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# ASSESSING CUSTOMER SATISFACTION LEVELS AT A NATURAL GAS ENERGY SUPPLIER

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# CHAPTER 1 INTRODUCTION

For over 40 years, the industrial pipeline gas industry in Gauteng, South Africa, has been dominated by Sasol Gas. The South African Gas Distribution Corporation Limited (Gascor), now known as Sasol Gas Limited (Sasol Gas), was established in 1964, based on the availability of synthetic gas produced at Sasolburg. By 1966 the first gas pipeline was completed at a total cost of R30 million. The second pipeline, 95 km long, connecting Secunda to the existing pipeline network at Springs, was completed in 1981. During the same period, a R40 million expansion to the Sasol One gasification plant was completed. This lead to an increase in plant output, of 160%, with a corresponding increase of 40% in pipeline gas sales. Using hydrogen – rich gas from Sasol Chemical Industries (SCI) plant, as well as methane-rich gas from Sasol Synthetic Fuels (SSF) plant at Secunda, Gascor built a substantial gas market in South Africa. Trading as Sasol Gas, the company has developed an extensive 1500 km pipeline network in South Africa. The network delivers gas reliably to more than 540 customers supplying 49million GigaJoules of pipeline gas, mainly in industrial sectors in Gauteng, Mpumalanga and KwaZulu – Natal. Sasol Gas' future marketing supply opportunities will expand considerably once the supply of natural gas from Mozambique begins in 2004.
The natural gas project is a joint venture between Sasol (50%) and the governments of South Africa and Mozambique.

## 1.1 Context of the study:

The advent of pipeline natural gas from the gas fields of Mozambique to supply the industrial customers in South Africa, brings with it new opportunities and challenges in the South African energy sector. The South African government, which holds a 25% stake in the natural gas pipeline, has made clear its intentions of opening the natural gas industry to more players, in order to squash once and for all the perception of Sasol being a monopolistic player in the pipeline natural gas industry. Government intends to entrench this by putting into place regulations and an Act that would see the transmission and distribution of pipeline gas being open to other companies that would compete with Sasol, mainly downstream in the distribution and retail end of the supply chain. To be fair to Sasol, a grace period of 10 years before introduction of other players in the market, shall be given to the company so as be able to recoup its investment in the 1.9 billion US$

pipeline, where-after the pipeline shall be open to players who satisfy certain government conditions. Depending on the proven gas reserves this period could be from 0 to 10 years from the first gas.

As is now well known and deservedly so, in the new political dispensation in South Africa, there is a lot of drive towards redressing the injustices of the past apartheid era in industries, where certain race groups of the country's citizens were excluded from participating in the economic decision making processes of their country because of the colour of their skin.

Sasol was built in the 1950s, by the previous government as a strategic state owned entity to sustain the country's oil needs in the face of sanctions by hostile nations who were against the practice of apartheid by the previous dispensation.

The privatization of the company in 1996, did very little to remove the stigma of a monopolistic state owned entity in the eyes of both the white owned businesses as well as the historically disadvantaged groups of the population. The company is viewed by both groups as having had an unfair competitive advantage in the industry as a result of its having been built on state funds by the apartheid era minority South African government.

The post 1994 democratically elected government of South Africa is now keen to remedy the situation in this industry and give more players a fair chance to participate in the natural gas energy industry. Industrial competition is encouraged in order to redress the unfair discriminatory practices of the past. However the government does not plan to do this through dictatorial imposition of its policy. The establishment of a joint venture between Sasol, the governments of South Africa and Mozambique in the natural gas pipeline from the Temane gas fields in Mozambique to Secunda in South Africa, is a transparent democratic means of the government's intention to redress the situation. Excepting for greenfield projects which have substantial amounts of gas volume requirements (8 million Gigajoules per annum), and thus will be able to negotiate supply directly with the generator of gas upstream, in Mozambique from first gas, the government intends shedding its 25% stake to new participants, from historically disadvantaged groups, who would be identified later as the industry matures, once Sasol has recouped its investment in the pipeline. Thus deregulation and taking a stake in the pipeline natural gas from Mozambique, are interventions from the government towards liberalizing of the South African natural gas energy industry.

