

Measuring the controllable variables in the customer experience in convenience stores at filling stations

N. Africa

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DEDICATION

This dissertation is dedicated to my Creator, daughter Dewlon and my two sons, Norman-Reid and Ebrahim, for their understanding, support and encouragement through the three-year journey towards the completion of my MBA.

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ABSTRACT

Convenience stores are playing a pivotal role in the contribution to profitability in the fuels retail environment. In order to increase market share that will lead to increased profits it is imperative to provide excellent customer service. Customer experience has been identified as the key construct in the modern retail environment to be addressed, in order to ensure a satisfied customer. It has been noted that customer experience is not measured in the convenience stores, but only at the pump stations and the carwash service points of Sasol garages. Sasol Oil has a fuels retail market share of 9% and it will be beneficial for the company to explore all avenues to increase market share since convenience stores contribute 25% towards the total profit of the company.

A literature review was conducted to identify the important controllable elements of the total customer experience and the measuring instruments that can be used to measure these elements, which formed the basis of the empirical study. The measuring instruments discussed in the literature are Servqual, Kano and customised models. One of the dimensions of the total customer experience is service quality and a customised model was chosen as the measuring instrument of choice. Questionnaires were developed, based on the controllable elements of customer experience, and distributed via email and handouts. In total, 260 questionnaires were distributed with a response of 47.7%. Descriptive statistics and exploratory factor analysis were employed to analyse the data. The reliability of the questionnaire was tested using Cronbach alpha. Cronbach alpha values above the minimum requirements and a cumulative variance of only 47% was achieved. Conclusions were drawn from the empirical study and recommendations were made in the final chapter.

Key terms: Sasol, convenience stores, fuel retail market, Servqual, Kano, customer service

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CHAPTER 1

NATURE AND SCOPE OF STUDY

1.1 INTRODUCTION

1.1.1 World energy sources

The energy needs of the world population of 6.82 billion are currently fulfilled by the conversion of oil, gas, coal, biomass, nuclear sources, wind and water to energy (US Census Bureau, 2010). The major sources of energy are oil, gas and coal. Global oil and natural gas consumption are estimated to be 85.98 million barrels per day (bbl/day) and 3.16 trillion cubic meters respectively (CIA, 2010).

Petroleum products are synthesised from coal, natural gas, crude oil or biomass. Petrol, diesel and jet fuel are products of petroleum which are instrumental in providing low cost fuel for the transport industry and equipment used in various industries. These products are produced at crude oil refineries, Coal-to-Liquid (CTL) plants and Gas-To-Liquid (GTL) plants. The service of the world petroleum refining industry has been moving from regional and local markets to one that serves global markets as the world refining capacity utilization has increased (Walls, 2009:1). Table 1.1 provides world refining capacity data from 1970 to 2009.

TABLE 1.1: WORLD REFINING CAPACITY

| World Crude Oil Refining Capacity, 1970-2009 (Million Barrels per Day) | | | | | | | | | | | | | | | | | | | |
|---|-------------------------|--------|----------------------|-------|-------|---------------------|--------------------------|-------|----------------|---------------|-------------------------|-----------------------------|-------|-----------------|--------|--------------|---------|--------------------|--------------------|
| Year | Selected OECD Countries | | | | | | | | | | | Selected Non-OECD Countries | | | | | | | World |
| | Canada | France | Germany ¹ | Italy | Japan | Mexico ² | South Korea ² | Spain | United Kingdom | United States | Total OECD ³ | Brazil | China | Former U.S.S.R. | Russia | Saudi Arabia | Ukraine | Total Non-OECD | |
| 1970 | 1.40 | 2.32 | 2.36 | 2.96 | 3.14 | 0.50 | 0.18 | 0.69 | 2.30 | 12.02 | 32.18 | 0.50 | 0.30 | 5.64 | -- | 0.38 | -- | 14.87 | 47.05 |
| 1971 | 1.45 | 2.53 | 2.54 | 3.24 | 3.70 | .57 | .25 | .85 | 2.39 | 12.86 | 35.19 | .51 | .42 | 6.27 | -- | .91 | -- | 16.73 | 51.92 |
| 1972 | 1.45 | 2.69 | 2.56 | 3.68 | 3.82 | .59 | .22 | .87 | 2.59 | 13.29 | 37.29 | .56 | .48 | 6.68 | -- | .51 | -- | 17.90 | ^a 55.18 |
| 1973 | 1.73 | 2.95 | 2.70 | 3.59 | 4.53 | .63 | .43 | 1.03 | 2.47 | 13.64 | 39.45 | .72 | .50 | 7.26 | -- | .43 | -- | 18.72 | 58.17 |
| 1974 | 1.79 | 3.14 | 2.83 | 3.88 | 5.15 | .63 | .42 | 1.16 | 2.76 | 14.36 | 42.39 | .79 | .60 | 7.81 | -- | .43 | -- | 20.74 | 63.13 |
| 1975 | 1.88 | 3.34 | 2.99 | 3.95 | 5.35 | .76 | .43 | 1.17 | 2.78 | 14.96 | 44.07 | .96 | .85 | 8.24 | -- | .61 | -- | 22.45 | 66.52 |
| 1976 | 2.02 | 3.31 | 3.10 | 4.08 | 5.63 | .76 | .44 | 1.32 | 2.89 | 15.24 | 46.16 | .99 | 1.01 | 9.23 | -- | .54 | -- | 23.77 | 69.93 |
| 1977 | 2.10 | 3.52 | 3.08 | 4.26 | 5.76 | .94 | .42 | 1.28 | 3.01 | 16.40 | 48.34 | 1.12 | 1.40 | 9.10 | -- | .60 | -- | 26.77 | 75.11 |
| 1978 | 2.17 | 3.46 | 3.08 | 4.23 | 5.67 | 1.38 | .48 | 1.27 | 2.91 | 17.05 | 49.37 | 1.16 | 1.46 | 9.98 | -- | .59 | -- | 28.09 | 77.46 |
| 1979 | 2.23 | 3.47 | 3.10 | 4.20 | 5.68 | 1.24 | .54 | 1.43 | 2.53 | 17.44 | ^a 49.33 | 1.21 | 1.58 | 10.48 | -- | .49 | -- | ^a 29.27 | 78.60 |
| 1980 | 2.22 | 3.40 | 2.99 | 4.13 | 5.71 | 1.39 | .60 | 1.46 | 2.53 | 17.99 | ^a 50.10 | 1.21 | 1.60 | 10.95 | -- | .49 | -- | ^a 29.78 | 79.88 |
| 1981 | 2.17 | 3.34 | 3.02 | 4.09 | 5.66 | 1.39 | .61 | 1.46 | 2.63 | 18.62 | ^a 50.60 | 1.40 | 1.81 | 11.40 | -- | .49 | -- | ^a 30.99 | ^a 81.59 |
| 1982 | 2.20 | 3.29 | 2.94 | 4.00 | 5.81 | 1.47 | .76 | 1.52 | 2.48 | 17.89 | ^a 49.80 | 1.41 | 1.81 | 11.60 | -- | .49 | -- | ^a 30.93 | 80.73 |
| 1983 | 2.02 | 2.87 | 2.47 | 3.28 | 5.73 | 1.29 | .76 | 1.52 | 2.26 | 16.86 | ^a 45.89 | 1.22 | 2.00 | 11.75 | -- | .71 | -- | ^a 31.42 | 77.30 |
| 1984 | 1.81 | 2.67 | 2.39 | 3.05 | 5.17 | 1.27 | .78 | 1.49 | 2.09 | 16.14 | ^a 43.39 | 1.30 | 2.05 | 12.00 | -- | .86 | -- | ^a 32.00 | 75.39 |
| 1985 | 1.87 | 2.39 | 2.17 | 3.10 | 4.97 | 1.27 | .78 | 1.49 | 2.01 | 15.66 | ^a 42.16 | 1.31 | 2.15 | 12.20 | -- | .84 | -- | ^a 33.02 | 75.18 |
| 1986 | 1.86 | 1.95 | 1.93 | 2.74 | 4.72 | 1.27 | .78 | 1.37 | 1.79 | 15.46 | ^a 40.06 | 1.31 | 2.15 | 12.20 | -- | 1.12 | -- | ^a 32.55 | 72.61 |
| 1987 | 1.76 | 1.83 | 1.72 | 2.68 | 4.79 | 1.35 | .86 | 1.31 | 1.78 | 15.57 | 39.63 | 1.32 | 2.20 | 12.26 | -- | 1.13 | -- | 32.93 | 72.56 |
| 1988 | 1.87 | 1.94 | 1.65 | 2.56 | 4.57 | 1.35 | .82 | 1.31 | 1.80 | 15.92 | 40.07 | 1.41 | 2.20 | 12.26 | -- | 1.38 | -- | 33.54 | 73.61 |
| 1989 | 1.86 | 1.88 | 1.52 | 2.45 | 4.36 | 1.35 | .88 | 1.29 | 1.80 | 15.66 | 39.31 | 1.41 | 2.20 | 12.30 | -- | 1.38 | -- | 33.99 | 73.30 |
| 1990 | 1.85 | 1.82 | 1.51 | 2.80 | 4.20 | 1.51 | .87 | 1.29 | 1.83 | 15.57 | ^a 39.65 | 1.40 | 2.20 | 12.30 | -- | 1.48 | -- | 34.21 | 73.86 |
| 1991 | 1.88 | 1.82 | 2.07 | 2.39 | 4.38 | 1.68 | .87 | 1.32 | 1.87 | 15.68 | 40.25 | 1.41 | 2.20 | 12.30 | -- | 1.86 | -- | 34.75 | 75.00 |
| 1992 | 1.91 | 1.82 | 2.06 | 2.39 | 4.61 | 1.57 | 1.16 | 1.32 | 1.86 | 15.70 | 41.72 | 1.41 | 2.20 | 12.30 | -- | 1.86 | -- | 33.72 | 75.43 |
| 1993 | 1.87 | 1.85 | 2.23 | 2.42 | 4.74 | 1.52 | 1.15 | 1.30 | 1.84 | 15.12 | 41.28 | 1.40 | 2.20 | -- | 6.46 | 1.86 | 1.24 | 31.83 | 73.11 |
| 1994 | 1.88 | 1.86 | 2.27 | 2.26 | 4.81 | 1.52 | 1.15 | 1.28 | 1.87 | 15.03 | 41.18 | 1.25 | 2.20 | -- | 6.46 | 1.61 | 1.24 | 31.90 | 73.07 |
| 1995 | 1.91 | 1.77 | 2.32 | 2.26 | 4.85 | 1.52 | 1.17 | 1.28 | 1.87 | 15.43 | 41.62 | 1.25 | 2.87 | -- | 6.53 | 1.66 | 1.26 | 32.63 | 74.25 |
| 1996 | 1.85 | 1.78 | 2.13 | 2.28 | 4.87 | 1.52 | 1.24 | 1.33 | 1.89 | 15.33 | 41.31 | 1.26 | 2.87 | -- | 6.72 | 1.66 | 1.26 | ^a 33.08 | 74.39 |
| 1997 | 1.85 | 1.79 | 2.11 | 2.26 | 4.99 | 1.52 | 2.21 | 1.30 | 1.94 | 15.45 | 42.47 | 1.26 | 2.87 | -- | 6.73 | 1.66 | 1.25 | 33.51 | 75.99 |
| 1998 | 1.85 | 1.87 | 2.18 | 2.45 | 4.97 | 1.52 | 2.54 | 1.29 | 1.83 | 15.71 | 43.23 | 1.66 | 2.97 | -- | 6.87 | 1.65 | 1.25 | 34.80 | 78.03 |
| 1999 | 1.87 | 1.95 | 2.25 | 2.45 | 5.06 | 1.53 | 2.54 | 1.32 | 1.85 | 16.26 | 44.19 | 1.77 | 4.35 | -- | 6.75 | 1.69 | 1.09 | 35.89 | 80.08 |

| | | | | | | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|-------------------|-------|-------|------|------|----|------|------|-------------------|-------|-------|
| 2000 | 1.91 | 1.90 | 2.28 | 2.34 | 5.00 | 1.53 | 2.54 | 1.32 | ^a 1.78 | 16.51 | 44.33 | 1.78 | 4.35 | -- | 6.67 | 1.71 | 1.15 | 37.20 | 81.53 |
| 2001 | 1.91 | 1.90 | 2.26 | 2.36 | 4.96 | 1.53 | 2.56 | 1.29 | 1.77 | 16.60 | 44.48 | 1.92 | 4.35 | -- | 5.44 | 1.75 | 1.03 | 36.84 | 81.32 |
| 2002 | 1.94 | 1.90 | 2.26 | 2.28 | 4.79 | 1.53 | 2.56 | 1.29 | 1.78 | 16.79 | 44.50 | 1.79 | 4.53 | -- | 5.44 | 1.75 | 1.03 | 36.95 | 81.44 |
| 2003 | 1.98 | 1.90 | 2.27 | 2.30 | 4.77 | 1.68 | 2.56 | 1.32 | 1.79 | 16.76 | 44.69 | 1.87 | 4.53 | -- | 5.44 | 1.75 | ^a 1.02 | 37.30 | 82.00 |
| 2004 | 1.99 | 1.95 | 2.29 | 2.31 | 4.70 | 1.68 | 2.54 | 1.27 | 1.82 | 16.89 | 44.75 | 1.91 | 4.53 | -- | 5.44 | 1.75 | ^a 1.02 | 37.51 | 82.26 |
| 2005 | 2.02 | 1.95 | 2.32 | 2.32 | 4.71 | 1.68 | 2.58 | 1.27 | 1.83 | 17.13 | 45.12 | 1.92 | 4.65 | -- | 5.43 | 1.75 | .88 | 37.67 | 82.80 |
| 2006 | 2.02 | 1.98 | 2.43 | 2.32 | 4.67 | 1.68 | 2.58 | 1.27 | 1.88 | 17.34 | 45.58 | 1.91 | 6.25 | -- | 5.34 | 2.10 | .88 | 39.76 | 85.34 |
| 2007 | 2.04 | 1.96 | 2.42 | 2.34 | 4.68 | 1.54 | 2.58 | 1.27 | 1.89 | 17.44 | 45.52 | 1.91 | 6.25 | -- | 5.34 | 2.10 | .88 | 39.83 | 85.36 |
| 2008 | 1.97 | 1.93 | 2.42 | 2.34 | 4.65 | 1.54 | 2.58 | 1.28 | 1.86 | 17.59 | 45.55 | 1.91 | 6.25 | -- | 5.43 | 2.08 | .88 | 39.91 | 85.46 |
| 2009 | 2.03 | 1.99 | 2.42 | 2.34 | 4.69 | 1.54 | 2.61 | 1.27 | 1.86 | 17.67 | 45.78 | 1.91 | 6.45 | -- | 5.43 | 2.08 | .88 | 40.12 | 85.90 |

¹Through 1990, this is East and West Germany. Beginning in 1991, this is unified Germany.

