note of the problems highlighted above it was decided that, due to the size of the sample, the only feasible way to conduct the customer survey would be by means of a self completion questionnaire. In an attempt to improve the response rate the questionnaire included only 30 questions. The majority of the questions made use of Likert scales or yes/no responses in an attempt to speed up the time required by respondents to complete the questionnaire. It was felt that the estimated three minutes required to complete the questionnaire was not excessive.

This questionnaire is attached and is marked as Annexure A.

#### **4.4.3 Testing the research instrument**

Once the research instrument had been created it was submitted to Dr Cullen, the author's supervisor and an expert, Dr Pietersen from the Nelson Mandela Metropolitan University Unit for Statistical Consultation, for scrutiny. The reason for this was to ensure that the questions being posed were not ambiguous in any way, and that the questions would in fact return relevant information. Following feedback from Dr Cullen and Dr Pietersen changes were made to improve the questions posed within the questionnaire. The revised questionnaire was resubmitted for final approval and accepted by both Dr Cullen and Dr Pietersen.

#### **4.4.4 Administering the research instrument**

The questionnaire relating to the customer survey were delivered to the identified sample by email. This method of delivery was chosen as it was felt that this would ensure that the questionnaire would reach the desired respondent, and would do so in the most efficient manner. The size of the sample dictated that a cost effective medium be used.

The email that was sent contained an introduction and an explanation of the reason behind conducting the survey. Included in the survey was a link to the questionnaire

hosted on survey-monkey. A sample of the supporting email is attached and marked Annexure B.

#### **4.4.5 Validity**

Validity is concerned with the extent to which the research findings accurately represent what is happening in the situation, in other words, whether the data collected represents a true picture of what is being studied (Collis & Hussey, 2009). According to Switzer, et al. (1999) three broad types of validity are central to any validity argument, namely content validity, criterion validity and construct validity. These three types of validity are discussed in more detail below:

- Content validity – this concerns the extent to which items in a measure accurately reflect the full breadth of the construct of interest (Switzer, et al., 1999). Content validity addresses the match between questions and the content they are intended to assess (The College Board, n.d.). In assessing content validity for surveys and tests, each question is given to a panel of expert analysts and they rate the question, giving their opinion about whether the question is essential, useful or irrelevant to measuring the construct under study. Based on the results the survey or test is modified to improve the validity (Shuttleworth, 2009a);
- Criterion validity – also known as correlational validity, is the extent to which the measure correlates with a “gold standard” of the intended construct. The “gold standard” can be another accepted measure of the same construct. Criterion validity is typically established by examining the correlation of each item with the criterion score. Low correlations suggest that particular items, or the scale as a whole, may not measure the intended construct (Switzer, et al., 1999). In order to establish criterion validity a pilot study should be done selecting people who, for the purposes of this study, are known to be e-commerce users, and those that are known to not be e-commerce users. If the survey has high concurrent validity, that is, the validity achieved by comparing the survey with an established measure, then e-commerce adopters should receive scores that reflect their adoption of e-commerce (Shuttleworth, 2009b);

- According to Switzer, et al. (1999) construct validity requires that an instrument be:
  - (a) viewed as measuring an underlying construct, and;
  - (b) tested to see whether its hypothesized or theoretical relationships with other variable can be established.

Construct validity is valuable in social sciences, where there is a lot of subjectivity to concepts (Shuttleworth, 2009c), but has for the purposes of this study not been assessed.

For the purposes of this study, validity of the research instrument was assessed by an expert, Dr Pietersen from the Nelson Mandela Metropolitan University Unit for Statistical Consultation, to ensure that the right questions were being asked and they were asked in the correct way so as to ensure that valid responses would be received from respondents. The expert was of the opinion that the research instrument was valid.

#### **4.4.6 Reliability**

Reliability is concerned with the findings of the research. The findings can be said to be reliable if the research is repeated and the same result is obtained (Collis & Hussey, 2009). In research, the term reliability means “repeatability” or “consistency”. A measure is considered reliable if it would give the same result over and over again, assuming that what is being measured isn’t changing (Trochim, 2006). Collis and Hussey (2009) state that reliability can be tested in one of three ways, namely, the Test re-test method, the Split-halves method and the Internal consistency method.

Reliability was assessed by the author’s supervisor, Dr Cullen, as well as an expert, Dr Pietersen from the Nelson Mandela Metropolitan University Unit for Statistical Consultation, during their assessment of the research instruments as discussed in section 4.4.3 of this study. The expert was of the opinion that there was no need to do further tests for reliability and was satisfied that there were no reasons why there would be any problems surrounding the repeatability or consistency of the research.

## **4.5 SUMMARY**

This study will address the primary research objective of whether or not an e-commerce solution presents an alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a Market Penetration Strategy by assessing six secondary objectives. A primarily quantitative approach has been followed as this will allow the gathering of information with the aim of predicting and controlling the impact of e-commerce on Canoa Eastern Cape. Primary data was gathered by means of questionnaires which were tested for both validity and reliability so as to ensure that the findings, to be discussed in Chapter 5, can be relied on.

## **CHAPTER 5 – RESEARCH FINDINGS**

### **5.1 INTRODUCTION**

The preceding chapter dealt with the research methodology followed in the accumulation of the primary data, the analysis of which is the subject of this chapter.

The chapter will commence with a review of the characteristics of the targeted sample, which will include a look at the response rate and the methods followed in analysing the data collected. The analysis of the primary data is then discussed, starting with the univariate analysis, followed by the bivariate analysis.

### **5.2 CHARACTERISTICS OF THE TARGETED SAMPLE – CUSTOMER SURVEY**

#### **5.2.1 Response rate**

The sample used for the purposes of the customer survey consisted of consumers in the Eastern and Southern Cape taken from Canoa Eastern Cape's database. A total of 7544 questionnaires were distributed by means of email, allowing a two week window for customers to respond. A total of 276 questionnaires were completed within the two week period. Although this only represents a response rate of just fewer than 4% it was felt that the responses received would be sufficient to perform the required statistical analysis. The non-responses are assumed to be purely on a random basis.

In certain instances respondents did not complete all questions posed. These questionnaires were retained and the data accumulated from these partially completed questionnaires will be included with those questionnaires that were fully completed.

## 5.2.2 Analysing and interpreting the data

For the purposes of analysing the data collected from the responses to the questionnaires two methods of analysis will be used, namely univariate analysis and bivariate analysis. Both these methods will be discussed in more detail below.

**5.2.2.1 Univariate analysis** – here descriptive statistics will be used to explore the data from individual variables. This analysis will be conducted making use of frequency distributions. In statistics, the term frequency refers to the number of observations for a particular data value in a variable, with a frequency distribution being an array that summarises the frequencies for all the data values in a particular variable (Collis & Hussey, 2009).

**5.2.2.2 Bivariate analysis** – here inferential statistics will be used to explore the relationships between two variables. In order to test the associations between these variables two tests will be used:

- **the Chi-Square Test** - According to AllBusiness.com Inc (2011) the chi-square test is a statistical method to test whether two (or more) variables are: (1) independent or (2) homogeneous. The chi-square test for independence examines whether knowing the value of one variable helps to estimate the value of another variable. The chi-square test for homogeneity examines whether two populations have the same proportion of observations with a common characteristic. Though the formula is the same for both tests, the underlying logic and sampling procedures vary;
- **Cramér's V** - Cramer's V is used as a post-test to determine strengths of association after chi-square has determined significance. Chi-square says that there is a significant relationship between variables, but it does not say just how significant and important this is. Cramer's V is a post-test to give this additional information. Cramer's V varies between 0 and 1. Close to 0 it shows little association between variables. Close to 1, it indicates a strong association (Cramér, 1999 (1890, cited in Changing Minds.org, 2011)).

### **5.3 UNIVARIATE ANALYSIS – CUSTOMER SURVEY**

The customer survey questionnaire focused on collecting data in four areas namely:

- Demographic data relating to the individual;
- Demographic data relating to the business;
- Individuals use of e-commerce;
- Business use of e-commerce.

The data collected has been analysed and the results are reported below.