### 1.1.1 Implications to Sasol Gas

The intervention by government in the pipeline gas supply chain, brings about new challenges to Sasol Gas, which has for many years been enjoying the advantage of being the sole player in the pipeline gas energy industry. This position of advantage, supplying pipeline gas to the lucrative Gauteng industrial market, has resulted in Sasol Gas not paying much attention to its Customer Relation Management strategies over the years. Retention of customers has been solely on the basis of its ability to provide a quality product at competitive energy prices. Most customers are locked into Sasol Gas since there is no other cost effective alternative pipeline gas supplier. Sasol pipeline gas is priced so competitively to most customers that they find it hard to justify hurting their profit margins by changing over to an alternative energy source such as liquid petroleum gas (LPG), which is priced at almost double the price of Sasol gas in some instances. Electricity as an alternative could be considered, save for the high unreliability of supply by the utilities, and high capital costs of converting equipment to electricity.

Deregulation in the industry as propounded by the government, will open the industry to more players. This will for the first time introduce meaningful competition in the industry.

Faced with these new challenges, Sasol Gas should be looking more towards assessing its corporate culture's view on customer satisfaction.

According to Lowenstein's (1997) loyalty pyramid, based on satisfaction, performance, and commitment, stated in the Literature Review chapter of this report, Sasol can clearly be seen as a company operating from a traditional bureaucratic model and only a rudimentary set of processes for performance and for internal and external communications. As would be expected, these companies minimally empower their staff.

The ideal of any progressive company is to be in the third and highest level of Lowenstein's loyalty pyramid, the Commitment-Based company. At this stage companies have really learned and practiced to be entirely customer-driven. The entire organization is involved in developing relationships with customers, proactively approaching customers as partners, and strategically acting to acquire and retain customers. These companies have developed a horizontal managerial style that cuts across department boundaries. They are focused on continuous improvement, searching for new understandings and ways to serve customers, creating knowledge, and maintaining information flow directed at meeting customer needs. They have learned to increase their employee communication and have cultivated a culture of empowerment.

By undertaking this study, Sasol is showing aspirations to join those companies who are in the third level of the pyramid.

It was decided that assessment of the satisfaction levels of customers with Sasol Gas' offering is the relevant point of departure in Sasol Gas review of its customer relations management. The present view of the company by its customers will enable the company to formulate new strategies to improve the perception customers have of the company.It is hoped that the more satisfied the customers become with the company, customer loyalty will be enhanced which will see the company retaining its valued customers when new entrants to the market arrive.

In addition it is hoped that this report will lead to further work to develop a formal customer satisfaction index (CSI) for the company in the lines of the popularly known American Customer Satisfaction Index. This company CSI will be included in the company's balanced scorecard's continuous improvement strategies as a performance measurement.

It is again hoped the study will add to new knowledge in that the formulation of a company CSI is to be exploded to include the energy sector CSI, and ultimately a South African energy industry CSI.

## 1.2 Research Problem and Sub-problem.

### 1.2.1 Main Problem:

Assess satisfaction levels of Sasol Gas' customers with the company offering and services.

### 1.2.2 Sub Problems

(i) Measuring the level of satisfaction of customers with the company.

(ii) Identifying the factors which are pertinent to satisfying the needs of Sasol Gas' natural gas customers.

## 1.3 Purpose of the Study

The purpose of this study is to assess levels of customer satisfaction with Sasol Gas' offering on quality performance, perceived value, and customer expectations and to evaluate its consequence of customer loyalty.

## 1.4 Significance of the Research

The study is of significance at both company and industry level.

### 1.4.1 Company Level

The measuring of customer satisfaction levels is paramount to every customer oriented company. The company hopes to use the results in developing appropriate strategies to gain a competitive advantage in a deregulated natural gas industry.

The aim is to improve customer satisfaction with the company's product and services to a point of loyalty. This will ensure retention of customers when deregulation of the industry allows more competitors in the industry.

It has been shown that a good CSI score has the propensity of enhancing a company's value and image. Thus improving the CSI score of Sasol Gas could be a competitive advantage if well leveraged in the market place.