²Mexico, which joined the OECD on May 18, 1994, and South Korea, which joined the OECD on December 12, 1996, are included in the OECD for all years shown in this table.

³Hungary and Poland, which joined the OECD on May 7, 1996, and November 22, 1996, respectively, are included in Total OECD beginning in 1992, the first year that data for these countries were available. The Czech Republic and Slovakia (or Slovak Republic), which joined the OECD on December 21, 1995 and December 14, 2000, respectively, are included in Total OECD beginning in 1992, the first year that data for these countries were available.

R=Revised. -- = Not applicable.

Notes: • OECD = Organisation for Economic Cooperation and Development. See Glossary for membership. • Capacity data represent distillation capacity. • Capacity for all years is as of January 1.

• Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.gov/international>.

Sources: **United States:** Table 5.9. **China and Former U.S.S.R.:** • 1970-1976—Ballinger Publishing

Company, *The Energy Decade, 1970-1980, A Statistical and Graphic Chronicle*. • 1977

forward—PennWell Publishing Company, *Oil & Gas Journal*. **All Other Data:** PennWell Publishing Company, *Oil & Gas Journal*.

(Source: U.S. Energy Information Administration, 2010a)

1.1.2 World Oil industry

The functioning of the oil industry can be characterised by:

- an activity, by which the functioning relies on the exploitation of a natural resource which is physically non-reproducible by human means;
- an industry that is global and multi-product;
- being made up of various activities in terms of exploration, production, transport, refining and distribution;
- an industry with market inconsistencies since crude oil has a variable production cost in time and space; and
- an industry where surplus distribution brings together oil exporting and importing countries and the multinational firms (Badour, 1997:144).

Table 1.2 follows on next page

TABLE 1.2: TOP TEN PETROLEUM CONSUMERS OF 2008 (IN BARRELS PER DAY)

| Rank | Country | Consumption |
|------|----------------|-------------|
| 1 | United States | 19 498 000 |
| 2 | China | 7 831 000 |
| 3 | Japan | 4 785 000 |
| 4 | India | 2 962 000 |
| 5 | Russia | 2 916 000 |
| 6 | Germany | 2 569 000 |
| 7 | Brazil | 2 485 000 |
| 8 | Saudi Arabia | 2 376 000 |
| 9 | Canada | 2 261 000 |
| 10 | South Korea | 2 175 000 |
| 11 | Mexico | 2 128 000 |
| 12 | France | 1 986 000 |
| 13 | Iran | 1 741 000 |
| 14 | United Kingdom | 1 710 000 |
| 15 | Italy | 1 639 000 |

Source: U.S. Energy Information Administration, 2010b

It is evident, from Table 1.2, that the United States of America is currently the largest single consuming country of petroleum. Table 1.3 provides petroleum statistics of the USA.

TABLE 1.3: UNITED STATES PETROLEUM STATISTICS

| Supply | |
|--|---|
| U.S. Petroleum Production (crude oil, NGPL, and other oils) | 7 270 000 barrels/day |
| U.S. Crude Oil Production | 5 361 000 barrels/day |
| U.S. Crude Oil Imports | 9 013 000 barrels/day |
| U.S. Petroleum Product Imports | 2 678 000 barrels/day |
| U.S. Net Petroleum Imports | 9 667 000 barrels/day |
| Dependence on Net Petroleum Imports | 52% |
| Top U.S. Crude Oil Supplier | Canada — 1 943 000 barrels/day |
| Top U.S. Total Petroleum Supplier | Canada — 2 479 000 barrels/day |
| U.S. Crude Oil Imports from OPEC | 5 954 000 barrels/day |
| U.S. Petroleum Product Imports from OPEC | 421 000 barrels/day |
| State Ranking of Crude Oil Production | Texas — 1 106 000 barrels/day |
| Top U.S. Producing Companies | BP PLC — 271.4 million barrels/day (2008) |
| Top U.S. Oil Fields by Production | Prudhoe Bay, AK (2008) |
| Top Oil Producing Country | #1 — Russia (9,934,000 barrels/day) |
| Top Oil Consuming Country | #1 — United States (18 771 000 barrels/day) |
| Consumption and Disposition | |
| U.S. Petroleum Consumption | 18 771 000 barrels/day |
| U.S. Motor Gasoline Consumption | 8 997 000 barrels/day (378 million gallons/day) |
| Share of U.S. Oil Consumption for Transportation | 72% |
| U.S. Total Petroleum Exports | 2 024 000 barrels/day |

Data of 2009 are given in the table below, except where noted.

(Source: U.S. Energy Information Administration, 2010c)

The global market leaders of the petroleum industry are ranked in Table 1.4. Refiners, distributors, marketers and others maintain inventories of crude oil and petroleum products to ensure a continuity of supply to customers. The primary

inventory system comprises production sites, pipelines, tankers and barges. The supply infrastructure of the Petroleum industry comprises of pipelines, barges, vessels, marine terminals and storage tanks. Road tankers and rail tankers distribute a small fraction of the products. Pipelines are generally the least expensive mode of petroleum products and oil distribution. Waterways, ports and vessels are the primary constituents of the marine transport system (Walls, 2009:2).

Mergers between major oil companies have created companies with advantages based on scale, size and increased performance of which Exxon Mobile and the merger between Mobil and Amoco is an example. It enhanced their influence, because they present such a large share of industry know-how and downstream capacity that they have advanced their negotiating positions against the national oil companies of the USA (Ernst & Steinhubl, 1999:50).

Table 1.4 follows on next page

TABLE 1.4: THE WORLD'S TOP 10 LARGEST OIL COMPANIES

| Rank | Company | Worldwide Liquids Reserves (10 ⁹ bbl) | Worldwide Natural Gas Reserves (10 ⁹ ft ³) | Total Reserves in Oil Equivalent Barrels (10 ⁶ bbl) | Company | Production (10 ⁶ bbl/d) |
|------|---|--|---|--|---|------------------------------------|
| 1 | Saudi Aramco | 260 | 254 | 303 | Saudi Aramco | 11 |
| 2 | National Iranian Oil Company | 138 | 948 | 300 | National Iranian Oil Company | 4 |
| 3 | Qatar Petroleum | 15 | 905 | 170 | Kuwait Petroleum Corporation | 3.7 |
| 4 | Iraq National Oil Company | 116 | 120 | 134 | Iraq National Oil Company | 2.7 |
| 5 | Petróleos de Venezuela | 99 | 171 | 129 | Petróleos de Venezuela | 2.6 |
| 6 | Abu Dhabi National Oil Company | 92 | 199 | 126 | Abu Dhabi National Oil Company | 2.6 |
| 7 | Kuwait Petroleum Corporation | 102 | 56 | 111 | Petróleos Mexicanos | 2.5 |
| 8 | Nigerian National Petroleum Corporation | 36 | 184 | 68 | Nigerian National Petroleum Corporation | 2.3 |
| 9 | Libya NOC | 41 | 50 | 50 | Libya NOC | 2.1 |
| 10 | Sonatrach | 12 | 159 | 39 | Lukoil | 1.9 |

(Source: Petrostrategies, 2010; Wikipedia, 2010)

1.1.3 South Africa's Oil industry

South Africa's sources of petroleum products are coal, natural gas, and crude oil. Table 1.5 represents the energy profile of South Africa. South Africa has the second largest refining capacity in Africa at 692 000 barrels per day according to a 2008 SAPIA report (cited by U.S. Energy Information Administration, 2010e), surpassed only by Egypt at 726 250 barrels per day. As listed in Table 1.5, major

refineries include Sapref, Enref in Durban, Calref in Cape Town, and Natref at Sasolburg. PetroSA is also developing a new 400 000 barrels per day refinery in the Eastern Cape to meet rapidly growing product demand (U.S. Energy Information Administration, 2010d).

TABLE 1.5: REFINERY CAPACITY OF SOUTH AFRICA

| South African Refinery Capacity, 2008 | |
|--|-------------------------|
| Refinery | Capacity (bbl/d) |
| Sapref | 180,000 |
| Enref | 125,000 |
| Chevref | 100,000 |
| Natref | 92,000 |
| Sasol | 150,000 |
| PetroSA | 45,000 |
| Total | 692,000 |
| Source: South African Petroleum Industry Association | |

(Source: U.S. Energy Information Administration, 2010d)

Table 1.6 follows on next page

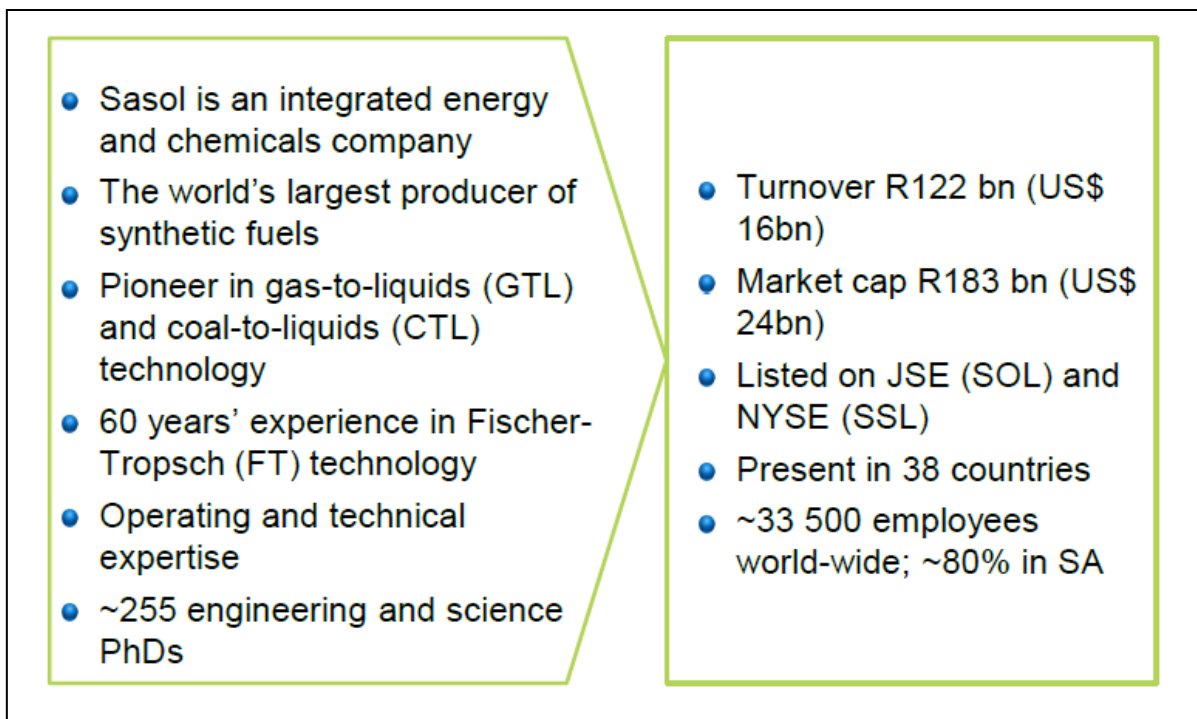
TABLE 1.6: ENERGY PROFILE OF SOUTH AFRICA

| Data | 2008 | | | | 2009 |
|---|--------------|--------|---------|------|--------------|
| | South Africa | Africa | World | Rank | South Africa |
| Petroleum (Thousand Barrels per Day) | | | | | |
| Total Oil Production | 193.8 | 10,879 | 85,478 | 40 | 190.56 |
| Crude Oil Production | 14.58 | 9,989 | 73,647 | 72 | 11.42 |
| Consumption | 575 | 3,235 | 85,759 | 29 | 579 |
| Net Export/Imports(-) | -381.2 | 7,644 | -- | 19 | -388.44 |
| Total Oil Exports to U.S. | NA | 2,515 | 12,915 | 52 | 2 |
| Refinery Capacity | 485 | 3,278 | 85,460 | 38 | 485 |
| Proved Reserves (billion barrels) | 0.02 | 115 | 1,332 | 72 | 0.02 |
| Natural Gas (Billion Cubic Feet) | | | | | |
| Production | 64 | 7,474 | 109,921 | 58 | 67 |
| Consumption | 177 | 3,616 | 111,010 | 56 | 191 |
| Net Export/Imports(-) | -113 | 3,858 | -- | 33 | -124 |
| Proved Reserves (trillion cubic feet) | | 490 | 6,212 | 89 | |
| Coal (Million Short Tons) | | | | | |
| Production | 273.005 | 279 | 7,047 | 7 | 259.597 |
| Consumption | 202.374 | 217 | 7,019 | 7 | 193.654 |
| Net Export/Imports(-) | 70.631 | 62 | -- | 108 | 65.942 |
| Electricity (Billion Kilowatt hours) | | | | | |
| Net Generation | 244.81 | 580 | 18,795 | 15 | 238.3 |
| Net Consumption | 219.64 | 521 | 17,139 | 15 | 212.24 |
| Installed Capacity (GWe) | 42.71 | 119 | 4,468 | 18 | 44.07 |
| Total Primary Energy (Quadrillion Btu) | | | | | |
| Production | 6.024 | 35 | 468 | 19 | 6.078 |
| Consumption | 5.253 | 15 | 472 | 19 | 0 |
| Energy Intensity (Btu per 2005 U.S. Dollars) | 17,448 | 6,314 | 7,825 | 19 | 16,892 |

(Source: U.S. Energy Information Administration, 2010e)

Sasol leads the world technology in the conversion of coal to gas and fuel and currently operates the only commercial coal-to-liquid plant in Secunda, South Africa (Sasol Limited, 2010:9). The applied Fischer Tropsch Technology is the intellectual property of Sasol and is used to expand its business globally. A concise fact list is given in Figure 1.1.