#### **5.3.1 Demographic data - Individual**

For the purposes of ease of interpretation the total number (n) of respondents will be reflected, and then the percentage frequency will be reported. According to Collis and Hussey (2009) a percentage frequency summarises frequencies as a proportion of 100 and is calculated by dividing the frequency by the sum of the frequencies and then multiplying the answer by 100. Should there be more than three variables, those variables that represent more than 85% of the total will be reported.

Three questions were posed to derive basic personal information, felt to be relevant to the study, from those completing the questionnaires. The respondents were requested to divulge their gender (n=276), age (n=276) and race (n=267). The results from these questions are contained in Table 5.1, Table 5.2 and Table 5.3 in Annexure B. With the respondents split 59.06% female and 40.94% male, combined with the fact that no one age group accounted for more than 16.5% of the respondents it is felt that the data is a good representation of gender and age. This information will be used later to test the findings of the literature study regarding the demographics of adopters of e-commerce.

The data relating to race indicated that 80.15% of respondents were white. This bias towards whites with regard to the race profile of the respondents, as depicted in Table 5.3, cannot be explained. Due to this unexplained bias it has been decided that, for the purposes of this study, race will not be used in any of the cross-tabulation to be conducted later in the study.

### 5.3.2 Demographic data - Business

Five questions relevant to the study were posed to derive basic information from those completing the questionnaires relating to the businesses they represent or are employed by. The main objective of these questions was to determine the geographic location of the business, the type of entity and industry and the size of the business.

With the aim of determining the area customers were in they were requested to enter the dialing code within which their business was located. Table 5.4 shows 88.76% of the 276 respondents who answered this question were situated in one of the three main areas serviced by Canoa Eastern Cape, namely, 041 or Port Elizabeth (41.30%), 044 or South Western Districts (28.62%) and 043 or East London (18.84%).

With regard to economic sector, Table 5.5 shows that there was a good spread of businesses across all economic sectors with no one sector accounting for more than 12% of the respondents. Government and public services (11.96%), retail and consumer (10.51%) and engineering and construction (9.42%) were the top three industries represented.

The type of business was assessed by requesting the respondents to divulge the type of legal entity through which the business they represent trades. The majority of the respondents, as reflected in Table 5.6, represented either Private Companies (33.94%) or Close Corporations (28.83%).

In an attempt to establish the size of the businesses the respondents were requested to indicate the number of people employed by the business. As shown in Table 5.7 52.17% of the businesses surveyed employed less than 25 people, with 23.55% employing more than 100 people. The size of the businesses was, in addition to the number of people employed, assessed by means of their spend on office automation consumables in a month. Table 5.8 shows that 26.94% of the respondents indicated a monthly spend of less than R1,000.00 and 24.72% indicated a spend of over R7,500.00 per month. The mean for the monthly spend amounted to R3,517.77 per



firm which equates to a total monthly spend of R 953,315.50 for the 271 businesses represented. This is significant because it represents more than one third of the current office automation consumable sales achieved by Canoa Eastern Cape.

The demographic information indicates that the questionnaires were completed by individuals associated with a good mix of businesses across all sectors, all sizes and types of businesses and from all three major geographical areas within which Canoa Eastern Cape trades. As with the personal demographic information, these findings will be used later to compare the findings of the questionnaires with the literature study conducted in Chapter 3.

### **5.3.3 Use of e-commerce - Individuals**

The objective behind gathering information relevant to the individuals' use of the internet and e-commerce was to allow an evaluation of the effect these personal experiences have on the decisions made relating to the use of e-commerce in the work environment. The information was gathered by means of nine questions, the results of which are reflected below. For the purposes of ease of interpretation the total number (n) of respondents will be reflected, and then the percentage frequency will be reported.

- **Question 2.1: Have you used the internet for purchasing goods or services for personal use? (n=273)**

Table 5.9 reflects that 79.85% of the respondents indicated that they had used the internet for purchasing of goods or services for personal use. This percentage is significantly higher than the South African internet penetration rate of 10.8% (Miniwatts Marketing Group, 2011) as reported in the literature study in chapter three. This significant difference can more than likely be explained by the fact that the respondents were all employed individuals based primarily in developed areas.

- **Question 2.2: Indicate the maximum value you would feel comfortable spending on any one on-line transaction. (n=265)**

As reflected in Table 5.10 52.07% of the respondents indicated that they would be prepared to spend over R1,001.00 on any one on-line transaction. The mean value for all respondents worked out at R2,143.67 which is thought to be significant as this is a relatively high value and indicates a significant level of trust by the individuals in e-commerce. These findings also point to the type of products the respondents would be prepared to buy on-line. With reference to Canoa Eastern Cape and the products it offers, this finding points towards Office Automation Consumables as being suitable for sale online as they are generally lower in price than the Office Automation Hardware with a ream of paper selling for roughly R 35.00 (incl. VAT) and printer cartridges selling for between R 150.00 (incl. VAT) and R 500.00 (incl. VAT) per cartridge.

- **Question 2.3: How frequently do you use the internet to purchase goods or services for personal use? (n=273)**

Whilst the percentage of people who have used the internet for the purchase of goods or services for personal use was high, as reflected in Table 5.9, the results on the frequency of use, reflected in Table 5.11, lower the significance of the high numbers in Table 5.9. 42.49% of those who responded only use the internet once every six months on average for the purchase of goods and services for personal use. Only 8.79% use the internet, for the purchase of goods and services for personal use, on a frequent basis, being at least once a week.

Brown and Jayakody (2008) warned against the use of frequency as a measure of e-commerce success by pointing out that given the variety of products and services on offer to e-commerce consumers, using frequency of use as a general measure of e-commerce success is problematic. Frequency of use is also dependent on the nature of products and services being purchased. For example, online grocery shopping might be conducted more frequently than purchase of airline tickets for some. Assessing customer

intentions to continue using an e-commerce system is perhaps a better measure of success, as it reflects repeat business regardless of product/service.

- **Question 2.4: Rate your general perception of on-line shopping for personal use. (n=261)**

Table 5.12 shows that 80.84% of the respondents were of the opinion that on-line shopping is at a high level, either good or very good. This high rating raises the question as to why the frequency of use is so low. A possible answer is that the nature of the shopping experience, particularly for personal use, is still a more social and interactive experience.

- **Question 2.5: Given your experiences of on-line shopping for personal use please rate the following with regard to their impact on your overall on-line shopping experience.**

The items rated were:

- The level of after sales customer service offered;
- Ease of use / site navigation;
- Product information availability; and
- Payment options.

The results, as contained in Table 5.13, Table 5.14, Table 5.15 and Table 5.16 show that these four factors have a significant impact on the overall on-line shopping experience. The “Product information availability” as set out in Table 5.15, was rated by 71.98% of the respondents as very important, and “Ease of use / site navigation” as set out in Table 5.14, was rated by 70.31% of the respondents as very important. These findings support the findings of Menga (2009) who found that in terms of what consumers want to see at online stores, 64 percent say product details are important, 60 percent said incentives were an important feature, followed by easy site navigation with 46 percent and product reviews with 42 percent.

It was surprising that “The level of after sales customer service offered” as set out in Table 5.13 rated lowest out of the four, with only 46.09% of the respondents rating this as very important. This may be an indication of the type of products being bought on-line, being goods such as CD’s and digital content, as these do not really require a great level of after sales service.

These findings are significant in the context of this study as they indicate what areas need to be focused on when developing the e-commerce solution for Canoa Eastern Cape.

- **Question 2.6: Would you use the internet again, given your prior experience, for the purchase of goods or services for personal use? (n=258)**

91.09% of the respondents indicated that they would use the internet again for the purchase of goods or services for personal use. The high level of repeat use, as set out in Table 5.17, is a testament to the acceptance of e-commerce as a bona fide means of trading. These findings tie in with the high rating reflected in Table 5.12 which reflected the respondents general perception of on-line shopping for personal use.

This high level of willingness to use the internet again, given prior experience is significant in terms of the literature studied as Brown and Jayakody (2008) are of the opinion that assessing customer intentions to continue using an e-commerce system is perhaps a better measure of success, as it reflects repeat business regardless of product/service.