### 1.4.2 Industry Level

Introduction of natural gas from Mozambique fields heralds a new era in the pipeline gas industry in South Africa. Competition is to be induced by the deregulation of the industry. Company strategies will be forced to address customer satisfaction to ensure customer retention.

DTI chief director Moses Moeletsi, stated that the Department of Trade and Industry (DTI), in South Africa has in the past three years been using a customer satisfaction index, the South African Satisfaction Index, aimed at encouraging competitiveness across industries and "is consumer-driven, objective, neutral and comparative". Industries covered in the satisfaction index have so far included banking, automobiles and telecommunications among others.

It is hoped the work in this report would be used to contribute towards the establishment of an energy industry satisfaction index.

## 1.5 Structure of the Project Report.

The report is structured as follows:

**Chapter 1 - Introduction**

The historical background of the company is discussed. Developments in the natural gas industry are elucidated. The research problem and sub problems are stated. The purpose and significance of the research are also discussed.

**Chapter 2 - Literature Review**

Discussion of the literature relevant to the research is discussed in the chapter. Classical marketing theories are discussed to support the literature review. Opinions of various authors, academic as well as marketing, related to the topic are discussed. The antecedents and consequences of customer satisfaction are discussed. Benefits derived from using customer satisfaction index score for competitive advantage are discussed.

**Chapter 3 - Research Questions:**

The questions upon which the study is based are introduced in this chapter.

**Chapter 4 - Research Methodology:**

The methodology followed in this report is explained in this chapter. The sampling decisions, creation of the questionnaire, and survey methods used are discussed. Data capturing on spreadsheet will discussed. The questions to be used for the survey questionnaire, as deemed appropriate for this study by both the marketing personnel and customers of Sasol Gas are stated.

**Chapter 5 - Research Results:**

Tabulation of results and graphs will be made here.

**Chapter 6 - Discussion and Interpretation of results.**

Analysis of results using, appropriate statistical methods.

**Chapter 7 - Conclusion and Recommendations.**

This chapter concludes the research by stating if the purpose of the study was achieved by the research. From observations of the analysis of results the author makes recommendations for any further work to be undertaken, to advance what was achieved.

# CHAPTER 2 LITERATURE REVIEW

## 2.1 Introduction

In this chapter the construct of customer satisfaction shall be explored and discussed from first principles of classical marketing, to its evolution throughout the various development of the marketing concept.

Classical marketing customer satisfaction measurement methods as they evolved throughout this period shall be briefly discussed. The bulk of the literature review discussion shall be on the more contemporary measurement method, Customer Satisfaction Index, and a critical literature review of its claimed competitive advantages and economic benefits as propounded by the American Customer Satisfaction Index developers, viz; Fornell et al (1994).

## 2.2 The Marketing Concept

Kotler (1997:19), in describing the marketing concept, states that “the marketing concept holds that the key to achieving organizational goals consists of being more effective than competitors in integrating marketing activities toward determining and satisfying the needs and wants of target markets.”

Peter Drucker (1973) asserts that a company’s first task is “to create customers.” Business does this by realizing the needs potential customers have. Having detected the needs, business will try to satisfy those needs by providing a solution in the form of a product or service. Marketing’s job is to convert societal needs into profitable opportunities.
In order to achieve the marketing objectives the culture of the company should be customer oriented.

### 2.2.1 Organisational Culture.

Webb, D. *et al* (2000) observe that, to date the marketing literature has failed to substantiate the linkage between market orientation and customer satisfaction. This is surprising particularly when

considering the attention that has been given to the implementation of the marketing concept in recent years.

Their study concludes that a strong relationship exists between customer-defined market orientation and both service quality and customer satisfaction.

Atuahene-Gima, (1996) mention that the importance of corporate culture is paramount. "The marketing concept defines a distinct organizational culture, a fundamental set of shared beliefs and values that puts the customer in the center of the firm's thinking about strategy and operations".