FIGURE 1.1: SELECTED SASOL FACTS



(Source: Sasol Limited, 2010)

1.1.4 Sasol Oil – Fuels retail

The fuels retail industry in South Africa is dominated by Caltex (Chevron Texaco), Shell, BP, Total SA, Engen and Sasol Oil. In December 2003, Sasol Oil entered the fuels retailing industry when the Tribunal approved a merger between Sasol Oil and Excel Petroleum. This followed the termination of the Main Supply

Agreements which limited Sasol Oil's presence in the retail market to its blue pumps and a few service stations (Anon., 2004). Currently Sasol Oil operates 411 Sasol and Excel retail convenience centres in South Africa. The Sasol retail convenience stores contribute 25% towards Sasol Oil's gross profit and charges franchisees 10% on consumer store turnover.

1.2 PROBLEM STATEMENT

Sasol Oil's Stocks were sold at progressively lower prices during August to January 2009 as a result of the steep decline in crude oil and product prices. Despite a slight recuperation in prices during the second half of the 2009 fiscal year, the full extent of the losses was not recovered. In response to the deteriorating economic conditions, costs were cut and stocks reduced to alleviate the pressure on working capital. In line with the Group's focus on cash conservation, the pace of rolling out new Sasol convenience centres were slowed while maintaining a steady market share of approximately 9%. Sasol Oil is still one of the leading suppliers in the Gauteng area where almost two-thirds of the countries' petrol and diesel are consumed (Sasol Annual Report, 2009).

Sasol Oil has a very small retail market share and it is proposed that the company increases sales volume to subsequently increase its profitability, considering the fact that this segment of the business contributes close to 25% towards the gross profit of Sasol Oil. Sasol promotes itself using print and television advertising. Corporate advertising and sponsorship, including the Springbok rugby team and motor racing is an additional way to market Sasol. Sasol is building a reputation beyond South Africa and aspires to reach a status where people can relate to its brand as they would to people. Loyalty to nationally advertised brands is falling due to the downturn in the economy. Consumers try to save money by searching for a less expensive substitute (Brewton, 2009:1). Thus, it is more important now to focus on customer experience in view of the fact that businesses cannot just rely on their brands

anymore. “Living a positive Customer Experience can promote the creation of an emotional tie between the firm’s brand and its customers which in turn enhance customer loyalty” (Gentile *et al.*, 2007:404). According to Richardson (2009:1), variety, price, and distance traveled do not matter to the consumer if the customer experience is great.

In order to increase market share in the current economic climate, it is important to understand the customer experience in the business. It has become increasingly important in the modern competitive economies to deliver a valuable customer experience. “When products can be copied, processes matched, and store layouts duplicated, it is the people and their behaviour that create distance and differentiation from competition. It’s about the ability of employees to respond to customers based on their unique needs and to engage them in a memorable experience” (Reichheld, 2008:2).

Benefits are regarded as the perceptions created across the customer experience (Anon., 2009:6). IBM Business Consulting Services (2005:1) identified a series of “customer-bonding attributes” or benefits, namely:

- Integrity (sincerity, authenticity, empathy, recognition and dignity)
- Reliability (responsiveness, availability, consistency and timeliness)
- Efficiency (the needs of customers being met quickly and effectively, by helpful, knowledgeable employees who “get the point”)
- Convenience (location of or access to products or services, and their ease of use; intuitive store layout or product placement)

Research that examined retail interactions in 73 stores by the research firm The Salt and Pepper Group found that staff were not actively anticipating or delivering on the needs of their customers (Stephens, 2009:1). The retailers failed dismally with a customer satisfaction score of 48.2% out of a possible 100%, indicating the opportunity to improve customer relations.

The profit of the retail fuels convenience stores are divided into 70% fuel, 20% carwash and 15% retail. Currently, only customer experience at the carwash and the fuel pumps are measured. Customer experience in the convenience store is not measured and it is important to the contribution of the profit of the retail convenience store and to Sasol Oil to develop a measuring tool.

1.3 OBJECTIVES

1.3.1 Primary objective

The primary objective of this study is to compile a conceptual framework to identify and measure the controllable dimensions of customer experience in the fuels retail convenience store environment. According to Terblanche and Boshoff (2006:2), the controllable components may be grouped under six elements, namely: Service quality; Merchandise quality; Merchandise variety and assortment; Internal store environment; Product prices and Store policies. Terblanche and Boshoff (2006:2) excluded store location in their studies because they believe that favourable location decreases in value as a result of changes in road patterns, the opening of competitive shops, and changing demographics. For the purpose of this study, convenience store location will be excluded, mainly because it cannot be controlled and as Richardson (2009) concluded, distance travelled will not matter to the consumer if the customer experience is great.

1.3.2 Secondary objective

The secondary objectives of this study are to:

- i. identify the elements of significance to consumers when assessing their contentment with an in-store shopping experience;
- ii. develop a credible measuring tool, measuring the total customer experience;

- iii. validate and test the reliability of the measuring instrument using statistical methods; and
- iv. draw conclusions and to make recommendations.

1.4 RESEARCH METHODOLOGY

1.4.1 Literature review

A literature review was conducted to establish a sound theoretical basis and to identify the controllable elements of customer experience. In addition, emphasis was placed on the attributes and the measuring tools used to evaluate these attributes. The inferences drawn from the literature review were used to enable the generation of questionnaire items relative to the problem statement which was utilised in the empirical study.

1.4.2 Empirical study

The empirical study was aimed at achieving the secondary objectives which were attained through the responses of the customers of fuels retail convenience stores on statements relating to their in-store shopping experience and their expectancy. Sasol employees and ex fellow students were the targeted population due to ease of data collection. The purpose of the survey was to identify the benefits that customers regard as important.

1.4.3 Instruments

From a measurement and management perspective, a comprehensive instrument that encapsulates all dimensions of a customer experience should be the focus instead of just one element such as service quality (Parasuraman *et al.*, 1988).

Currently, a readily available measurement tool does not exist in the fuels retail industry of Sasol Oil. Questionnaires are available at all Sasol Oil fuels retail convenience stores which are used as an instrument for data collection to measure customer satisfaction at the fuel pump and carwash areas, which are just two facets of the total customer experience. Customer experience in the convenience store is not measured. According to Berman and Evans (quoted by Terblanche & Boshoff, 2006:1), the total retail experience comprises all the dimensions that encourage or inhibit consumers during their contact with a retailer, and can either be non-controllable or controllable and include in-store and external dimensions. The study was focused on the controllable elements of the retail convenience centres' shopping experience.

The outcome of this study could improve Sasol Oil's financial performance, in that it will direct the focus of the company towards the key customer experience that needs to be attended to, to ensure brand growth and luring of new customers. Ultimately, this study was aimed at developing a method whereby the implementation thereof can achieve higher sales volumes with subsequent higher profits. Terblanche and Boshoff (2006:1) used a process proposed by Churchill (1979) to develop a generic instrument to measure customer satisfaction with the controllable elements of the in-store shopping experience. The same process was followed in this study, which entailed the following steps: domain specification; generation of questionnaire items; empirical surveying; an iterative process of scale purification based on reliability assessment and validity checks; and the development of norms (Terblanche & Boshoff, 2006:3).

Questionnaires were distributed via email and physical handouts. The questionnaires contained statements relative to the ratings of the controllable elements of customer experience in fuels retail convenience stores, as indicated in the literature review. A 5-point Likert-type scale was employed to capture the views of respondents.

The empirical study, with a sample size of 260, was limited to Sasol employees working in Sasolburg and Secunda.

1.5 LIMITATIONS OF THE STUDY

Only Sasol employees in Secunda and Sasolburg were targeted for this study.

1.6 LAYOUT OF THE STUDY

Chapter 1: Introduction

This chapter provides an introduction and background to the study. The objectives of the study and the research methodology used for research are concisely described.

Chapter 2: Literature Review

This chapter contains a literature review concerning the broad topics of customer service and customer experience.

Chapter 3: Research Methodology and Results

In this chapter, the empirical research methodology as well as the results of the study is discussed in detail.

Chapter 4: Conclusions and recommendations

This chapter contains an evaluation to establish whether the objectives were met. The study is concluded and recommendations are made in this last and final chapter.

1.7 SUMMARY

Chapter 1 is an introduction to the study, and provides a background in terms of literature, problem statement, objectives and research methodology. A literature review, pertaining to the problem statement and objectives, will be dealt with in the next chapter.

CHAPTER 2

CUSTOMER EXPERIENCE

2.1 INTRODUCTION

In Chapter 1, the global oil and gas industry is discussed as well as the South African oil industry. Sasol's role in the South African oil and gas industry was described and the significance of the Sasol Oil fuels retail convenience stores to Sasol's financial performance. The importance of customer experience and the effect on market size and financial contribution was presented. It was noted that a customer experience measuring instrument in Sasol Oil convenience stores does not exist and the need for it was evident, especially during a downturn in economies. In order to develop the measuring instruments an in-depth literature review is required with regard to customer service and its measuring instruments

Good customer service is fundamental to any business to prosper in the current competitive global market. Fuels retail convenience stores are not exempted from this reality, as they face high competitive dynamics which can ultimately lead to stagnation or closure.

Service quality is defined as the difference between customer expectation and customer perception. Customer experience is the perceived quality of service by the customer which ultimately determines customer satisfaction. It is important to both identify and measure the elements of customer experience of a business, as they are critical factors in retaining or attracting customers.

Measuring the quality of service is essential for the sustainability and growth of businesses, as it identifies the gaps that need to be attended to, for the improvement of customer satisfaction. Two prominent models, widely used across the service industry, are SERVQUAL (Parasuraman *et al.*, 1985:41) and Kano (Hand, 2004). Customised models are applied in situations where specific results are required.

The literature framework in this chapter is illustrated in Figure 2.1.

FIGURE 2.1: LITERATURE INFORMATION FLOW



The concept of customer service is elucidated in the following section of this chapter, as depicted in Figure 2.1. Subsequently, the importance, expectations and experiences perceived by customers in the service environment are reflected upon. In conclusion, different methods of service quality measurement are explained, in conjunction with the empirical study.

2.2 CUSTOMER SERVICE

Retailing is one of the largest sectors in the global economy and one of the toughest and most competitive industries in South Africa. It is for this reason that

companies or service providers are focusing on identifying gaps in the market in order to improve service and retain customers. This also applies to fueling stations, as consumers will be loyal to stations where the customer service was a satisfactory experience. In order to lure new customers or retain regular customers, it is important to meet or exceed customer expectations, which can lead to a decrease in marketing costs and an increase in profits.

As deduced from an extensive literature review no definite definition for customer experience exists. According to the Customer Service Management Group (2009), customer experience is:

- about treating others as you would like to be treated;
- the ability to provide a product or service in the way that it was promised;
- an organisation's ability to supply its customers' wants and needs; and
- any contact between a customer and a company that causes negative or positive perceptions.

It can be derived, from the given definitions above, that customer service is the delivery of a product or service by an organisation, as promised. Customer service is rated according to:

- Excellent customer service, which implies exceeding the customer service expectation, as created by the organisation;
- Good customer service, defined as the expected service delivered by the organisation; and
- Bad customer service, where some of the promised attributes of the customer service is absent.

It is important to measure the quality of service to ensure customer satisfaction, thereby creating a sustainable business. Parasuraman *et al.* (quoted by Chiu &

Lin, 2004:187) aver that, as the competitiveness of the service industry increases, delivering high-quality service to meet the needs of customers is vital for success.