- **Question 2.7: If you have not used the internet before for the purchase of goods or services for personal use what is the main reason? (n=47)**

Having reviewed the reasons given by the respondents it was clear that there were three main groupings that could be created:

- **Lack of trust** – this accounted for 38.30% of the responses. The comments here included:

- “Won't give banking details over the net - regardless of how secure they say the sight is.”;
- “Security not up to standard. A lot of false companies asking banking and personal details - Security ?”;
- “Are scared that if I receive the items I ordered it will be in bad shape and I cannot return it”;

The element of trust was highlighted in the literature study with reference to comments by Brown and Jayakody (2008) when they pointed out that in a B2C e-commerce context, customer service and trust in an online vendor are of the utmost importance.

- **The need for a personal shopping experience** – this accounted for 25.53% of the responses. The comments here included:
  - “Has not been a regular on-line shopper, probably because I like shopping at malls and prefer to have items immediately available to me, I don't like waiting for items. Maybe also a bit of a trust factor, I like to touch / feel the item before I purchase it.”;
  - “I prefer feeling and seeing the item before purchasing”;
  - “live close to town and enjoy going out to rather go buy it in person”;

This need for a personal shopping experience supports the comments by Maamar (2003) that once IT is introduced into the process, the “social context” is ignored and one of the challenges that need tackling is how to integrate the social context into the development of any user-oriented systems.
- **Have no need** – this accounted for 12.77%. The fact that these customers have not expressed a negative sentiment towards the use of e-commerce would appear to be an opportunity to educate users as to the advantages of e-commerce. In essence, if they perceive a need, and they have a positive experience, then it is possible that they could be converted to e-commerce users.

#### 5.3.4 Use of e-commerce - Businesses

The objective behind gathering information relevant to the use of the internet and e-commerce within the business environment was to establish if there was sufficient e-

commerce adoption to warrant the commissioning of an e-commerce site by Canoa Eastern Cape. The focus on business was because of the fact that this is primarily the customer profile Canoa Eastern Cape normally sells to. The information was gathered by means of 12 questions, the results of which are reflected below. For the purposes of ease of interpretation the total number (n) of respondents will be reflected and then the percentage frequency will be reported.

- **Question 1.8: You/your firm would consider buying office automation consumables (copy paper, ink cartridges etc - excluding stationery) on-line if your existing supplier made an e-commerce solution available to you. Please indicate your agreement or otherwise with this statement. (n=275)**

With 65.82% of the respondents in Table 5.18 indicating that they would be likely or very likely to consider buying office automation consumables on-line it would indicate that this category of products, including copy paper, ink cartridges and the like, lends itself to being sold on-line. The office automation consumables exhibit three of the traits that Eppright and Hawkins (2009) established would render a product suitable to be sold online, that is, they are:

- products that do not require informational input from available salespeople;
- products that do not require in-person demonstration; and
- the product has to be shippable.

What is significant with regard to this study is the fact that the willingness to buy office automation consumables is similar across all regions as depicted by the percentages reflected in Table 5.19. A noteworthy point is that George and Knysna (044) show the lowest with 27.8% of the respondents indicating that they would be unlikely or very unlikely to buy office automation consumables on-line.

- **Question 1.9: You/your firm would consider buying office automation equipment (printers, photocopiers etc) on-line if your existing supplier made an e-commerce solution available to you. Please indicate your agreement or otherwise with the statement. (n=275)**

54.55% of the respondents in Table 5.20 indicated that they were either unsure, unlikely or very unlikely to consider buying office automation equipment on-line. It is assumed that the product traits make office automation equipment less suitable to be sold online when compared with the office automation consumables. In addition to the traits, the selling prices would more than likely be significantly higher than the average amount people are prepared to spend on-line as highlighted in Table 5.10.

On the positive side, these results indicate that there is most certainly a market within the e-commerce environment for the sale of office automation equipment. 45.45% of the respondents indicated that they would be prepared to buy this category of products, which includes printers, photocopiers and the like, on-line. It is felt that this would require further investigation to establish exactly what office automation equipment products should be catered for as part of an e-commerce solution.

- **Question 3.1: Has your firm used the internet to purchase goods? (n=252)**

Table 5.21 shows that there is a significantly lower rate of businesses using the internet to purchase goods than there are individuals using the internet to purchase goods for personal use. 59.13% of respondents indicated that their firm has used the internet to purchase goods, when compared to 79.85% of individuals who indicated that they had used the internet to purchase goods, as reflected in Table 5.9. This lower rate of adoption is understandable and could be explained by the fact that the proliferation of e-commerce was initially aimed at individuals as highlighted by Gilbert (2004) in his article "E-commerce turns 10".

Given the results in Table 5.19 above it is interesting to see that when the data relating to the use of the internet to purchase goods and services for business purposes are broken down by region, as set out in Table 5.22, it is Port Elizabeth (041) that ends with the lowest, with 54.81% prior use, and George and Knysna (044) that ends with the highest, with 69.01% prior use. These percentages are significantly higher than the South African internet penetration rate of 10.8% as reflected in the literature study in chapter three.

- **Question 3.2: How frequently do you use the internet to purchase goods or services for business use? (n=252)**

Table 5.23 shows that the frequency of use for businesses is very similar to that of individuals which was set out in Table 5.11. 33.73 % of those who responded only use the internet once every six months on average for the purchase of goods and services for business use. 9.92% use the internet, for the purchase of goods and services for business use, on a frequent basis, being at least once a week.

- **Question 3.3: Rate your general perception of on-line shopping for business use. (n=225)**

The high rating achieved in Table 5.24, with 79.56% being of the opinion that on-line shopping is at a high level, being either good or very good, does raise the question then as to why the frequency of use is so low. A possible answer to this is suggested by Eppright and Hawkins (2009) who suggest that frequently purchased items should be less prominent in electronic commerce due to the lack of a feasible distribution model.

- **Question 3.4: Given your experiences of on-line shopping for business use please rate the following with regard to their impact on your overall on-line shopping experience.**

The respondents were requested to rate the following four items:

- The level of after sales customer service offered;
- Ease of use / site navigation;



- Product information availability; and
- Payment options.

As found with the assessment for individual use of the internet for on-line purchases, the results in Table 5.25, Table 5.26, Table 5.27 and Table 5.28 show that these four factors have a significant impact on the overall on-line shopping experience for business use too. The “Product information availability”, set out in Table 5.27 and “Ease of use / site navigation”, set out in Table 5.26, again rated highest.

- **Question 3.5: Would you use the internet again, given your prior experience, for the purchase of goods or services for business use? (n=222)**

Although the indication from Table 5.29 is that there would be repeat use of the internet for the purchase of business goods or services, the percentage is significantly lower than that indicated by the individuals. 80.18% of the respondents indicated that they would use the internet again, given their prior experience, for the purchase of goods or services for business use.

This willingness to use the internet again is rated highly by Brown and Jayakody (2008) who are of the opinion that assessing customer intentions to continue using an ecommerce system is perhaps a better measure of success, as it reflects repeat business regardless of product/service.

- **Question 3.7: Does your firm have any policy that encourages or prescribes the use of the internet for purchasing? (n=244)**

The results set out in Table 5.30, with 85.66% of the respondents indicating that there is no official policy that encourages or prescribes the use of the internet for purchasing. These findings suggest that although the internet is being used for purchasing of goods and services for business use, firms are not yet at the stage where the risks and rewards of doing business in this manner have been fully assessed and formal policies put in place to take advantage of the benefits that e-commerce can offer.

- **Question 3.9: Is the use of the internet for business purposes encouraged in your firm? (n=249)**

With only 14.06% of respondents indicating that they receive very little or no encouragement to use the internet for business purposes, as reflected in Table 5.31, it seems that although formal policies may be lacking, the need to incorporate the internet into business has been accepted by the majority.

This encouragement to use the internet for business purposes is important as Molla and Licker (2005) point out that a lack of commitment, especially by top executives, is one of the chief obstacles affecting IT implementations. It can then be taken that commitment from management will ensure that the adoption of e-commerce within the business environment.

- **Question 3.10: What type of internet access does your firm have? (n=250)**

Broadband internet access is by far the most prevalent. It is also interesting to note that only 0.40% have no internet access. These factors all bode well for the future of e-commerce within the Eastern and Southern Cape.

- **Question 3.11: Does your firm make use of on-line payments? (n=252)**

Table 5.33 shows that 90.08% of businesses surveyed make use of on-line payments. This is significant as it indicates that there is a high level of trust in on-line transactions.