Wright, & Snell (2002), observe that customer orientation also has been related to market orientation, competitor orientation, inter-functional coordination, long-term perspective (Narver and Slater, 1990), innovation, and different types of corporate cultures (Atuahene-Gima, 1996; Deshpande, *et al.*, 1993).

Lowenstein, (1997), describes companies' culture in a customer loyalty pyramid that has three distinct levels based on satisfaction, performance, and commitment. He states that "the Satisfaction-Based, companies approach customers in a largely passive and reactive manner. Companies in this stage are operating from a traditional bureaucratic model and only a rudimentary set of processes for performance and for internal and external communications. As would be expected, these companies minimally empower their staff. Companies in the second level of Lowenstein's Customer Loyalty Pyramid, the Performance-Based stage, are more aware and sensitive to customers. Although they still operate with a traditional hierarchy, they have formal processes for measuring performance and collecting and acting on complaints. They actively evaluate customer needs and train their staff to be more proactive. Companies at this level create teams or assign individuals to upgrade customer services. They also compensate, at least partially, their sales and other staff based on customer satisfaction scores. The third and highest level is Commitment-Based. At this stage companies have really learned and practiced to be entirely customer-driven. The entire organization is involved in developing relationships with customers, proactively approaching customers as partners, and strategically acting to acquire and retain customers. These companies have developed a horizontal managerial style that cuts across department boundaries. They are focused on continuous improvement, searching for new

understandings and ways to serve customers, creating knowledge, and maintaining information flow directed at meeting customer needs. They have learned to increase their employee communication and have cultivated a culture of empowerment. They have developed sophisticated performance measurements to improve actions toward customer retention and customer loyalty. And as everyone contributes to success by keeping customers, everyone receives incentives and recognition based on the company's level of customer loyalty, sales, and profits" (Lowenstein, M.W. 1997).

Fornell (2000), further states that, the basic idea behind a market economy is that businesses exist and compete in order to create a satisfied customer. Investors will flock to the companies that are expected to do this well. It is not possible to increase economic prosperity without also increasing customer satisfaction. In a market economy, where suppliers compete for buyers, but buyers do not compete for products, customer satisfaction defines the meaning of economic activity, because what matters in the final analysis is not how much we produce or consume, but how well our economy satisfies its consumers.

Empirical work done by, Aaker & Jacobson, (1994); Anderson et al., (1994), (1997); Bolton, (1998); Capon et al., (1990), indicates that firms providing superior quality enjoy higher economic returns.

### 2.2.2 Customer Satisfaction.

Kotler (1997:40) defines satisfaction as a function of perceived performance and expectations. If the performance falls short of expectations, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted.

Kotler (1997:40) describes "satisfaction as a person's feelings of pleasure or disappointment resulting from comparing a product's (or service) perceived performance (or outcome) in relation to his or her expectations."
As this definition makes clear, satisfaction is a function of perceived performance and expectations. The basic premise of the ACSI (1994) model, is that customer satisfaction has three antecedents: perceived quality, perceived value and customer expectations. Perceived performance, the served market's evaluation of recent consumption experience, is expected to have a direct and positive

effect on customer satisfaction.

## 2.3 Measuring Customer Satisfaction

**Introduction:**

Barnes (2002) states that, many organizations today are spending significant resources to better understand the relationships they have with their customers. These resources might include a customer relationship management (CRM) software tool and/or a customer satisfaction measurement instruments. The intent of these tools is to provide the organization a clearer understanding of customer needs, behaviors and attitudes. It is believed that improving customer satisfaction based on the insight these tools provide will result in improved business results.

Fornell (2000), states that the economy-for nations and for corporations-has changed much more than our theories and measurements. One can easily make the case that the measures on which we rely for determining corporate and national economic performance have not kept pace. For example, the service sector and information technology play a dominant role in the modern economy. An implication of this change is that economic assets today reside heavily in intangibles-knowledge, systems, customer relationships, etc. The building of shareholder wealth is no longer a matter of the management of financial and physical assets.

In this study we shall look at the more traditional classical marketing tools as well as the more contemporary methods of measuring customer satisfaction.

### 2.3.1 Classical Marketing Tools

A brief discussion of the classical methods of measuring customer satisfaction shall be made here.