2.3 SERVICE QUALITY

According to Lee *et al.* (2000:217), service quality has become an area of interest in marketing research since a conceptual model concerning perceived service quality was proposed by Parasuraman *et al.* in 1985. Research on the concept of service quality has been conducted over decades with considerable interest and no conclusive definition or measuring instrument. These years of research has resulted in literature rich in definitions, dimensions, models and measurement concerns, as stated by Seth *et al.* (2006:84).

Modern-day definitions of service quality by pioneers in this field are depicted in Table 2.1.

Table 2.1 follows on next page

TABLE 2.1: SELECTED DEFINITIONS OF SERVICE QUALITY

| No. | Author (Year) | Definition |
|-----|----------------------------------|---|
| 1 | Gronroos (1984) | Outcome of an evaluation process, where the consumer compares his/her expectations with the service he/she perceives he/she has received |
| 2 | Parasuraman <i>et al.</i> (1988) | Comparison between customer expectations and perceptions of service |
| 3 | Bitner <i>et al.</i> (1990) | Consumer's overall impression of relative inferiority/superiority of the organisation and its services |
| 4 | Asubonteng <i>et al.</i> (1996) | Difference between customer's expectations for service performance prior to the service encounter and their perceptions of the service received |

(Source: Seth *et al.*, 2006:82))

In summation of Table 2.1, service quality in convenience stores can be defined as the difference between customers' expectations of service and perceived service. Customer perceptions can also be referred to as the customer experience of a specific product or service. Service quality is therefore the Gap between the expectation and the experience. In the SERVQUAL model, the service quality is the fifth Gap being measured. Perception differs from customer to customer depending on the expectations and the service experience. Customer perception will never be the same as every individual is unique and will therefore perceive customer service differently and differently from service providers. Parasuraman *et al.* (1988:16) conceptualised perceived service quality as a global judgment or attitude relating to the superiority of the service.

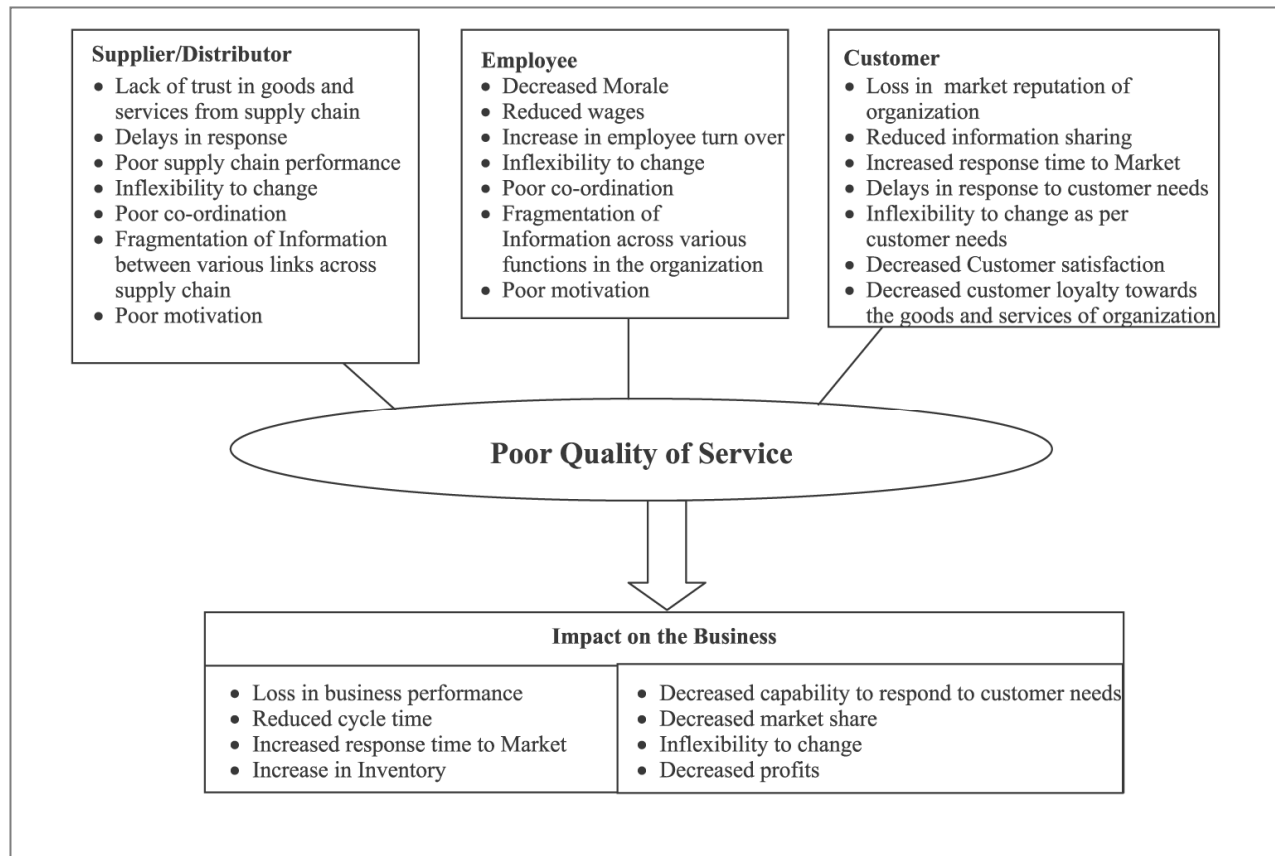
2.3.1 Importance of service quality

In today's world of global competition, rendering quality service is a key for success, and many experts concur that the most powerful competitive trend currently shaping business and marketing strategy is service quality. According to Kaul (2007:15), service quality is a tool that is increasingly being recognised as a means of positioning in a competitive environment to ensure customer satisfaction, retention and support. Since the 1980s, service quality has been linked with increased profitability, and it is seen as providing an important competitive advantage by generating repeat sales, positive word-of-mouth feedback, customer loyalty and competitive product differentiation (Zeithalm, *et al.*, 1996:31). It is increasingly evident that authors are focusing on the subject of service quality in their work and, in particular, examining how central service quality is to retain old customers and attract new ones. Service quality has therefore emerged as an enveloping strategic force and a key strategic issue on management's agenda. Harrley and Estelami (1998:211) noted that researchers of service quality and customer satisfaction observed instances where perceived performance has been a good predictor of purchase intentions.

The understanding of consumer behaviour has never been more important to retailers especially since there is an abundance of information which is freely accessible to the consumer. The abundance of information is a result of information systems that has become more affordable, in terms of the internet, newspapers, televisions, radios and the advertisements of products on billboards along most roads and highways in cities. These modern day advertisement strategies have empowered consumers with choices about products and services. The increase in customer choices has led to increased competition and consequently the need for exceptional service.

The consequences of poor service quality are depicted in Figure 2.2.

FIGURE 2.2: CONSEQUENCES OF POOR QUALITY OF SERVICE



(Source: Seth *et al.*, 2006:83)

2.4 CUSTOMER EXPECTATION

Olsen and Dover (quoted by Zeithelm *et al.*, 1993:1) are of the opinion that customer expectations are pretrial beliefs about a product or service that serve as standards against which product or service performance is judged. These beliefs are antecedents of many factors, in terms of:

- previous experience of the product or service;
- direct marketing of product or service through different advertisements media; and

- indirect marketing through word-of-mouth advertising and the psychological state of the customer at the time of service.

Oliver (quoted by Zeithelm *et al.*, 1993:3) attributed experience to the product, the context and the individuals' characteristics. Customer expectation is an important concept to understand in order to remain or attain a competitive advantage, as it is a determinant in the measurement of service quality. Parasuraman *et al.* and Robledo (quoted by Bick *et al.*, 2010:15) suggest that understanding of customer expectations is a requirement for delivering superior service, since customers evaluate a firm's service quality by comparing their perceptions of the service with their expectations. According to Parasuraman *et al.* (1988:5), expectations are not viewed as predictions but as desires or wants of consumers. Customer expectations are created by previous experiences with a product or service, direct marketing and indirect marketing through word-of-mouth. These are key to customer satisfaction and therefore imperative for any company to meet or exceed. However, if a customer expects bad service and receives it, he/she will not be dissatisfied.

2.5 CUSTOMER EXPERIENCE

Respect and understanding are the quests of a customer when conducting shopping activities. Expectations are created through marketing of products and businesses. It is vital for a business to meet or exceed these expectations as this creates the ultimate experience in the minds of customers after the completion of the business or shopping process. Customers want good shopping experiences and the reassurance of consistency or improvement of experiences when in contact with specific products or businesses.

Meyer and Schwager (2007:1) define customer experience as the internal and subjective responses by consumers following their direct or indirect contact with a company. Direct contact is initiated by the consumer and normally occurs during

voluntary purchase, use and service. Indirect contact most often involves unplanned encounters with representations of a company's products, services or brands and takes the form of word-of-mouth recommendations, criticisms, the media and the like. Pool and Hollyoake (n.d.) define customer experience into three parts, namely:

- pre-conceived beliefs and expectations;
- engagement; and
- memories of engagement.

The total customer experience is defined by Mascarenhas *et al.* (2006:399) as a totally positive, engaging, enduring and socially fulfilling physical and emotional customer experience across all major levels of one's consumption chain. He further defines the total customer experience as one that is brought about by a distinct market offering that calls for active interaction between consumers and providers. The total customer experience is all the elements that encourage or inhibit consumers during their contact with a retailer (Berman & Evans, 1998:19) and can be either non-controllable or controllable, and include in-store and external elements, as cited by Terblanche and Boshoff (2006:2). Gentile *et al.* (2007:397) define customer experience as an evolution of the concept of relationship between the company and the customer. It is clear, from the above definitions, that customer experience is a perception created by a business when having contact with a consumer, whether direct during a transaction experience or indirect through the media. Experience is dependent on the customers' judgment and is therefore not the same for all customers. Customer experience differs from person to person as determined by beliefs, lifestyles behaviours and relationships (Gentile *et al.*, 2007:397).

Customer experience is a collection of touchpoints which includes the attraction, interaction and cultivation of customer relationships of which the establishment of accurate inventory can ultimately lead to success or failure (Howard, 2009:2).

2.5.1 Importance of customer experience

Products and services are not enough to keep the hearts and minds of customers. “When products can be copied, processes matched, and store layouts duplicated, it is the people and their behaviour that create distance and differentiation from competition. It is about the ability of employees to respond to customers based on their unique needs and to engage them in a memorable experience.” (Reichheld, 2008:2).

The experience provided is a reflection of the entire business – it is a culmination of every interaction a customer has with a brand or service. Every interaction through the servicing process can result in a satisfied or dissatisfied customer and should therefore be treated as vital for the existence of the company. The customer experience is a combination of people and processes – both what we do and how we do it. Each customer experience sets future expectations – what they receive once becomes the benchmark for what they expect next time. “Living a positive Customer Experience can promote the creation of an emotional tie between the firm’s brand and its customers which in turn enhance customer loyalty” (Gentile *et al.*, 2007:404).

2.5.2 Controllable elements of customer experience

Non-controllable elements of the customer experience of a convenience store include aspects like location, infrastructure and government regulations. Controllable elements include all retail aspects that can be controlled by the business such as price, store layout, product freshness and the amount of cashiers. According to Terblanche and Boshoff (2006:16-17), literature suggests that the controllable elements can be grouped under six dimensions, namely:

- service quality;
- perceived product quality;
- product variety and assortment;

- internal store environment;
- product prices; and
- store policies.

However, the pricing and product variety dimension is in contrast with Richardson's (2009) statement that variety, price and distance traveled do not matter to the consumer if the customer experience is great. Product variety will therefore be omitted from this study except for price, which is very important to the customer when evaluating the value of a product.

2.6 MEASURING SERVICE QUALITY

Performance measurement practices are needed to determine the experience value of services and products, and whether it meets the needs of its customers.

Quality can be associated with the ability of a specific service or product to perform its specific task as stated by Ennew *et al.* (1993:59). They describe service as an act rather than a tangible object of which its quality is judged on the technical as well as the functional quality. The difficulty of objectively evaluating a service can be attributed to its intangible nature. Zeithalm (quoted by Parasuraman *et al.*, 1988:15) defines perceived quality as the customers' judgment about a company's overall excellence or superiority. According to Parasuraman *et al.* (1988:15), service quality is a form of attitude, associated to but not equivalent to customer satisfaction. The intangible characteristic of a service makes it difficult to be measured objectively. Parasuraman *et al.* (1988:13) states that service quality is an elusive and abstract construct that is difficult to define and measure due to its intangible, heterogeneous and inseparable characteristics.