- **Question 3.12: Does your firm have a credit card that can be used for internet based purchasing? (n=251)**

Only 44.22% of the respondents, as reflected in Table 5.34, indicated that their firm has a credit card that can be used for internet based purchasing.

## 5.4 BIVARIATE ANALYSIS – CUSTOMER SURVEY

This section will now investigate the relationships between certain of the variables discussed earlier in univariate analysis.

### **5.4.1 Prior use as an indicator of future use (personal use) - Question 2.1:**

Have you used the internet for purchasing goods or services for personal use? vs Question 2.6: Would you use the internet again, given your prior experience, for the purchase of goods or services for personal use?

The chi-square reflecting in Table 5.35 indicates that there is a statistically significant association between the prior use of the internet for purchasing goods for personal use and the individual's willingness to use the internet again. A score of 0.58 for Cramér's V indicates a strong association and large effect size.

This association, as set out in Table 5.35, is seen as important because if a customer can be enticed to make use of the internet for purchasing once, there is a significant chance that the customer will continue to make use of the internet for purchasing.

### **5.4.2 Prior use for personal means as an indicator of prior use for business purposes - Question 2.1: Have you used the internet for purchasing goods or services for personal use? vs Question 3.1: Has your firm used the internet to purchase goods?**

Have you used the internet for purchasing goods or services for personal use? vs Question 3.1: Has your firm used the internet to purchase goods?

The chi-square, reflected in Table 5.36, indicates that there is a statistically significant association between the prior use of the internet for purchasing goods for personal use and the individual's firm using the internet to purchase goods. A score of 0.27 for Cramér's V indicates a moderate association and medium effect size.

### **5.4.3 Prior use for personal means as an indicator of future use for business** Question 2.1: Have you used the internet for purchasing goods or

services for personal use? vs Question 3.5: Would you use the internet again, given your prior experience, for the purchase of goods or services for business use?

In Table 5.37 the chi-square indicates that there is a statistically significant association between the prior use of the internet for purchasing goods for personal use and the individual's firm using the internet to purchase goods. A score of 0.38 for Cramér's V indicates a moderate association and medium effect size.

**5.4.4 Prior use as an indicator of future use (business use)** Question 3.1: Has your firm used the internet to purchase goods? vs Question 3.5: Would you use the internet again, given your prior experience, for the purchase of goods or services for business use?

The chi-square reflecting in Table 5.38 indicates that there is a statistically significant association between the prior use of the internet for purchasing goods for business use and the individual's willingness to use the internet again for purchasing goods or services for business use. A score of 0.56 for Cramér's V indicates a strong association and large effect size.

**5.4.5 Company policy as an indicator of use for business purposes** Question 3.7: Does your firm have any policy that encourages or prescribes the use of the internet for purchasing? vs Question 3.1: Has your firm used the internet to purchase goods?

In Table 5.39 the chi-square indicates that there is not a statistically significant association between whether a firm has any policy that encourages or prescribes the use of the internet for purchasing and whether the firm has used the internet to purchase goods. A score of 0.06 for Cramér's V indicates a weak association and small effect size.

**5.4.6 Company policy as an indicator of future use for business purposes** Question 3.7: Does your firm have any policy that encourages or

prescribes the use of the internet for purchasing? vs Question 3.5: Would you use the internet again, given your prior experience, for the purchase of goods or services for business use?

The chi-square indicates that there is not a statistically significant association between whether a firm has any policy that encourages or prescribes the use of the internet for purchasing and the individual's willingness to use the internet again for purchasing goods or services for business use. A score of 0.02 for Cramér's V indicates a weak association and small effect size.

The researcher is of the opinion that the results in Table 5.40 are more subject to the fact that there are very few firms with formal policies in place that encourage or prescribe the use of the internet for purchasing, rather than the fact that policies will have no bearing on future use of the internet for business purposes.

**5.4.7 Encouragement to use internet for business purposes as an indicator of the use of the internet for the purchase of goods** Question 3.1: Has your firm used the internet to purchase goods? vs Question 3.9: Is the use of the internet for business purposes encouraged in your firm?

The chi-square indicates that there is a statistically significant association between whether the use of the internet for business purposes encouraged in a firm and whether the firm has used the internet to purchase goods. A score of 0.31 for Cramér's V indicates a moderate association and medium effect size.

The results in Table 5.41 indicate that the greater the degree to which the use of the internet is encouraged for business purposes, the higher the likelihood is that the business will use the internet to purchase goods for online purposes. These findings support Molla and Licker's (2005) stance that once an organisation moves to adopt interactive e-commerce systems, the commitment of its managers, especially those at the top, appears to drive how far and how fast it moves up the maturity ladder of e-commerce.

**5.4.8 Type of internet connection as an indicator of use for business purposes** Question 3.1: Has your firm used the internet to purchase goods? vs Question 3.10: What type of internet access does your firm have?

The chi-square, as reflected in Table 5.42, indicates that there is not a statistically significant association between the type of internet connection used and whether the firm has used the internet to purchase goods. A score of 0.14 for Cramér's V indicates a weak association and small effect size.

**5.4.9 The use of on-line payments as an indicator of use for business purposes** 3.1: Has your firm used the internet to purchase goods? vs Question 3.11: Does your firm make use of on-line payments?

The chi-square reflected in Table 5.43 indicates that there is a statistically significant association between the use of on-line payments and whether the firm has used the internet to purchase goods. A score of 0.29 for Cramér's V indicates a moderate association and medium effect size.

The results reflected in Table 5.43 indicate that firms who make use of on-line payments are more likely to purchase goods on-line. This may be as a result of the fact that they have a better understanding of the security in place, and are less concerned that they are exposing their business to risk by transacting on-line. The use of on-line banking is also an indicator of a business's level of adoption, and as per Daniel, Meyers and Wilson (2002) the most advanced adopters have on-line ordering in operation and are developing on-line payment capabilities.

**5.4.10 Availability of credit card as an indicator of use for business purposes** 3.1: Has your firm used the internet to purchase goods? vs Question 3.12: Does your firm have a credit card that can be used for internet based purchasing?

The chi-square indicates that there is a statistically significant association between the availability of a credit card for internet based purchasing and whether the firm has used the internet to purchase goods. A score of 0.30 for Cramér's V indicates a moderate association and medium effect size.

#### **5.4.11 Age as an indicator of use for business purposes** Age vs Question 3.1: Has your firm used the internet to purchase goods?

With regard to the results reflecting in Table 5.45, the chi-square indicates that there is not a statistically significant association between the age of the individual and whether the firm has used the internet to purchase goods. A score of 0.15 for Cramér's V indicates a weak association and small effect size.

The results reflected in Table 5.45 show that there is no difference between the age groups relating to the adoption of e-commerce. These findings support Chip and Ismail (2008) who say that the longer the internet is present in a country, a wider percentage of the country's population begins to use the service. This is further supported by Doherty and Ellis-Chadwick (2010) who report that recent research tends to suggest that in terms of their personal profiles – age, gender, education, salary, etc – internet shoppers are no longer likely to be greatly different to their off-line counterparts.

#### **5.4.12 Size of entity as an indicator of use for business purposes** Number of people vs 3.1: Has your firm used the internet to purchase goods?

The chi-square indicates that there is not a statistically significant association between the size of the firm, indicated by the number of people employed, and whether the firm has used the internet to purchase goods. A score of 0.11 for Cramér's V indicates a weak association and small effect size.

These findings, as set out in Table 5.46, indicate that the size of the entity has no bearing on whether or not it has used the internet for the purchase of goods for business purposes.

#### **5.4.13 Type of entity as an indicator of use for business purposes Type of firm vs 3.1: Has your firm used the internet to purchase goods?**

In Table 5.47 the chi-square indicates that there is not a statistically significant association between the size of the firm, indicated by the number of people employed, and whether the firm has used the internet to purchase goods. A score of 0.20 for Cramér's V indicates a weak association and small effect size.

As with the age of internet users, these findings set out in Table 5.47 suggest that the type of entity through which the business transacted has no impact on the use of the internet for business purposes.