Kotler (1997:43) describes several marketing tools for tracking and measuring customer satisfaction.

Kotler (1997:43) states that a customer-centered organization makes it easy for its customers to deliver suggestions and complaints, through different means. Some customer-centered companies establish customer hot lines with toll-free 800 telephone numbers to maximize the ease with which

customers can inquire, make suggestions, or complain. These information flows provide these companies with many good ideas and enable them to act more rapidly to resolve problems.

Kotler (1997:43) further asserts that studies show that while customers are dissatisfied with one out of every four purchases, less than 5% of dissatisfied customers will complain. Most customers will buy less or switch suppliers rather than complain. Therefore, companies cannot use complaint levels as a measure of customer satisfaction. Responsive companies obtain a direct measure of customer satisfaction by conducting periodic surveys. They send questionnaires or make telephone calls to a random sample of their recent customers and ask if they were very satisfied, satisfied, indifferent, somewhat dissatisfied with various aspects of the company's performance. They also solicit buyers' views on their competitors' performances.

While collecting customer satisfaction data, it is also useful to ask additional questions to measure the customer's *repurchase intention*; this will normally be high if the customer's satisfaction is high. It is also useful to measure the customer's likelihood or willingness to recommend the company and brand to other persons. A high *word-of-mouth score* indicates that the company is producing high customer satisfaction.

The method of ghost shopping (Kotler, 1997: 43) is suggested for measuring satisfaction levels of customers. Companies can hire persons to pose as potential buyers to report their findings on strong and weak points they experienced in buying the company's and competitor's products. These *ghost shoppers* can even pose certain problems to test whether the company's sales personnel handle the situation well. Not only should companies hire ghost shoppers, but managers themselves should leave their office from time to time, enter company and competitor sales situations where they are unknown, and experience firsthand the treatment they receive as "customers". A variant of this is for managers to phone their own company with different questions and complaints to see how the call is handled.

Kotler (1997:43) also suggest that companies should contact customers who have stopped buying or who have switched to another supplier to learn why this happened. Not only is it important to conduct *exit interviews* when customers first stop buying, but also to monitor the *customer loss rate,* which, if increasing, clearly indicates that the company is failing to satisfy its customers

Today's customers face a vast array of product and brand choices, prices, and suppliers. How do companies gauge its ability to satisfy these customers better than its competitors?

### 2.3.2 Customer Satisfaction Index ( CSI)

A measuring tool that is gaining credibility in marketing oriented firms recently is the Customer Satisfaction Index, as developed by Fornell *et al* (1994). Customer Satisfaction Index is a tool used to represent the voice of the customer by translating survey responses into information that companies use to improve quality and customer satisfaction, as well as to help consumers make better decisions. Utililized correctly by a company CSI could have immense benefits to the company's efforts to keep the momentum on giving the company competitive advantage and sustainable growth in its market through retention of loyal customers.

Fornell *et al* (1994), state that the concept of Customer Satisfaction index has been steadily gaining ground as a meaningful marketing strategy tool, at the macro as well as microeconomic levels. The most popular national customer satisfaction indices are the `Sverige Kundbarometer' (since 1989), the `Deutsches Kundenbarometer' (since 1992) and the `American Index of Customer Satisfaction' (ACSI; since 1994). Owing to the similarity of the Swedish and the US approach, the literature review for this report focussed mainly on the American Customer Satisfaction Index literature

Fornell, et al (1994) further explain that what economists and statisticians monitored was not quite in step with how people actually experienced the economy. Most of the measured economy dealt with production, prices and supply. In short, there were lots of measures that referred to the quantity of economic output. Quality, to the extent it was referred to at all, was treated as a residual.

Fornell et.al (2000) pose the question: "How do we know if a company is performing well?" The fact is that we have serious difficulty answering these questions today. It is even more difficult to tell where we are going.

Gorst, Kanji & Wallace (1998) state that one method of measuring customer satisfaction is the structural equation model the methodology developed by Fornell and his team. The structural equation model that Fornell (1992) has developed models customer satisfaction by measuring a number of different aspects that together create an index. The aspects incorporated in the Fornell model are: customer expectations; perceived quality; perceived value; customer satisfaction; customer complaints; customer loyalty. The model is a structural equation model, and as such the analysis of the data is carried out using the partial least squares technique.