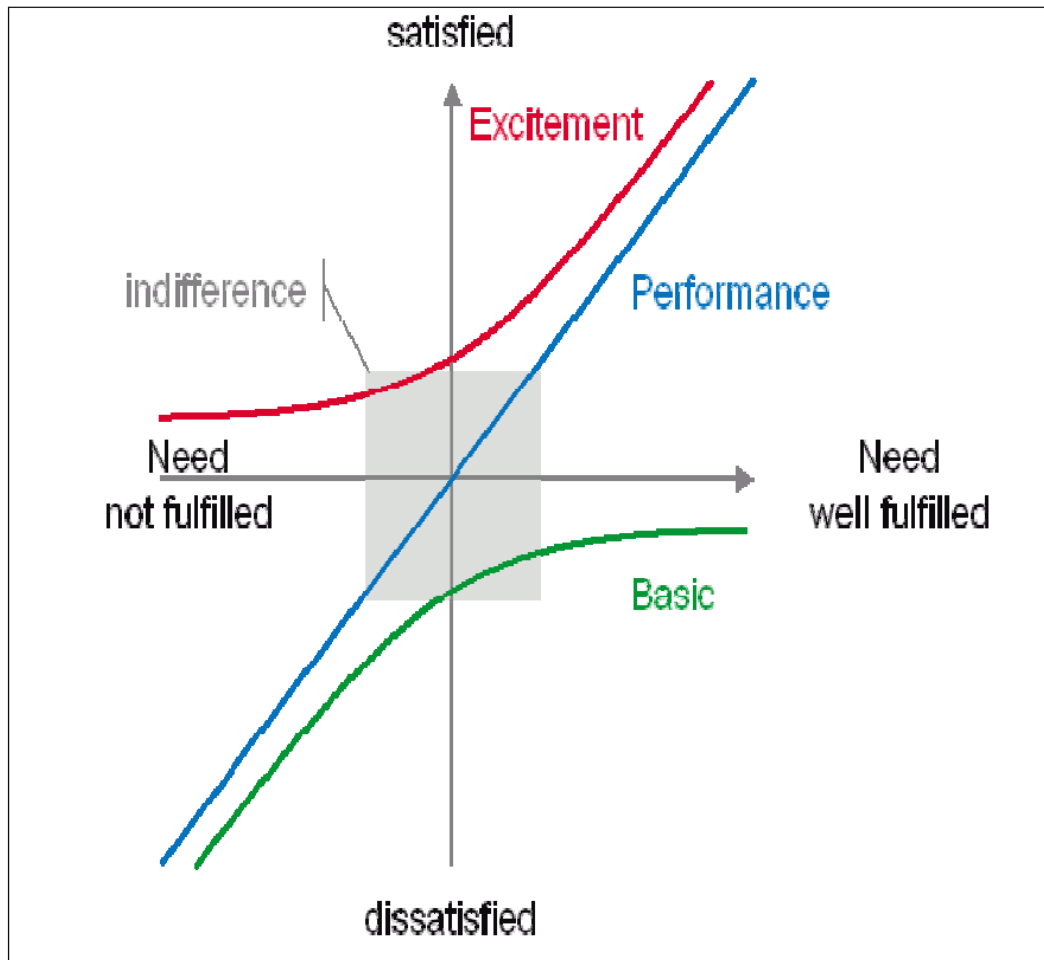
According to Bisschoff and Lotriet (2009:271), two principles exist when measuring service quality, namely the use of existing models or the development of customised models for specific circumstances. Through the years many service quality models were developed to effectively measure service quality. Two of the most popular models available is the Kano model (1984) and the SERVQUAL model (Parasuraman *et al.*, 1985:41). Kotler (quoted by Bisschoff and Lotriet, 2009:271) is of the opinion that, despite the fact that the models were developed decades ago, they are still regarded as two of the best models. The models are discussed in the sections that follow.

2.6.1 Kano's model

The Kano model, which was developed by a Japanese quality expert, Professor Noriaka Kano, is used to identify and classify the different forms of customer needs (Hand, 2004). The model describes the complexities of customer needs and its affiliation to customer satisfaction and can, when applied, result in successful products and services. It is thus important to manage these quality aspects identified in the Kano model to ensure satisfied customers, and therefore ultimately the retention of customers and the attraction of new customers.

The Kano model is illustrated in Figure 2.3. The horizontal axis indicates the degree to which an aspect of the need is functional or present whilst the vertical axis signifies how satisfied or dissatisfied the customer is. The line going through the origin at 45 degrees depicts the situation in which customer satisfaction is directly proportional to the customer needs which signifies performance.

FIGURE 2.3: KANO'S MODEL



(Source: Hand, 2004)

One of the major assumptions of the Kano model is that certain product or service attributes primarily have an impact on creating satisfaction, while others primarily have an impact on creating dissatisfaction. Bisschoff and Lotriet (2009:273) cited that Kano's model of customer satisfaction distinguishes between six categories of quality attributes (Berger, 1993), from which the first three influence customer satisfaction in different ways when met (Jane & Dominiquez, 2003):

- **Dissatisfiers or Basic Needs (Must Be)** – expected attributes of a product or service which if absent leads to dissatisfaction. These attributes are regarded as basics which are so obvious to the consumer that it is never mentioned when asked. It is the basic needs that allow a company entry into the market.
- **Satisfiers or Performance Needs** – standard attributes that will cause satisfaction if the performance is high and dissatisfaction if the performance is low. A linear relationship exists between the performance of the product or service and customer satisfaction. An increase in performance will therefore lead to a direct increase in satisfaction and a decrease thereof to a decrease in customer satisfaction. These one-dimensional attributes are expected by customers and when delivered consistently allows companies to remain in the market.
- **Delighters or Excitement Needs (Attractive)** – unexpected aspects of a product or service that, if present, will increase customer satisfaction and of which the absence thereof, does not decrease satisfaction. These aspects of a product or service differentiate companies from the rest which consequently leads to a competitive edge.
- **Indifferent attributes** – attributes that are of little or no consequence to the customer and do not feature in consumer decisions.
- **Reverse attributes** – attributes that cause dissatisfaction.

The Kano model therefore focuses on product and service attributes and the importance thereof for the customer. It can be utilised to position each attribute of a customer's need for the purpose of segmentation and prioritization.

2.6.2 SERVQUAL model

Over the years researchers have devised models and instruments for measuring service quality, of which *SERVQUAL* (Parasuraman *et al.*, 1985:42) is the most prominent and most widely used. The developers of this model proposed that the customers' quality perception is formed by an internal comparison of performance with expectations. *SERVQUAL* is a diagnostic technique for the organisation to identify its service quality strengths and weaknesses. It is also a continuous enhancement and innovation mechanism.

Based on the concept of perceived service quality, Parasuraman *et al.* (1985:43) proposed that ten dimensions determine service quality. The ten dimensions suggested are as follows:

- **Tangibles** – appearance of physical facilities, equipment, personnel and communication materials.
- **Reliability** – ability to perform the promised service dependably and accurately.
- **Responsiveness** – willingness to help customers and provide prompt service.
- **Competence** – possession of required skill and knowledge to perform service.
- **Courtesy** – politeness, respect, consideration and friendliness of contact personnel.
- **Credibility** – trustworthiness, believability and honesty of service provider.
- **Security** – freedom from danger, risk or doubt.

- **Access** – approachable and easy contact.

Through empirical research, Parasuraman *et al.* (1998:7) later refined the ten dimensions into five dimensions, namely:

- **Tangibles** – the appearance of physical facilities, equipment, personnel and communications materials.
- **Reliability** – the ability to perform the promised service dependably and accurately.
- **Responsiveness** – the willingness to assist customers and to provide prompt service.
- **Assurance** – the knowledge and courtesy of employees and their ability to convey trust and confidence.
- **Empathy** – the provision of caring, individualised attention to customers.

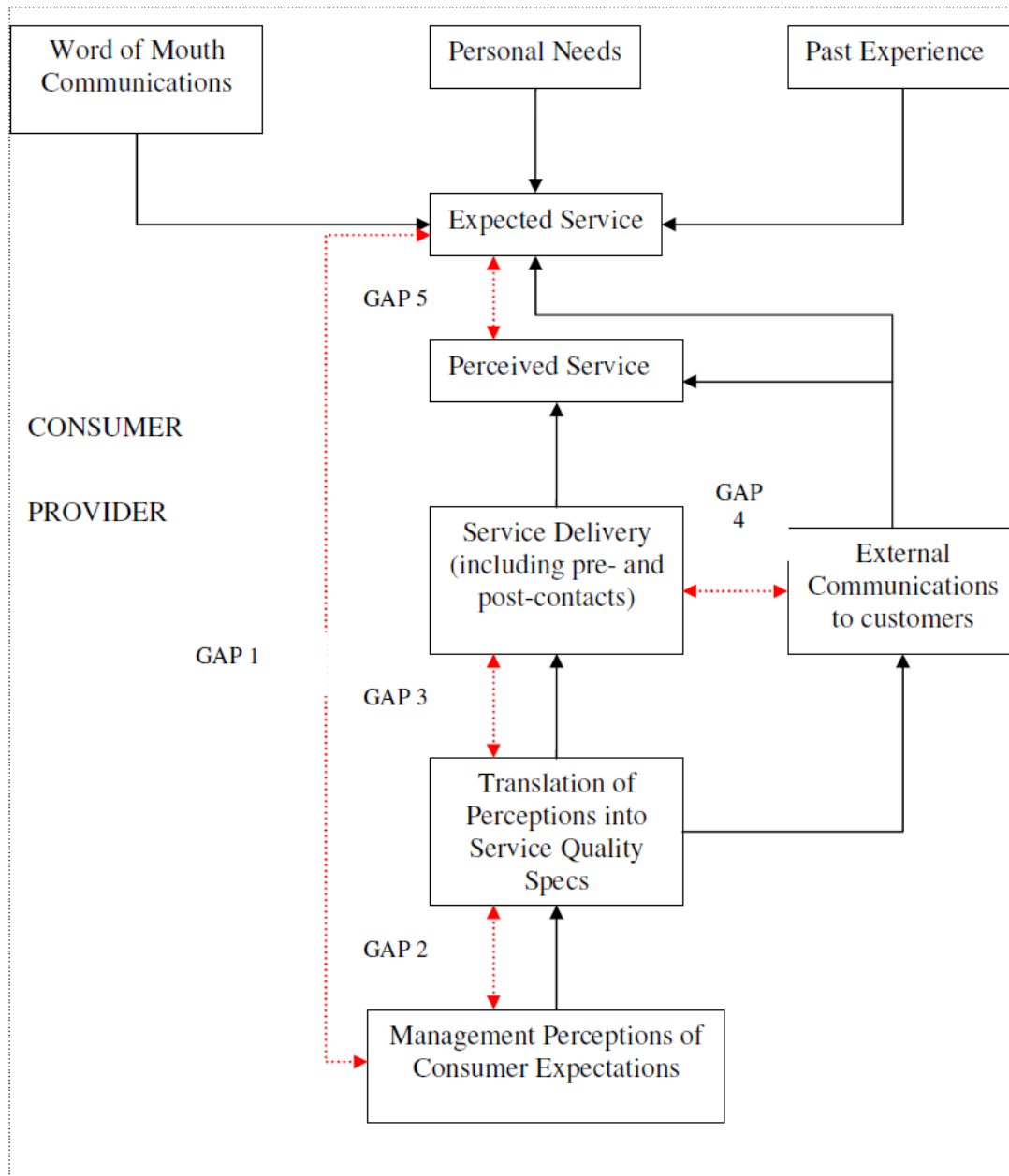
Communication, credibility, security, competence, courtesy, understanding customers and access, as identified by Parasuraman in the original ten dimensions, have been encapsulated into assurance and empathy (Parasuraman *et al.*, 1998:43). The authors concluded that, irrespective of the services being studied, reliability is the most important dimension in meeting customer expectations while assurance, responsiveness and empathy are most important in exceeding expectations. The intangibles were of least concern to the customers, as noted by the authors.

Parasuraman *et al.* (1985:42) suggest that perception of service quality is the difference between the customers' perceptions and expectations of service

delivery. They developed a service quality model, depicted in Figure 2.4, based on gap analysis.

This instrument evaluates customers' perception of quality by comparing their expectations with their perceptions of the service received, across several service quality dimensions (Parasuraman *et al.*, 1988:22). It consists of two sets of 22 items, of which the first set aims to measure the customers' expectations with respect to the five service quality dimensions, whilst the second set seeks to ascertain the customers' perceptions of the service delivered. The 22 service items are firstly rated on respondent expectations regarding its importance, and then on a 7-point Likert-scale. The SERVQUAL model, as illustrated in Figure 2.4, allows for the identification of shortfalls with regard to key customer requirements and the implementation of strategies in order to enhance customer service. The gap score is evaluated in accordance with a disconfirmation paradigm: If the perception of service quality is greater than the expectations, it is considered to be a positive disconfirmation; and if it is less than the expectations, it is regarded as a negative disconfirmation (Coulthard, 2004:480).

FIGURE 2.4: SERVQUAL MODEL



(Source: Zeithalm *et al.*, 1993:8)

This scale was based on a concept of perceived quality or otherwise stated, as the quality of service received as judged by the customer. Perceived service quality can be expressed as the difference between perceived service and expected service. The instrument can therefore be applied to understand service

expectations and perceptions of customers and, as a result, improve services to the consumer. Shahin (2006:5) argued that the concept of measuring the difference between expectations and perceptions in the form of the SERVQUAL gap score proved very functional for evaluating levels of service quality. He further suggests that information on service quality gaps assists managers to understand where to focus performance improvement strategies.

Parasuraman *et al.* (1988:30) claimed that SERVQUAL was a concise, multiple-item scale with good reliability and validity that retailers can use to better understand the service expectations and perceptions of consumers, and as a result, improve service.