### **5.4 SUMMARY**

The key findings from the customer survey were the following:

- There is a high rate of adoption of e-commerce by individuals and businesses in the target area. This was highlighted by the fact that 79.85% of respondents had used the internet for purchasing goods and services for personal use and 59.13% had used the internet for the purchasing goods for business use;
- Once the internet has been used for the purchase of goods for business use there is a high rate of willingness to transact again given the prior experience. The bivariate analysis showed this relationship to be statistically significant and with a Cramér's V score of 0.56 indicating a strong association and large effect size;
- The bivariate analysis showed that there is a statistically significant association between management encouraging the use the internet for business purposes and a firm using the internet for the purchase of goods and services for business use. The Cramér's V score of 0.31 indicated a moderate association and medium effect size;
- The demographics of users of e-commerce, particularly with regard to age of the individual and size or type of entity have no impact on whether or not they



will transact via e-commerce. The bivariate analysis highlighted that there was not a statistically significant association between either the age of individuals, the size of the entity or the type of entity and whether the firm had used the internet to purchase goods;

- The availability of product information on a website and ease of use of the website were highlighted as the two main factors affecting the on-line shopping experience. The availability of product information was rated as very important by 71.98% of respondents and ease of use was rated as very important by 70.31% of the respondents when assessing their impact on the on-line shopping experience for personal use. The results for business use were similar.

As has been highlighted throughout this chapter the findings set out in this chapter generally support the literature study presented in chapter 3. The next chapter will discuss the findings from this chapter in relation to the objectives of the research as set out in chapter 4 and will put forward recommendations to the management of Canoa Eastern Cape with regard to the use of e-commerce.

## **CHAPTER 6 - DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS**

### **6.1 INTRODUCTION**

The primary objective to be addressed by this study is to establish if an e-commerce solution presents a viable alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a market penetration strategy.

In this chapter the findings of the primary research, as reported in chapter five, will be discussed in relation to the secondary objectives identified in chapter four. Each of the five secondary objectives will be assessed based on the primary research findings as well as the literature study findings. Based on these assessments a conclusion will be drawn as to the evaluation of the primary objective.

As with any research the current research has certain limitations. These limitations will be discussed in this chapter. It is also noted that this study only focuses on one area relevant in the implementation of an e-commerce solution, and as such certain areas for suggested research will be highlighted.

### **6.2 ASSESSMENT OF SECONDARY OBJECTIVES**

The purpose of the research conducted in this study was to provide a basis upon which the secondary objectives identified in chapter four could be assessed. These secondary objectives are dealt with individually below and conclusions drawn with regard to the relevant findings.

#### **6.2.1 Determine if customers in the Eastern and Southern Cape of South Africa are prepared to purchase goods and services through an e-commerce channel**

This particular objective was assessed from two perspectives:

- Personal use – here the primary data indicated a high frequency of prior use, with 79.85% of respondents indicating that they had previously used the internet for the purchasing of goods and services. This coupled with the fact

that 80.84% of the respondents perception is that online shopping for personal use is either good or very good, and that 91.09% of respondents indicated that they would use the internet again given their prior experiences, points to a high level of acceptance of e-commerce as a means to purchase goods;

- Business use – the research findings relating to business use, whilst still significantly high, were not as high as those for personal use. 59.13% of respondents indicated that their firms have used the internet for the purchase of goods. 79.56% had a perception that online shopping for business use is at a high level, being either good or very good. 80.18% of respondents indicated that they would use the internet again, given prior experience, for the purchase of goods and services for business use.

These positive sentiments are tempered somewhat by the fact that, with regard to both personal and business use, less than 10% of respondents use the internet on a frequent basis, that is, at least once a week, for the purchase of goods and services.

Given these findings it is felt that it can be concluded that customers in the Eastern and Southern Cape of South Africa are prepared to purchase goods and services through an e-commerce channel.

### **6.2.2 Determine what the reasons are for adoption or the failure to adopt**

The main points that were raised as to the failure by individuals and firms to adopt e-commerce as a means to purchase goods and services are:

- a lack of trust;
- the need for a personal shopping experience;
- no perceived need to use e-commerce.

With regard to the factors resulting in adoption, it is noted that encouragement by management to use the internet for business purposes has an impact on the actual use of e-commerce solutions by businesses. Further to this, the ease of use and site

navigation, as well as the product information availability rate highest as factors impacting on the e-commerce experience.

The negative points will have to be further investigated to find the most effective means of overcoming this objections to the use of e-commerce. Bothe the negative and positive points highlighted above should receive serious consideration when it comes to the design of any e-commerce solution should Canoa Eastern Cape decide to implement an e-commerce solution.

### **6.2.3 Profile the demographics of users and non-users, including the industry within which they trade and the entity size**

The research interestingly highlighted the fact that demographics have very little impact in separating the users from the non-users. There was no clear demographic profile that could be determined using the individuals age, the industry within which the entity operates, the size of the entity or the type of legal entity.

The significance of this is that the Canoa Eastern Cape can effectively target all consumers with an e-commerce solution, and the effectiveness of such an e-commerce solution will not be impacted on by the demographic make-up of the target market.

### **6.2.4 Establish if there is a difference between the adoption rate in East London, Port Elizabeth, Knysna and George**

The results of the primary research indicated that the overall adoption rate, based on the firms who have used the internet to purchase goods, was 59.13%. When reviewed by region it can be seen that Knysna and George showed the highest adoption level with 69.01% and Port Elizabeth showed the lowest level of adoption with 54.81%.

It is felt that this does not represent a significant difference in the adoption rate between the three regions, which would suggest that benefit would accrue to all three regions should an e-commerce solution be implemented.

### **6.2.5 Establish which of the two groups of products, office automation consumables and office automation equipment, customers would be prepared to buy online.**

65.82% of the respondents indicated that they would be likely or very likely to consider buying office automation consumables on-line, compared with the 45.46% who indicated that they would be prepared to buy office automation equipment on-line.

In addition to this the mean of the maximum spend, as depicted in Table 5.10, worked out at R 2,143.67. This is too low for equipment purchases and would point towards consumables being suitable.

Based on these findings it is suggested that Canoa Eastern Cape develop the e-commerce solution primarily with the sale of office automation consumables in mind. The website could provide information and contact details for the sale of equipment.

### **6.3 LIMITATIONS OF THE STUDY**

The study was conducted by distributing questionnaires to Canoa Eastern Cape's customer base. In order to ensure a cost effective distribution to a large number of potential respondents' emails were sent out requesting individuals to participate in the survey by clicking on a link contained in the email. The limitations that have become apparent are:

- People are sceptical about following links and are obviously tired of receiving a large amount of spam emails, the aim of which are to get personal information. This "fatigue" could be responsible for the low response rate;
- The fact that only those with email addresses were surveyed could mean that the adoption rates are skewed. By targeting those with emails the likelihood is that the level of non-adoption has been under reported;
- It is estimated that Canoa Eastern Cape only commands in the region of 10% of the market share in the Office Automation market in the Eastern and

Southern Cape. This study has therefore been focused on a small section of the market and this could affect the results.

#### **6.4 OPPORTUNITIES FOR FURTHER RESEARCH**

As this study focused primarily on assessing the willingness and ability of consumers in the Eastern and Southern Cape to take part in e-commerce it is felt that the following areas would still need to be researched, and could be included in future research studies:

- The cost of implementing an e-commerce solution and the availability of suitable resources in the Eastern and Southern Cape to facilitate the implementation;
- Operational factors critical in ensuring the success of an e-commerce solution implementation;
- Assessment of the level of e-commerce adoption by the competitors within the office automation industry in South Africa.

#### **6.5 RECOMMENDATIONS**

Given the preceding assessment of the secondary objectives of this study it is felt that an e-commerce solution does present a viable alternative channel for a brick and mortar company trading in the Office Automation Industry in the Eastern and Southern Cape wishing to follow a market penetration strategy.

It is therefore recommended that Canoa Eastern Cape proceed with an assessment of the cost implications of implementing an e-commerce solution. The reason for suggesting this is that if the costs prove to be inhibitive, then it may not be in their interests to continue.

## **6.6 CONCLUDING REMARKS**

Given the literature read and the results of the survey it is felt that Canoa Eastern Cape's adoption or failure to adopt e-commerce as an element of their growth strategy into the future will have a significant impact on their future development.

E-commerce is a reality and businesses who fail to embrace the new technology could find themselves losing competitive advantage. This study, even with the limitations highlighted in this chapter, indicates that there is a significant adoption from consumers, and it is important that suppliers ensure that they are in a position to offer the customers, not only the products they want, but also the distribution model that best suits them.

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## **ANNEXURE A – EMAIL REQUEST AND QUESTIONNAIRE**

**From:** Clifford Wilson [mailto:cliffordw@canonec.co.za]

**Sent:** 14 April 2011 09:45 PM

**To:** .....

**Subject:** REQUEST TO PARTICIPATE IN A SURVEY - E-COMMERCE AS A COMPLIMENT TO BRICK AND MORTAR BUSINESSES

Dear .....

### **REQUEST TO PARTICIPATE IN A SURVEY**

#### **Purpose of the study:**

I am an MBA student at the Nelson Mandela Bay Business School. This survey, which forms part of my research treatise, is being conducted in order to better understand the appropriateness of e-commerce (on-line shopping) as a business offering for businesses trading in the Eastern and Southern Cape. This research will help to better understand the level of adoption of e-commerce by businesses in the Eastern and Southern Cape.

#### **Description of the survey procedures and approximate duration of the study:**

I would greatly appreciate your completing the questionnaire by clicking on the link below. This link will take you to a website where the questionnaire can be completed on-line. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. The questionnaire will focus on the e-commerce adoption, and will take approximately three minutes to complete.

#### **Description of how confidentiality will be assured and the limits to these assurances, if any.**

Your completion of the on-line questionnaire indicates your consent to participate in this study. Please be assured that your responses will be held in the strictest confidence. In order to identify your survey, a code reflects below which needs to be entered onto the questionnaire. This code is the only means by which your response

will be identified. If the results of this study were to be written for publication, no identifying information will be used.

**Anticipated benefits resulting from this study.**

This study will provide information to businesses in the Eastern and Southern Cape to help them decide whether or not to offer an e-commerce alternative to their existing brick and mortar businesses.

**Contact information.**

If you have any questions about this study, you can contact the persons below:

**PRIMARY INVESTIGATOR:**

Clifford Mounsear-Wilson

MBA Student

NMMU Business School

Port Elizabeth

041 392 7200

[cliffordw@canonec.co.za](mailto:cliffordw@canonec.co.za)

**PROMOTER:**

Dr Margaret Cullen

Senior Lecturer

NMMU Business School

Port Elizabeth

041 504 3772

[Margaret.Cullen@nmmu.ac.za](mailto:Margaret.Cullen@nmmu.ac.za)

I hope that you will be able to participate in this study.

Yours Sincerely,

Clifford Mounsear-Wilson.

**Unique ID: C00000012030**

**(please copy this ID and paste it in the first question on the survey)**

**Link to survey:** <https://www.surveymonkey.com/s/Q82LYBQ>

**Survey close date: 30 April 2011**

# Customer - E-commerce

## 1. Demographic Information

**\* 1. Please enter the UNIQUE ID reflected at the bottom of the email sent to you.**

**\* 2. Age (years):**

20-25     26-30     31-35     36-40     41-45     46-50     51-55     >55

**3. Race:**

Black     Coloured     Indian     White     Other

**\* 4. Gender:**

Male     Female

**\* 5. Please indicate the sector your firm belongs to:**

<input type="checkbox"/> Automotive & component manufacturers	<input type="checkbox"/> Hospitality & leisure
<input type="checkbox"/> Banking & capital markets	<input type="checkbox"/> Industrial manufacturing
<input type="checkbox"/> Chemicals	<input type="checkbox"/> Insurance
<input type="checkbox"/> Energy, Utilities & mining	<input type="checkbox"/> Investment management
<input type="checkbox"/> Engineering & construction	<input type="checkbox"/> Pharmaceuticals
<input type="checkbox"/> Entertainment & media	<input type="checkbox"/> Retail & consumer
<input type="checkbox"/> Financial Services	<input type="checkbox"/> Technology
<input type="checkbox"/> Forest, paper & packaging	<input type="checkbox"/> Telecommunications
<input type="checkbox"/> Government & public services	<input type="checkbox"/> Transportation & logistics
<input type="checkbox"/> Healthcare	<input type="checkbox"/> Other

Other (please specify)

**\* 6. Please enter the telephone dialling code within which your firm operates, eg, 041 or 044:**

Dialling Code

## Customer - E-commerce

**7. Please indicate your firms monthly spend on office automation consumables (copy paper, ink cartridges etc - excluding stationery):**

< R 1,000

R 5,001 - R 7,500

R 1,001 - R 2,500

> R 7,500

R 2,501 - R 5,000

**8. You/your firm would consider buying office automation consumables (copy paper, ink cartridges etc - excluding stationery) on-line if your existing supplier made an e-commerce solution available to you. Please indicate your agreement or otherwise with this statement.**

Likelihood

Very likely <input type="radio"/>	Likely <input type="radio"/>	Unsure <input type="radio"/>	Unlikely <input type="radio"/>	Very unlikely <input type="radio"/>
--------------------------------------	---------------------------------	---------------------------------	-----------------------------------	--

**9. You/your firm would consider buying office automation equipment (printers, photocopiers etc) on-line if your existing supplier made an e-commerce solution available to you. Please indicate your agreement or otherwise with the statement.**

Likelihood

Very likely <input type="radio"/>	Likely <input type="radio"/>	Unsure <input type="radio"/>	Unlikely <input type="radio"/>	Very unlikely <input type="radio"/>
--------------------------------------	---------------------------------	---------------------------------	-----------------------------------	--

**\* 10. Please indicate the number of people employed by your firm**

< 25

25 - 50

51 - 75

76 - 100

> 100

**11. Please indicate the type of legal entity your firm trades as**

Sole Proprietor

Private Company - (Pty) Ltd

Partnership

Public Company - Ltd

Trust

School / Educational Institution

Close Corporation

Incorporated

Other (please specify)

# Customer - E-commerce

## 2. E-Commerce - Personal use

\* 1. Have you used the internet for purchasing goods or services for personal use?

Yes

No

2. Indicate the maximum value you would feel comfortable spending on any one on-line transaction.

< R 100

R 1,001 - R 5,000

R 100 - R 500

> R 5,000

R 501 - R 1,000

3. How frequently do you use the internet to purchase goods or services for personal use?

	A great deal (once a day)	Much (once a week)	Somewhat (once a month)	Little (once every six months)	Never
Frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Rate your general perception of on-line shopping for personal use.

	Very good	Good	Barely acceptable	Poor	Very poor
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Given your experiences of on-line shopping for personal use please rate the following with regard to their impact on your overall on-line shopping experience.

	Very important	Important	Moderately important	Of little importance	Unimportant
The level of after sales customer service offered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of use / site navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product information availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Payment options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Would you use the internet again, given your prior experience, for the purchase of goods or services for personal use?

Yes

No

7. If you have not used the internet before for the purchase of goods or services for personal use what is the main reason?

# Customer - E-commerce

## 3. E-Commerce - Business use

\* 1. Has your firm used the internet to purchase goods?

Yes

No

\* 2. How frequently do you use the internet for the purchase of goods or services for business use?

	A great deal (once a day)	Much (once a week)	Somewhat (once a month)	Little (once every six months)	Never
Frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Rate your general perception of on-line shopping for business use

	Very Good	Good	Barely acceptable	Poor	Very poor
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Given your experiences of on-line shopping for business use please rate the following with regard to their impact on your overall on-line shopping experience

	Very Important	Important	Moderately important	Of little importance	Unimportant
The level of after sales customer service offered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of use / site navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product information availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Payment options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Would you use the internet again, given you prior experience, for the purchase of goods and services for business use?

Yes

No

6. If you have not used the internet before for the purchase of goods or services for business use what is the main reason?