This multiple-item scale for measuring customer perceptions was devised by Parasuraman *et al.* in 1988, based on empirical research conducted. The scale was based on a concept of perceived quality or otherwise stated, as the quality of service received as judged by the customer. Perceived service quality can be expressed as the difference between perceived service and expected service. This instrument can therefore be used to understand service expectations and perceptions of customers and, as a result, improve services to the consumer. The results of the survey are used to identify positive and negative gaps in the firm's performance on five service quality dimensions.

The various gaps depicted in the model (Figure 2.4) are:

- **Gap 1 – The managing perception gap.** It is the gap between customer expectations and management perceptions of customer expectations. This gap can be the result of a lack of marketing research orientation, inadequate communication and too many management levels.
- **Gap 2 – The quality specification gap.** It is the gap between management's perception of what customers expect and the specification of service quality. This can be the result of poor commitment to service quality or inadequate task standardization.

- **Gap 3 – The service delivery gap.** It occurs when the service delivered differs with the specification placed by management.
- **Gap 4 – The market communication gap.** This gap evaluates the difference between service delivery and the communicated service delivery to customers – promises made through advertising campaigns consistently fulfilled.
- **Gap 5: The perceived service quality gap.** It is the overall discrepancy between the expected service and the perceived service experienced.

2.6.2.1 Steps in using SERVQUAL gaps

The following operational steps by Parasuraman (1988:16) can be modified to consider the SERVQUAL gaps in the prioritization of service attributes:

- 1) Identify customers' needs and expectations.
- 2) Conduct a SERVQUAL based survey.
- 3) Administer customer interviews.
- 4) Compute the SERVQUAL gaps for each attribute.
- 5) Adjust prioritization.

2.6.2.2 Criticism of the SERVQUAL model

The SERVQUAL model has been criticised by many researchers for its effectiveness in measuring service quality. According to Coulthard (2004:481), the conceptual basis of SERVQUAL has been criticised as being inadequate and

inappropriate. Buttle (1994:10) states that SERVQUAL has been subjected to a number of theoretical and operational criticisms. The theoretical criticisms are:

- **Paradigmatic objections.** Cronin and Taylor (1992:64) suggest that the attitudinal model of service quality be used as a basis of the SERVQUAL model, instead of the expectation-disconfirmation model. Anderson (quoted by Coulthard, 2004:482) identified the failure of SERVQUAL to draw on economic, statistical and psychological theory.
- **Gaps model.** There is little evidence that customers perceive quality in terms of *Perceptions* minus the *Expectations* (P-E) gaps, as noted by Buttle (1994:10).
- **Process orientation.** Gronroos (quoted by Coulthard, 2004:482) identified the three facets of service quality as technical (outcome), functional (process) and reputational (organisation's corporate image). According to Cronin and Taylor (1992:64), SERVQUAL focuses on the process of service delivery rather than the quality of service delivered.
- **Dimensionality.** SERVQUAL's five dimensions are not universal gaps, but they are proven and contextualised by research.

On the other hand, the operational criticisms are:

- **Expectations.** The term expectation is polysemic. Consumers use standards other than expectations to evaluate service quality and SERVQUAL fails to measure absolute service quality expectations, as noted by Buttle (1994:11).
- **Item composition.** The four or five items of each dimension are insufficient for variability measurement of the respective dimensions.

- **Moments of truth.** The moments of truth will vary according to the service encountered at a particular moment.
- **Polarity.** Thirteen statement pairs of the 22 items in the SERVQUAL scale are positively phrased and nine pairs are negatively phrased which cause respondent error.
- **Scale points.** Lewis (quoted by Coulthard, 2004:477) claims that many has criticised the 7-point Likert scale, in terms of the lack of verbal labeling of points two to six and the respondents' understanding of the meaning of the scale midpoint.
- **Two administrators.** The boredom and confusion of respondents by the administration of E and P versions of SERVQUAL imperil data quality (Bouman & van der Wiele, quoted by Buttle (2004:23).
- **Variance extracted.** Fornell and Larcker (quoted by Buttle, 1994:23) state that the overall SERVQUAL score accounts for a dissatisfying section of item variances. Variance extracted should be employed as an assessment of construct validity.

According to Kaul (2007:47), the applicability of SERVQUAL across different cultures is questionable since it was developed in a Western world. Despite all the criticism on the SERVQUAL model, it still remains the most widely used instrument for the measurement of service quality across all industries. Coulthard (2004:18) noted that SERVQUAL seemed to capture the crux of what service quality really means. The 22 items of the SERVQUAL model are good forecasters of service quality in its entirety, according to Surechander *et al.* (quoted by Coulthard, 2004:481).

2.6.3 Customised models

According to Gounder (2008:26), data can be collected by means of a standard questionnaire, such as the SERVQUAL measuring instrument or by designing a tailor-made or customised measuring instrument. Customer experience will be measured for this study of which service quality is one of the dimensions of the controllable elements. A customised model will be applied as a measuring instrument to ultimately establish a model to determine customer experience. However, the validity of a customised model is questioned in terms of internal stability and reliability as a measuring instrument (Bisschoff & Bisschoff, 2001:229), and as such, it is important to verify these aspects statistically to ensure validity of the instrument.

2.7 SUMMARY

Chapter 2 provided the literature which is fundamental for the empirical study. The chapter presents the concept of customer service and the models used to measure it. Customer experience, which is core to the empirical study, is also discussed. SERVQUAL, Kano and customised models were introduced in this chapter. The customised model was regarded as the best fit to achieve the objectives set in Chapter 1.

The research methodology and the results of the empirical study are discussed in the following chapter.

CHAPTER 3

RESEARCH METHODOLOGY AND RESULTS

3.1 INTRODUCTION

The research methodology, which includes the questionnaire design and data collection, is discussed in this chapter, in conjunction with the statistical analysis and the results thereof. Tables and figures are utilised to represent the data and the results of the empirical study.

3.2 RESEARCH METHODOLOGY

3.2.1 Questionnaire design

The literature review revealed that data could be collected using a standardised questionnaire – a SERVQUAL or Kano measuring instrument – or a tailor-made questionnaire. This study was aimed at developing a measuring instrument to measure the controllable elements of the total customer experience and a tailor-made questionnaire was the measuring instrument of choice.

The questionnaire consisted of nine sections. The first six sections measured the elements of the total customer experience, namely Service quality, Product quality, Internal store environment, Product price and Store policies. Sections seven and eight entailed open-ended questions to include important data not captured by the questionnaire. The last section was designed to capture biographical information of the respondents. A five-point Likert scale was used in the questionnaire.

3.2.2 Sample

The sample was limited to Sasol employees and ex fellow students. All Sasol employees targeted were all employees that the researcher has engaged with in the past. The reason for this was to improve the chances of receiving a large number of completed questionnaires. One hundred and fifty questionnaires were distributed via email and 110 questionnaires in the form of hardcopies were distributed within Sasol, Secunda. Only 20 respondents of the total sample were ex fellow students.

3.2.3 Data collection

The data were requested by distributing the tailor-made questionnaire via e-mail and via physical handouts. Questionnaires distributed via email, by means of the Sasol network, were returned via email and those distributed via handouts were personally collected. Reminders were sent to non-respondents and the deadline of the collection of handouts was extended to increase the probability of receiving a satisfactory number of completed questionnaires. The target response was 100 completed questionnaires. A favourable total of 124 completed questionnaires were returned. However, only 120 respondents completed the biographical information and the questionnaires of the four respondents who did not was eliminated from the study. A total of 74 and 50 completed questionnaires were returned via email and as hardcopies respectively. In total, 260 questionnaires were distributed, thus a response of 47.69% was achieved.

3.3 STATISTICAL ANALYSIS

The data collected was analyzed by means of SPSS 17.0 (SPSS Inc, 2009). Descriptive statistics (frequencies, means and standard deviations) were calculated to analyze the data. An Exploratory Factor Analysis was performed on each of the dimensions of customer experience to confirm that the different sections actually measure what they were intended to measure. Cronbach alpha

coefficients were also calculated to assess the reliability of the factors measured (Clark & Watson, 1995 in Bearden & Netemeyer, 1999:4). Pearson product-moment correlation coefficients were used to specify the relationships between the various customer experience dimensions as identified by the factor analysis. The interpretation of this correlation coefficient (also referred to as the practical significance test) follows the guidelines given by Cohen (quoted by Ellis & Steyn, 2003:54). The correlation coefficient is interpreted as: (a) small effect = 0.1; (b) medium effect = 0.3; and (c) large effect = 0.5. Therefore, a relationship ≥ 0.5 is considered as practically significant.

Two statistical measures were used to assess the factorability of the data and these included Bartlett's test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. These two measures determine the relationships among items, as well as the adequacy of the sample size (Pallant, 2007:180-181). Bartlett's test of Sphericity should be significant ($p < 0.05$) for the factor analysis to be considered appropriate (Pallant, 2007:181; Field, 2007:599). As indicated by Tabachnick and Fidell (quoted by Pallant, 2007:181) the KMO index ranges from 0 to 1, with 0.6 suggested as the minimum value for sample adequacy. As recommended by Kaiser (quoted by Field, 2007:640) values between 0.5 and 0.7 are average while values between 0.7 and 0.8 are good. However, values between 0.8 and 0.9 are great and values above 0.9 are superb. The results of this study are interpreted according to these guidelines.

Cronbach alpha coefficients were also calculated for each factor to determine the reliability of the data and also to serve as a measure of internal consistency amongst the items. Coefficients of 0.70 and higher are regarded to be satisfactory (Field, 2007:666). In order to determine the appropriateness of principle components analysis for the collected data, a correlation matrix (Kaiser-Meyer-Olkin, KMO), measure of sampling adequacy, as well as the Bartlett test of sphericity, were examined (Field, 2007:640). The KMO measure of sampling adequacy aims to examine if the relationship between variables is strong enough to proceed with a factor analysis. This statistic varies between 0 and 1. For

values smaller than 0.5, the factor analysis is likely to be inappropriate and more data should be collected or different factors be selected. Values between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good and between 0.8 and 0.9 are great, whilst values between 0.9 and 1 are superb (Field, 2007:640). The larger the KMO value, the more reliable the factor analysis for this particular sample size. The Bartlett test is found to be significant if $p < .00001$ (Field, 2007:640). This indicates that the data reduction by principle components would be legitimate.

3.3.1 Survey results

TABLE 3.1: BACKGROUND INFORMATION OF RESPONDENTS (N=120)

| Item | Category | Frequency | Percentage |
|--------------------------|--------------|-----------|------------|
| Gender | Male | 86 | 69.4 |
| | Female | 34 | 27.4 |
| Age group | Under 30 | 26 | 21.7 |
| | 30 – 39 | 48 | 40 |
| | 40 – 49 | 25 | 20.8 |
| | 50 - 59 | 19 | 15.8 |
| | 60 and older | 2 | 1.7 |
| Ethnic background | Black | 35 | 29.2 |
| | White | 56 | 46.7 |
| | Coloured | 20 | 16.7 |
| | Indian | 9 | 7.5 |

Only 120 respondents completed their biographical information. Therefore, the percentages are relative to $n=120$. Most of the respondents were male (69.4%) whilst 61.7% were under the age of 39 and 46.7% were White.

3.3.2 Exploratory factor analysis

An exploratory factor analysis (EFA) was conducted on each of the five customer experience dimensions as set out in the questionnaire. These dimensions are Service quality, Product quality, Internal store environment, Product Prices as well as Store Policies. Principle component analysis with Varimax rotation was specified as the extraction and rotation methods. In determining the factors to extract in each dimension, the percentage of variance explained and the individual factor loadings were considered.

Before the results of each of the EFAs are discussed, the KMO and Bartlett's test of Sphericity were employed to ensure that factor analysis is a suitable statistical tool to confirm the questions pertaining to each of the service dimensions.

3.3.3 KMO and Bartlett's test of Sphericity – Customer Experience dimensions

The table below represents the KMO measure and Bartlett's test of Sphericity for each dimension of customer experience.

According to Table 3.2, the overall KMO's measure for each of the five customer experience dimensions ranged from .667 to .815. These values are all above the minimum value of 0.6 as suggested by Tabachnick and Fidell (quoted by Pallant, 2007:181). The Bartlett's test of Sphericity was found to be significant (p -values < .00001) in all five customer experience dimensions.

TABLE 3.2: THE KMO AND BARTLETT’S TEST OF SPHERICITY OF CUSTOMER EXPERIENCE DIMENSIONS

| Customer Experience | Kaiser-Meyer-Olkin (KMO) measure | Bartlett’s test of Sphericity (P-value) |
|----------------------------|---|--|
| Service quality | .815 | <.00001 |
| Product quality | .77 | <.00001 |
| Internal Store environment | .811 | <.00001 |
| Product Prices | .668 | <.00001 |
| Store Policies | .667 | <.00001 |

From Table 3.2 above it is clear that all five the service dimensions have adequate samples (as shown by the KMO measures) and that the data is also suitable to be subjected to multivariate statistical analysis (such as factor analysis). The proposed multivariate statistical analysis can, therefore, be performed with confidence.

3.3.4 Factor analysis on service quality

The first factor analysis focused on the 22 items that measures service quality. Question two: “*When a customer has a problem, excellent convenience stores will show a sincere interest in solving it,*” loaded on a single factor, and was therefore excluded from the factor analysis. A second factor analysis was conducted (without the mentioned question) and question 10 loaded on more than one factor. This question was therefore also excluded. A third factor analysis was conducted, and the results of the analysis of the remaining 20 items are given in Table 3.3.