7. Does your firm have any policy that encourages or prescribes the use of the internet for purchasing?

Yes

No

## Customer - E-commerce

**8. At what level would you place your firm with regard to the use of the internet and related technology? Please select the levels below that reflect your firms use of technology - select multiple items if they are applicable.**

- Not at all
- Use emails to communicate with customers and suppliers
- Make use of internet banking
- Have a website as an information portal
- Buy goods and services via the internet
- Sell goods and services via the internet

**9. Is the use of the internet for business purposes encouraged in your firm?**

	To a great extent	Somewhat	Neutral	Very Little	Not at all
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. What type of internet access does your firm have?**

- None
- Broadband
- Dial-up
- 3G

**11. Does your firm make use of on-line payments?**

- Yes
- No

**12. Does your firm have a credit card that can be used for internet based purchasing?**

- Yes
- No

## Customer - E-commerce

### 4. Thank-you for completing the survey

**1. Thank-you for taking the time to complete the survey. Your assistance is greatly appreciated.**

**Should you have any queries or comments please feel free to record them in the box below.**





## ANNEXURE B – RESEARCH FINDINGS

### UNIVARIATE ANALYSIS – CUSTOMER SURVEY

#### Demographic data - Individual

- Table 5.1: Gender (n=276)

	Percent
Female	59.06
Male	40.94

- Table 5.2: Age (n=276)

	Percent
20-25	6.16
26-30	10.87
31-35	13.41
36-40	16.30
41-45	16.30
46-50	13.04
51-55	10.14
>55	13.77

- Table 5.3: Race (n=267)

	Percent
Black	8.24
Coloured	8.61
Indian	2.62
White	80.15
Other	0.37

## Demographic data - Business

- Table 5.4: Area / Dialling Code (n=276)

	Percent
041	41.30
044	28.62
043	18.84

- Table 5.5: Economic Sector (n=276)

	Percent
Government & public services	11.96
Retail & consumer	10.51
Engineering & construction	9.42
Hospitality & leisure	7.25
Financial Services	6.88
Technology	6.88
Automotive & component manufacturers	6.88
Healthcare	5.43
Industrial manufacturing	4.71
Entertainment & media	4.71
Transportation & logistics	4.35
Insurance	3.26
Energy, Utilities & mining	2.54
Banking & capital markets	1.81

- Table 5.6: Type of entity (n=274)

	Percent
Private Company - (Pty) Ltd	33.94
Close Corporation	28.83
Sole Proprietor	7.66
School / Educational Institution	6.93
Public Company - Ltd	5.11
Incorporated	4.01

- Table 5.7: Number of people employed (n=276)

	Percent
< 25	52.17
25 – 50	16.30
51 – 75	5.80
76 – 100	2.17
> 100	23.55

- Table 5.8: Monthly spend on Office Automation Consumables (n=271)

	Percent
< R 1,000	26.94
R 1,001 - R 2,500	22.51
R 2,501 - R 5,000	19.19
R 5,001 - R 7,500	6.64
> R 7,500	24.72

### Use of e-commerce – Individuals

- Table 5.9: Individuals – prior use

	Percent
Yes	79.85
No	20.15

- Table 5.10: Individuals – maximum spend

	Percent
< R 100	6.42
R 100 - R 500	16.23
R 501 - R 1,000	25.28
R 1,001 - R 5,000	35.09
> R 5,000	16.98

- Table 5.11: Individuals – frequency of use

	Percent
A great deal (once a day)	2.20
Much (once a week)	6.59
Somewhat (once a month)	30.40
Little (once every six months)	42.49
Never	18.32

- Table 5.12: Individuals – general perception

	Percent
Very good	18.77
Good	62.07
Barely acceptable	8.81
Poor	6.51
Very poor	3.83

- Table 5.13: The level of after sales customer service offered (n=256)

	Percent
Very important	46.09
Important	31.25
Moderately important	11.72
Of little importance	6.25
Unimportant	4.69

- Table 5.14: Ease of use / site navigation (n=256)

	<b>Percent</b>
Very important	70.31
Important	24.22
Moderately important	1.56
Of little importance	0.78
Unimportant	3.13

- Table 5.15: Product information availability (n=257)

	<b>Percent</b>
Very important	71.98
Important	23.74
Moderately important	0.78
Of little importance	0.39
Unimportant	3.11

- Table 5.16: Payment options (n=257)

	<b>Percent</b>
Very important	65.37
Important	24.90
Moderately important	4.28
Of little importance	1.56
Unimportant	3.89

- Table 5.17: Individuals – repeat use

	<b>Percent</b>
Yes	91.09
No	8.91

## Use of e-commerce – Businesses

- Table 5.18: Business use – consumables

	Percent
Very likely	26.18
Likely	39.64
Unsure	13.45
Unlikely	12.73
Very unlikely	8.00

- Table 5.19: Business use – consumables (by region)

	041	043	044
Very likely	22.1%	30.8%	24.1%
Likely	43.4%	44.2%	32.9%
Unsure	15.0%	11.5%	15.2%
Unlikely	16.8%	1.9%	13.9%
Very unlikely	2.7%	11.5%	13.9%
N	113	52	79

- Table 5.20: Business use – equipment

	Percent
Very likely	15.64
Likely	29.82
Unsure	21.09
Unlikely	22.18
Very unlikely	11.27

- Table 5.21: Business use – prior use

	Percent
Yes	59.13
No	40.87

- Table 5.22: Business use – prior use (by region)

	041	043	044
Yes	54.81%	58.33%	69.01%
No	45.19%	41.67%	30.99%
N	104	48	71

- Table 5.23: Business use – frequency

	Percent
A great deal (once a day)	3.17
Much (once a week)	6.75
Somewhat (once a month)	19.84
Little (once every six months)	33.73
Never	36.51

- Table 5.24: Business use – general perception

	Percent
Very Good	15.56
Good	64.00
Barely acceptable	8.44
Poor	4.89
Very poor	7.11

- Table 5.25: The level of after sales customer service offered (n=224)

	Percent
Very Important	61.61
Important	24.55
Moderately important	7.59
Of little importance	0.89
Unimportant	5.36

- Table 5.26: Ease of use / site navigation (n=222)

	Percent
Very Important	68.47
Important	25.23
Moderately important	1.80
Unimportant	4.50

- Table 5.27: Product information availability (n=223)

	Percent
Very Important	72.20
Important	21.52
Moderately important	1.79
Unimportant	4.48

- Table 5.28: Payment options (n=221)

	Percent
Very Important	66.52
Important	25.34
Moderately important	3.17
Of little importance	0.45
Unimportant	4.52

- Table 5.29: Business use – repeat use

	Percent
Yes	80.18
No	19.82

- Table 5.30: Business use – policy

	Percent
Yes	14.34
No	85.66

- Table 5.31: Business use – internet use encouraged



	Percent
To a great extent	37.35
Somewhat	25.30
Neutral	23.29
Very Little	9.24
Not at all	4.82

- Table 5.32: Business use – type of internet access

	Percent
None	0.40
Dial-up	4.80
Broadband	81.60
3G	13.20

- Table 5.33: Business use – on-line payments

	Percent
Yes	90.08
No	9.92

- Table 5.34: Business use – credit card

	Percent
Yes	44.22
No	55.78

## BIVARIATE ANALYSIS – CUSTOMER SURVEY

- Table 5.35: Prior use as an indicator of future use (personal use)

<b>2-Way Summary Table: Observed</b>			
<b>Frequencies</b>			
	<b>Q2_6</b>	<b>Q2_6</b>	<b>Row</b>
<b>Q2_1</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Yes</b>	214	4	<b>218</b>
<b>Row %</b>	98.17%	1.83%	
<b>No</b>	21	19	<b>40</b>
<b>Row %</b>	52.50%	47.50%	
<b>Totals</b>	<b>235</b>	<b>23</b>	<b>258</b>

Chi-square      86.8    df=1      p=0.0000

Cramér's V      0.58    (Large effect size)

- Table 5.36: Prior use for personal means as an indicator of prior use for business purposes

<b>2-Way Summary Table: Observed</b>			
<b>Frequencies</b>			
	<b>Q3_1</b>	<b>Q3_1</b>	<b>Row</b>
<b>Q2_1</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Yes</b>	136	73	<b>209</b>
<b>Row %</b>	65.07%	34.93%	
<b>No</b>	13	30	<b>43</b>
<b>Row %</b>	30.23%	69.77%	
<b>Totals</b>	<b>149</b>	<b>103</b>	<b>252</b>

Chi-square      17.9    df=1      p=.00002

Cramér's V      0.27    (Medium effect size)

- Table 5.37: Prior use for personal means as an indicator of future use for business

<b>2-Way Summary Table: Observed</b>			
<b>Frequencies</b>			
	<b>Q3_5</b>	<b>Q3_5</b>	<b>Row</b>
<b>Q2_1</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Yes</b>	163	25	<b>188</b>
<b>Row %</b>	86.70%	13.30%	
<b>No</b>	15	19	<b>34</b>
<b>Row %</b>	44.12%	55.88%	
<b>Totals</b>	<b>178</b>	<b>44</b>	<b>222</b>

Chi-square      32.9    df=1      p=.00000

Cramér's V      0.38    (Medium effect size)

- Table 5.38: Prior use as an indicator of future use (business use)

<b>2-Way Summary Table: Observed</b>			
<b>Frequencies</b>			
	<b>Q3_5</b>	<b>Q3_5</b>	<b>Row</b>
<b>Q3_1</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Yes</b>	139	5	<b>144</b>
<b>Row %</b>	96.53%	3.47%	
<b>No</b>	39	39	<b>78</b>
<b>Row %</b>	50.00%	50.00%	
<b>Totals</b>	<b>178</b>	<b>44</b>	<b>222</b>

Chi-square      68.9    df=1      p=.00000

Cramér's V      0.56    (Large effect size)

- Table 5.39: Company policy as an indicator of use for business purposes

<b>2-Way Summary Table: Observed</b>			
<b>Frequencies</b>			

	Q3_1	Q3_1	Row
Q3_7	Yes	No	Totals
Yes	23	12	35
Row %	65.71%	34.29%	
No	119	90	209
Row %	56.94%	43.06%	
Totals	142	102	244

Chi-square 0.9 df=1 p=.32992

Cramér's V 0.06 (Small effect size)

- Table 5.40: Company policy as an indicator of future use for business purposes

2-Way Summary Table: Observed Frequencies			
	Q3_5	Q3_5	Row
Q3_7	Yes	No	Totals
Yes	26	6	32
Row %	81.25%	18.75%	
No	146	38	184
Row %	79.35%	20.65%	
Totals	172	44	216

Chi-square 0.1 df=1 p=.80523

Cramér's V 0.02 (Small effect size)

- Table 5.41: Encouragement to use internet for business purposes as an indicator of the use of the internet for the purchase of goods

2-Way Summary Table: Observed Frequencies						
	Q3_9	Q3_9	Q3_9	Q3_9	Q3_9	Row

Q3_1	To a great extent	Somewhat	Neutral	Very Little	Not at all	Totals
Yes	69	35	29	13	1	<b>147</b>
Column %	74.19%	55.56%	50.00%	56.52%	8.33%	
No	24	28	29	10	11	<b>102</b>
Column %	25.81%	44.44%	50.00%	43.48%	91.67%	
<b>Totals</b>	<b>93</b>	<b>63</b>	<b>58</b>	<b>23</b>	<b>12</b>	<b>249</b>

Chi-square                      23.9    df=4                      p=.00008

Cramér's V                      0.31    (Medium effect size)

- Table 5.42: Type of internet connection as an indicator of use for business purposes

2-Way Summary Table: Observed Frequencies						
	Q3_10	Q3_10	Q3_10	Q3_10	Row	
Q3_1	None	Dial-up	Broadband	3G	Totals	
Yes	0	4	124	20	<b>148</b>	
Column %	0.00%	33.33%	60.78%	60.61%		
No	1	8	80	13	<b>102</b>	
Column %	100.00%	66.67%	39.22%	39.39%		
<b>Totals</b>	<b>1</b>	<b>12</b>	<b>204</b>	<b>33</b>	<b>250</b>	

Chi-square                      5.0    df=3                      p=.17076

Cramér's V                      0.14    (Small effect size)

- Table 5.43: The use of on-line payments as an indicator of use for business purposes

2-Way Summary Table: Observed Frequencies			
	Q3_11	Q3_11	Row
Q3_1	Yes	No	Totals
Yes	145	4	<b>149</b>

<b>Column %</b>	63.88%	16.00%	
<b>No</b>	82	21	<b>103</b>
<b>Column %</b>	36.12%	84.00%	
<b>Totals</b>	<b>227</b>	<b>25</b>	<b>252</b>

Chi-square                      21.4    df=1                      p=.00000  
Cramér's V                      0.29    (Medium effect size)

- Table 5.44: Availability of credit card as an indicator of use for business purposes

<b>2-Way Summary Table: Observed Frequencies</b>			
	<b>Q3_12</b>	<b>Q3_12</b>	<b>Row</b>
<b>Q3_1</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Yes</b>	84	65	<b>149</b>
<b>Column %</b>	75.68%	46.43%	
<b>No</b>	27	75	<b>102</b>
<b>Column %</b>	24.32%	53.57%	
<b>Totals</b>	<b>111</b>	<b>140</b>	<b>251</b>

Chi-square                      22.0    df=1                      p=.00000  
Cramér's V                      0.30    (Medium effect size)

- Table 5.45: Age as an indicator of use for business purposes

<b>2-Way Summary Table: Observed Frequencies</b>			
	<b>Q3_1</b>	<b>Q3_1</b>	<b>Row</b>
<b>Age</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>20-25</b>	7	7	<b>14</b>
<b>Row %</b>	50.00%	50.00%	

<b>26-30</b>	17	9	<b>26</b>
<b>Row %</b>	65.38%	34.62%	
<b>31-35</b>	23	10	<b>33</b>
<b>Row %</b>	69.70%	30.30%	
<b>36-40</b>	28	15	<b>43</b>
<b>Row %</b>	65.12%	34.88%	
<b>41-45</b>	24	17	<b>41</b>
<b>Row %</b>	58.54%	41.46%	
<b>46-50</b>	20	14	<b>34</b>
<b>Row %</b>	58.82%	41.18%	
<b>51-55</b>	12	13	<b>25</b>
<b>Row %</b>	48.00%	52.00%	
<b>&gt;55</b>	18	18	<b>36</b>
<b>Row %</b>	50.00%	50.00%	
<b>Totals</b>	<b>149</b>	<b>103</b>	<b>252</b>

Chi-square      5.6    df=7      p=.58756

Cramér's V      0.15    (Small effect size)

- Table 5.46: Size of entity as an indicator of use for business purposes

<b>2-Way Summary Table: Observed Frequencies</b>			
	<b>Q3_1</b>	<b>Q3_1</b>	<b>Row</b>
<b>N people</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>&lt; 25</b>	79	51	<b>130</b>
<b>Row %</b>	60.77%	39.23%	

<b>25 - 50</b>	20	21	<b>41</b>
<b>Row %</b>	48.78%	51.22%	
<b>51 - 75</b>	9	7	<b>16</b>
<b>Row %</b>	56.25%	43.75%	
<b>76 - 100</b>	4	1	<b>5</b>
<b>Row %</b>	80.00%	20.00%	
<b>&gt; 100</b>	37	23	<b>60</b>
<b>Row %</b>	61.67%	38.33%	
<b>Totals</b>	<b>149</b>	<b>103</b>	<b>252</b>

Chi-square      3.1    df=4      p=.54493

Cramér's V      0.11    (Small effect size)

- Table 5.47: Type of entity as an indicator of use for business purposes

<b>2-Way Summary Table: Observed Frequencies</b>			
	<b>Q3_1</b>	<b>Q3_1</b>	<b>Row</b>
<b>Type firm</b>	<b>Yes</b>	<b>No</b>	<b>Totals</b>
<b>Private Company - (Pty) Ltd</b>	55	30	<b>85</b>
<b>Row %</b>	64.71%	35.29%	



<b>Close Corporation</b>	47	26	<b>73</b>
<b>Row %</b>	64.38%	35.62%	
<b>Public Company - Ltd</b>	4	10	<b>14</b>
<b>Row %</b>	28.57%	71.43%	
<b>Sole Proprietor</b>	14	7	<b>21</b>
<b>Row %</b>	66.67%	33.33%	
<b>Incorporated</b>	4	5	<b>9</b>
<b>Row %</b>	44.44%	55.56%	
<b>School / Educational Institution</b>	10	7	<b>17</b>
<b>Row %</b>	58.82%	41.18%	
<b>Totals</b>	<b>134</b>	<b>85</b>	<b>219</b>

Chi-square                              8.4    df=5    p=.13571  
Cramér's V                              0.20    (Small effect size)