TABLE 3.3: FACTOR ANALYSIS ON SERVICE QUALITY

| Item no. | Employee customer focus | Display | Reliability | Personal attention | Psychological need satisfaction |
|----------|-------------------------|---------|-------------|--------------------|---------------------------------|
| A08 | .76 | | | | |
| A09 | .755 | | | | |
| A12 | .749 | | | | |
| A07 | .722 | | | | |
| A11 | .525 | | | | |
| A20 | | .883 | | | |
| A19 | | .813 | | | |
| A21 | | .741 | | | |
| A22 | | .692 | | | |
| A01 | | | .778 | | |
| A04 | | | .679 | | |
| A03 | | | .604 | | |
| A05 | | | .574 | | |
| A15 | | | | .807 | |
| A14 | | | | .647 | |
| A16 | | | | .551 | |
| A18 | | | | | -.808 |
| A17 | | | | | -.623 |
| A06 | | | | | -.569 |
| A13 | | | | | -.412 |

Five factors loaded on service quality. The five sub-dimensions of service quality cumulatively explain 63.32% of variance in the data. Factor loadings of ≥ 0.4 and ≤ -0.4 (Hair *et al.*, 2005) are reported for all factors, consequently providing evidence of construct and discriminant validity for the measuring instrument.

The Cronbach alpha coefficients for each of the constructs for service quality are summarised in the table below.

TABLE 3.4: CRONBACH ALPHA COEFFICIENTS FOR MEASURING INSTRUMENT – SERVICE QUALITY

| Criteria | Cronbach alpha coefficients |
|--------------------------------------|------------------------------------|
| Employee customer focus (ECF) | .822 |
| Display(D) | .789 |
| Reliability(R) | .709 |
| Personal attention(PA) | .689 |
| Psychological needs (PN) | .726 |

All the reliability coefficients reported in the table range from 0.689 to 0.822, suggesting that satisfactory coefficients of reliability were recorded with regard to the identified factors. Only one factor falls marginally below the 0.70 margin, but Field (2007:668) argues that Cronbach Alpha coefficients as low as 0.58 is acceptable in exploratory research (such as this study). The factors are thus regarded to all be reliable and internally stable.

3.3.5 Factor analysis on Product quality

The following factor analysis focused on the six items that measure Product quality. The results of the analysis are given in Table 3.5.

TABLE 3.5: FACTOR ANALYSIS ON PRODUCT QUALITY

| Item no. | Factor loading |
|-----------------|-----------------------|
| B04 | .778 |
| B02 | .742 |
| B03 | .742 |
| B05 | .634 |
| B06 | .608 |
| B01 | .56 |

Only one factor loaded with all factor loadings ≥ 0.4 . These six items explained 46.5% of the variance in the data with a reliability coefficient of 0.739.

3.3.6 Factor analysis on Internal store environment

The third factor analysis focused on the nine items that measures the internal store environment of customer experience. The results of the analysis are given in Table 3.6.

TABLE 3.6: FACTOR ANALYSIS ON INTERNAL STORE ENVIRONMENT

| Item no. | Physical attraction | Physiological attraction |
|-----------------|----------------------------|---------------------------------|
| C03 | .77 | |
| C05 | .76 | |
| C06 | .721 | |
| C01 | .716 | |
| C09 | .715 | |
| C02 | .673 | |
| C07 | .625 | |
| C08 | | .74 |
| C04 | | .646 |

Two factors loaded on Internal store environment. The two sub-dimensions explained a cumulative 57.08% of the variance in the data and the reliability coefficients are given in the table below.

TABLE 3.7: CRONBACH ALPHA COEFFICIENTS FOR MEASURING INSTRUMENT – INTERNAL STORE ENVIRONMENT

| Criteria | Cronbach alpha coefficients |
|--|------------------------------------|
| Physical attraction (Pa) | .842 |
| Physiological attraction (Phat) | .547 |

3.3.7 Factor analysis on Product Prices

The fourth factor analysis focused on the five items that measures the extent of information analysis for product price improvements. The results of the analysis are given in Table 3.8.

TABLE 3.8: FACTOR ANALYSIS ON PRODUCT PRICES

| Item no. | Product Prices (PP) |
|-----------------|----------------------------|
| D04 | .851 |
| D03 | .731 |
| D02 | .677 |
| D01 | .622 |

One factor loaded on the dimension Product Prices. These four items explained 51.93% of the variance in the data with a reliability coefficient of 0.668.

3.3.8 Factor analysis on Store Policies

The fifth factor analysis focused on the four items that measures the store policies. The results of the analysis are given in Table 3.9.

TABLE 3.9: FACTOR ANALYSIS ON STORE POLICIES

| Item no. | Customer assisting systems | Advertising |
|----------|----------------------------|-------------|
| E01 | .848 | |
| E06 | .811 | |
| E02 | .745 | |
| E03 | .709 | |
| E04 | | .928 |
| E05 | | .909 |

Two factors loaded on the dimension Store policies. The six items explained a cumulative 71.69% of the variance in the data with reliability coefficients given in the table below.

TABLE 3.10: CRONBACH ALPHA COEFFICIENTS FOR STORE POLICIES

| | Cronbach alpha coefficients |
|----------------------------------|-----------------------------|
| Customer assisting systems (CAS) | .804 |
| Advertising (A) | .848 |

3.3.9 Descriptive statistics

Descriptive statistics (mean and standard deviation) were calculated to describe the basic features of the different customer experience dimensions calculated from the factor analysis.

TABLE 3.11: DESCRIPTIVE STATISTICS OF THE DIFFERENT CUSTOMER EXPERIENCE DIMENSIONS

| Customer Experience | n | Mean | Standard deviation |
|------------------------------------|----------|-------------|---------------------------|
| Service Quality: | | | |
| ECF | 124 | 4.3391 | .5651 |
| D | 124 | 4.3391 | .5651 |
| R | 124 | 4.2681 | .5327 |
| PA | 124 | 3.9758 | .719 |
| PN | 124 | 3.9758 | .719 |
| Product quality | 123 | 4.3805 | .4814 |
| Internal store environment: | | | |
| Pa | 124 | 4.047 | .5989 |
| Phat | 124 | 2.1492 | .5946 |
| Product Prices | 124 | 4.2554 | .6164 |
| Store Policies | | | |
| CAS | 124 | 4.0517 | .0735 |
| A | 124 | 3.5121 | 1.0388 |

The mean of the customer experience dimensions ranged between 2.1492 and 4.3805, according to the 5-point Likert scale of measurement. The most important customer experience dimension is Product quality with a mean of 4.3805. Comparing the mean values presented in the table and the scale of measurement used, it can be concluded that the respondents found all off the customer experience dimensions important to very important, except for

psychological attraction with a mean of 2.1492 indicating that this dimension is not that important to the respondents.

3.3.10 Correlations coefficients

The correlation coefficients were calculated in order to determine the strength of the linear relationship between the various customer experience dimensions. The results are presented in Table 3.12 below.

TABLE 3.12: CORRELATION COEFFICIENTS BETWEEN VARIOUS CUSTOMER EXPERIENCE DIMENSIONS

| Customer Experience | ECF | D | R | Pat | PNS | PQ | PA | Phat | PP | CAS | A |
|---------------------|-----|------|------|------|-------------|------|-------------|------|------|------|------|
| ECF | | .255 | .463 | .488 | .696 | .327 | .13 | .132 | .458 | .49 | .121 |
| D | | | .326 | .266 | .411 | .484 | .635 | .065 | .242 | .136 | .362 |
| R | | | | .298 | .5 | .385 | .377 | .075 | .363 | .292 | .306 |
| Pat | | | | | .565 | .23 | .242 | .224 | .375 | .395 | .089 |
| PNS | | | | | | .387 | .255 | .145 | .377 | .407 | .297 |
| PQ | | | | | | | .544 | .156 | .375 | .356 | .448 |
| PA | | | | | | | | .252 | .329 | .252 | .491 |
| Phat | | | | | | | | | .196 | .312 | .346 |
| CAS | | | | | | | | | | .497 | .29 |
| A | | | | | | | | | | | .389 |

* Correlations > .5 identified

The strength of the relationship varies between 0.065 (no effect) and 0.635 (practically significant effect). All the relationships that are practically significant are positive, meaning that if a respondent feels a specific experience is important another dimension of experience is also important to the respondent. From the table, various practically significant relationships ($r > 0.50$) are observed with the

highest relationship ($r=0.635$) between dimension D (Display) and PA (physical attraction). The significant relationship between the two variables means that when people are satisfied with the display they will also be satisfied with the physical attraction of the store and vica versa. Dissatisfaction with the display of the convenience store will ultimately lead to dissatisfaction with the physical attraction of the store.

3.4 SUMMARY

This chapter presented the research methodology and the results of the empirical analysis. The statistical methods employed are descriptive statistics, reliability testing, as well as Exploratory Factor Analysis.

The next, and final chapter, envelops all conclusions (inferred from the empirical results) and recommendations made (based on the empirical study as well as the literature review).

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

This chapter encompasses the conclusions and recommendations of the empirical research. Conclusions are made based on the findings of the descriptive statistical analysis and the factor analysis. The recommendations are formulated based on literature and the conclusions of the empirical research. This chapter also touches on the areas for future research and a summary to conclude the research.

4.2 CONCLUSIONS

The following conclusions were drawn from the study:

Conclusion 1:

The study demonstrated the use of a qualitative methodological approach regarding customer experience. It can be concluded that all the five dimensions of the controllable elements of the total customer experience as indicated in the literature are important to measure, the most important being product quality.

Conclusion 2:

The overall KMO measures for each of the five customer experience dimensions ranged from 0.667 to 0.815 which is above the minimum value of 0.6. It can be concluded that the sample was adequate for the empirical study.

Conclusion 3:

The customers found all the customer experience dimensions to be important except for psychological attraction which had a mean value of only 2.14. The elements of psychological attraction, which includes store music and store cleanliness is surprisingly not important to customers when shopping at a convenience store. It can thus be concluded that these elements are not important to customers.

Conclusion 4:

The validity of the customer experience measuring instrument is proven to be above the minimum requirements as most of the dimensions resulted in Cronbach Alpha values of above 0.7 while the few that missed this margin had reliability coefficients above 0.5. It can thus be concluded that the factors can all be regarded as reliable and internally stable.

Conclusion 5:

The fact that the analyses identified questions that could be discarded from the study, leads to the conclusion that the questionnaire can be shortened without jeopardising its measuring quality.

Conclusion 6:

A response rate of only 47.69% was achieved. In a fast tracked 21st century, people are becoming more competitive to secure their jobs and find time as an extremely valuable asset. It can be concluded that one of the reasons for the low response rate is that the questionnaire is too long.

Conclusion 7:

The study explained a cumulative variance of 47%. This is below the standard 60% variance that is regarded to be a good fit to the data. Resultantly, it can be

concluded that the questionnaire did not measure all the service dimensions. An additional conclusion is made that additional research would be required to compile a questionnaire that could improve the variance explained, and thus a better fit between the customers and the questionnaire.

4.3 RECOMMENDATIONS

4.3.1 Recommendations based on the empirical study

The following recommendations are made, based on the conclusions from the empirical study in Section 4.2. The recommendation number is directly related to the conclusion number, e.g. Recommendation 1 is related to Conclusion 1 and Recommendation 2 is related to Conclusion 2.

Recommendation 1:

It is recommended that all of the five controllable dimensions of customer experience be included in future studies of customer experience. If, however, a future study leader wants to exclude some of the elements, product quality should not be considered, as it is the most important controllable dimension of customer experience, as concluded in the empirical study.

Recommendation 2:

A sample size of not less than 120 should be targeted when the measuring instrument under discussion is used for future research.

Recommendation 3:

In future, researchers conducting studies, pertaining to the measurement of the controllable elements of customer experience in the fuels environment, can omit the elements of store cleanliness and store music.

Recommendation 4:

The tried and tested tailor-made measuring instrument can be used in any research pertaining to the controllable elements of customer experience in the fuels retail convenience store environment.

Recommendation 5:

The questionnaire can be shortened when used for future studies by eliminating the following two questions: *“When a customer has a problem, excellent convenience stores will show a sincere interest in solving it,”* and *“The behaviour of employees in excellent convenience stores will instill confidence in customers.”*

Recommendation 6:

It is recommended that further studies be conducted to shorten the measuring instrument with the aim of increasing the response rate.

Recommendation 7:

Future research must be conducted to identify and include all the service dimensions. The recommendation is also that research be conducted to compile a questionnaire to achieve an improved variance.

4.3.2 Recommendations based on the literature review**Recommendation 8:**

Consumer centricity is a strategy based on the belief that if you can identify your most important customer and understand their needs, you can align your value proposition to meet those needs. This has proven to provide a sustainable competitive advantage while increasing sales and profits through greater

consumer share and consumer loyalty. The recommendation is also that the Sasol Oil convenience stores adapt a consumer centricity strategy.

Recommendation 9:

Hughes Net Managed Services is a company offering business solutions. Major companies like BP Retail, Exxon and Shell make use of the services of Hughes to provide fully managed solutions to the challenges of the retail business. Challenges include fast, easy, reliable service wanted by customers and secure transactions which are requirements for effective business. Some of the many services provided by Hughes are to:

- ensure that both the company and franchisee network operations provide a uniform customer experience;
- allow the franchisee to promote loyalty programs and “specials” as well as training of employees;
- implement video advertising at petrol pumps to increase in-store sales; and
- deliver the most appropriate broadband technology to each store (Hughes Enterprise Solutions, 2010).

It is recommended that Sasol Oil utilise Hughes, or a company providing similar services of business solutions to manage their customer experience.

Recommendation 10:

The empirical study proved that the measuring instrument developed is too long, and to use it in the retail environment to measure the customer experience will just not be practical to achieve an acceptable response rate. Reminders had to be sent to non-respondents to complete the questionnaire. An instrument that can effectively capture customer experience at the point-of-sale is the Opinion meter.

The system is quickly implemented, easy, convenient and economical to use. It is a battery-powered, portable mini-kiosk that can be placed at strategic customer points-of-sale. It gathers large amounts of “primary response data”, analyses it and transforms the data into meaningful actions (Multitech systems, 2006).

The recommendation is that Sasol Oil install opinion meters to capture customer experience at the point-of-sale.

4.4 AREAS OF FUTURE RESEARCH

The study was limited to Sasol employees and it will be advantageous to do a follow-up study to test this instrument across economic sectors.

Respondents were predominantly from Secunda and Sasolburg (which are towns) and a follow-up study to reflect the needs of consumers in the city will be interesting.

In this study a cumulative variance of only 47% was achieved and further research to improve the questionnaire is needed to enhance the fit between customers and the data.

4.5 SUMMARY

This study consists of four chapters. **Chapter 1** provided an introduction to the study as well as the problem statement. The objectives of the study were set in this chapter and the research methodology discussed. It was concluded in Chapter 1, that a measuring instrument is not available in the Sasol Oil fuels retail convenience stores to measure the controllable elements of the total customer experience.

Chapter 2 entails an in-depth literature review regarding customer service. Three measuring instruments namely, SERVQUAL, Kano and customised measuring instruments were discussed in this chapter. It was concluded that a customised questionnaire will be employed as a data gathering instrument.

In **Chapter 3**, the research methodology was discussed in detail as well as the statistical methods employed to analyse the data and the results of the statistical analysis. The statistical methods discussed in this chapter included the following: Descriptive statistics; Exploratory Factor Analysis; Cronbach alpha coefficients; Pearson product-moment correlation coefficients; Bartlett's test of Sphericity; and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy.

Chapter 4 entails conclusions, recommendations and areas of future research. It was concluded that all five dimensions of the controllable elements of customer experience employed in this study are important for customer experience. Future research is, however, necessary to improve the questionnaire to ensure a better fit between customers and the questionnaire as indicated in the results of the statistical analysis.

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APPENDIX 1: QUESTIONNAIRE

CUSTOMER EXPERIENCE QUESTIONNAIRE

Dear Participant,

The aim of the questionnaire is to gather data which will be employed to create a measuring instrument, to determine the controllable elements of customer experience of consumers at garage convenience stores. Ultimately, the measuring instrument will be applied to help managers identify and address the gaps of customer experience (CE) in their convenience stores. It is thus of utmost importance that all questions be answered truthfully and to the best of your ability.

Please complete every question / statement to ensure the validity and reliability of the study.

The questionnaire is divided into eight sections of which the first seven sections aim to determine the relevant attributes with respect to CE as follows:

- **Service Quality** (Section A)
- **Product Quality** (Section B)
- **Internal Store Environment** (Section C)
- **Product Prices** (Section D)
- **Store Policies** (Section E)
- **Important Attributes** of CE **not listed** in questionnaire as identified by you, as a participant (Section F)
- **Very Important Attributes** of CE **not listed** in questionnaire as identified by you, as a participant (Section G)

The eighth section (**Section H**) aims to gather biographical information of the participants of this survey.

All questions must be rated in terms of importance to you as a customer. Please mark the appropriate box with an x.

Use the following key to indicate your attribute rating:

| SCALE | TERM USED |
|--------------|------------------|
| 5 | Very important |
| 4 | Important |
| 3 | Uncertain |
| 2 | Less important |
| 1 | Unimportant |

Please select the number which best describes your rating of a specific attribute. In the example below, the participant rated the attribute listed as important.

SECTION A: SERVICE QUALITY

| SERVICE QUALITY ATTRIBUTES | | Unimportant | Less Important | Uncertain | Important | Very Important |
|----------------------------|--|-------------|-------------------|-----------|-----------|-------------------|
| A01 | When excellent convenience stores promise to do something by a certain time, they do (e.g., Money-back Guarantee). | 1 | 2 | 3 | 4 | 5 |
| A02 | When a customer has a problem, excellent convenience stores will show a sincere interest in solving it. | 1 | 2 | 3 | 4 | 5 |
| A03 | Excellent convenience stores will perform the service right the first time. | 1 | 2 | 3 | 4 | 5 |
| A04 | Excellent convenience stores will perform the service at the time they promised to do so. | 1 | 2 | 3 | 4 | 5 |
| A05 | Excellent convenience stores will insist on error-free records. | 1 | 2 | 3 | 4 | 5 |
| A06 | Employees of excellent convenience stores will tell customers exactly when services will be performed. | 1 | 2 | 3 | 4 | 5 |
| A07 | Employees of excellent convenience stores will give prompt service to customers. | 1 | 2 | 3 | 4 | 5 |
| A08 | Employees of excellent convenience stores will always be willing to help customers. | 1 | 2 | 3 | 4 | 5 |
| A09 | Employees of excellent convenience stores will never be too busy to respond to customers' requests. | 1 | 2 | 3 | 4 | 5 |
| A10 | The behaviour of employees in excellent convenience stores will instil confidence in customers. | 1 | 2 | 3 | 4 | 5 |
| A11 | Customers of excellent convenience stores will feel safe in transactions. | 1 | 2 | 3 | 4 | 5 |
| A12 | Employees of excellent convenience stores will be consistently courteous with customers. | 1 | 2 | 3 | 4 | 5 |
| A13 | Employees of excellent convenience stores will have the knowledge to answer customers' questions. | 1 | 2 | 3 | 4 | 5 |
| A14 | Excellent convenience stores will give customers individual attention. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|------------|---|----------|----------|----------|----------|----------|
| A15 | Excellent convenience stores will have operating hours convenient to all their customers. | 1 | 2 | 3 | 4 | 5 |
| A16 | Excellent convenience stores will have employees who give customers personal service. | 1 | 2 | 3 | 4 | 5 |
| A17 | Excellent convenience stores will have their customers' best interest at heart. | 1 | 2 | 3 | 4 | 5 |
| A18 | The employees of excellent convenience stores will understand the specific needs of their customers. | 1 | 2 | 3 | 4 | 5 |
| A19 | Excellent convenience stores will have modern looking equipment. | 1 | 2 | 3 | 4 | 5 |
| A20 | The physical facilities at excellent convenience stores will be visually appealing. | 1 | 2 | 3 | 4 | 5 |
| A21 | Employees at excellent convenience stores will be neat in their appearance. | 1 | 2 | 3 | 4 | 5 |
| A22 | Products associated with the service (food, drinks, etc.) will be neatly and appealingly displayed at an excellent convenience store. | 1 | 2 | 3 | 4 | 5 |

SECTION B: PRODUCT QUALITY

| PRODUCT QUALITY ATTRIBUTES | | Unimportant | Less Important | Uncertain | Important | Very Important |
|----------------------------|--|-------------|----------------|-----------|-----------|----------------|
| B01 | Product freshness (Pastries e.g. Pies) | 1 | 2 | 3 | 4 | 5 |
| B02 | Products of excellent quality | 1 | 2 | 3 | 4 | 5 |
| B03 | Taste of food | 1 | 2 | 3 | 4 | 5 |
| B04 | Eye appeal of food | 1 | 2 | 3 | 4 | 5 |
| B05 | Nutritional content of food | 1 | 2 | 3 | 4 | 5 |
| B06 | Variety of pastries | 1 | 2 | 3 | 4 | 5 |

SECTION C: INTERNAL STORE ENVIRONMENT

| INTERNAL STORE ENVIRONMENT ATTRIBUTES | | Unimportant | Less Important | Uncertain | Important | Very Important |
|---------------------------------------|------------------------------------|-------------|----------------|-----------|-----------|----------------|
| C01 | Practical and logical shelf layout | 1 | 2 | 3 | 4 | 5 |
| C02 | Modern Appearance of store | 1 | 2 | 3 | 4 | 5 |
| C03 | Store attractiveness | 1 | 2 | 3 | 4 | 5 |
| C04 | Clean store | 1 | 2 | 3 | 4 | 5 |
| C05 | Comfortable in-store Temperature | 1 | 2 | 3 | 4 | 5 |
| C06 | Pleasant store atmosphere | 1 | 2 | 3 | 4 | 5 |
| C07 | Store scents | 1 | 2 | 3 | 4 | 5 |
| C08 | Store music | 1 | 2 | 3 | 4 | 5 |
| C09 | Aisles that makes it easy to shop | 1 | 2 | 3 | 4 | 5 |

SECTION D: PRODUCT PRICE

| PRODUCT PRICE ATTRIBUTES | | Unimportant | Less Important | Uncertain | Important | Very Important |
|--------------------------|------------------------------------|-------------|----------------|-----------|-----------|----------------|
| D01 | Accurate price displays | 1 | 2 | 3 | 4 | 5 |
| D02 | Prices reflect quality of products | 1 | 2 | 3 | 4 | 5 |
| D03 | Price compared to competitors | 1 | 2 | 3 | 4 | 5 |
| D04 | Price consistency | 1 | 2 | 3 | 4 | 5 |

SECTION E: STORE POLICIES

| STORE POLICY ATTRIBUTES | | Unimportant | Less Important | Uncertain | Important | Very Important |
|-------------------------|---|-------------|----------------|-----------|-----------|----------------|
| E01 | Exchange of purchases | 1 | 2 | 3 | 4 | 5 |
| E02 | Availability of credit or debit card facilities or in-store ATM | 1 | 2 | 3 | 4 | 5 |
| E03 | System dealing with enquiries or complaints | 1 | 2 | 3 | 4 | 5 |
| E04 | Regular promotions | 1 | 2 | 3 | 4 | 5 |
| E05 | Regular advertising of convenience store promotions | 1 | 2 | 3 | 4 | 5 |
| E06 | Exchange of purchases | 1 | 2 | 3 | 4 | 5 |

SECTION F: IMPORTANT ATTRIBUTES NOT LISTED

| IMPORTANT ATTRIBUTES NOT LISTED |
|---------------------------------|
| |

SECTION G: VERY IMPORTANT ATTRIBUTES NOT LISTED

| VERY IMPORTANT ATTRIBUTES NOT LISTED |
|--------------------------------------|
| |

SECTION H: BIOGRAPHICAL INFORMATION

Biographical information is needed to help with the statistical analysis of data for comparisons among different interest groups. All your responses will be treated confidentially. Your assistance in providing this important information is appreciated. Please mark the applicable block with a cross (X).

| | | | | | | |
|------------|--------------------------------|-----------|---------|---------|---------|-----|
| H01 | INDICATE YOUR AGE GROUP | ≤ 29 | 30 - 39 | 40 - 49 | 50 - 59 | 60+ |
|------------|--------------------------------|-----------|---------|---------|---------|-----|

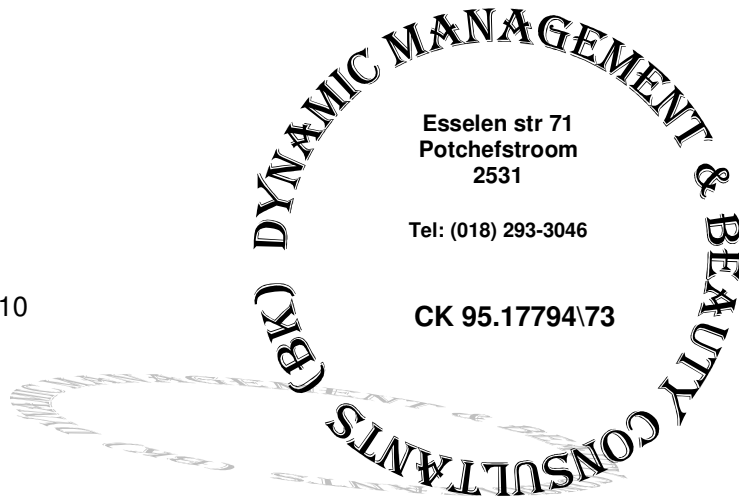
| | | | |
|------------|-----------------------------|------|--------|
| H02 | INDICATE YOUR GENDER | Male | Female |
|------------|-----------------------------|------|--------|

| | | | | | |
|------------|---------------------------|-------|-------|----------|--------|
| H03 | INDICATE YOUR RACE | Black | White | Coloured | Indian |
|------------|---------------------------|-------|-------|----------|--------|

THANK YOU FOR YOUR TIME.

APPENDIX 2: LETTER FROM LANGUAGE EDITOR

Tuesday, November 23, 2010



Mr Norman Africa

21425728

Re: Letter of confirmation of language editing

The MBA mini-dissertation "*Measuring the controllable variables in the customer experience in convenience stores at filling stations*" was language, technically and typographically edited. The sources and referencing technique applied was checked to comply with the specific Harvard technique as per North-West University prescriptions.

A handwritten signature in black ink, appearing to read 'Antoinette Bisschoff'.

Antoinette Bisschoff

Officially approved language editor of the NWU