The basic premise of the ACSI model is that customer satisfaction has three antecedents: perceived quality, perceived value and customer expectations. Perceived performance, the served market's evaluation of recent consumption experience, is expected to have a direct and positive effect on customer satisfaction. This prediction is intuitive and fundamental to all economic activity. From literature on quality, consumption experience has two primary components, viz. customization, that is, the degree to which the firm's offering is customized to meet heterogeneous customer needs, and reliability, that is, the degree to which the firm's offering is reliable, standardized, and free from deficiencies. Service provided by the firm, through its staff falls into this category.

The second determinant of customer satisfaction according to the ACSI model is perceived value, or the perceived level of product quality relative to the price paid. According to Fornell et.al (1994) the served markets expectations, is the third determinant of overall customer satisfaction. The served market's expectations represent both the served market's prior consumption experience with the firm's offering – including non-experiential information available through sources such as advertising and word of mouth – and a forecast of the supplier's ability to deliver quality in the future.

Fornell et. al. (1994) points out to the fact that the expectation construct is backward and forward – looking. It captures all previous quality experiences and information. Hence it naturally has a direct and positive association with cumulative evaluation of the firm's performance, such as customer satisfaction. At the same time, the served market's expectations at time t, forecast a firm's ability to satisfy its market in future periods.

Anderson, Fornell and Lehmann (2000) further state that this role of expectations is important because the nature of the ongoing relationship between a firm and its customer base is such that expected future quality is critical to overall customer satisfaction. This predictive role of expectations also suggest that it should have a positive effect on overall customer satisfaction. Finally according to Fornell et.al's (1994) ACSI model, customer expectations should be positively related to perceived quality and consequently, to perceived value.

Gorst et.al. (1998) emphasise the importance to note the word 'perceived' in front of both quality and value. It is the customer's perception of both these aspects that is important. If the customer views the quality and value for money as being good, then it is good (Gerson, 1993). After all, a satisfied customer is the least expensive way to generate revenue and profit.

The ACSI model also explains the consequences of customer satisfaction. According to the exit-voice theory of Hirschman (1970), the immediate consequences of increased customer satisfaction are decreased customer complaints and increased customer loyalty (Fornell and Wernerfelt 1987). When dissatisfied, customers have the option of exiting (e.g., going to a competitor) or voicing their complaints in an attempt to receive retribution. An increase in overall customer satisfaction should decrease the incidence of complaints. Increased overall customer satisfaction should also increase customer loyalty.

Loyalty is the ultimate dependent variable in the model because of its value as a proxy for profitability (Reichheld and Sasser (1990). When the relationship is positive, the implication is that the firm is successful in turning complaining customers into loyal customers. When negative, the firm's complaint handling has managed to make a bad situation even worse-it has contributed further to customer defection.

#### 2.3.2.1 Perceived Quality/Performance

Fornell (1994) states that the first determinant of overall customer satisfaction is perceived quality or performance, which is the served market's evaluation of recent consumption experience, and is expected to have a direct and positive effect on overall customer satisfaction. This prediction is intuitive and fundamental to all economic activity. To operationalize the perceived quality construct, we draw on the quality literature to delineate two primary components of consumption experience:

(1) customization, that is, the degree to which the firm's offering is customized to meet heterogeneous customer needs, and
(2) reliability, that is, the degree to which the firm's offering is reliable, standardized, and free from deficiencies.

Gronholdt, L.; Martensen, A.; Kristensen, K. (2000:11: 509) describe perceived quality as conceptually divided into two elements: `hard ware', which consists of the quality of the product/service attributes, and `human ware', which represents the associated customer interactive elements in service, i.e. the personal behaviour and atmosphere of the service environment.

#### 2.3.2.2 Perceived Customer Value

The second determinant of overall customer satisfaction is perceived value, or the perceived level of product quality relative to the price paid.

In defining the construct of value the work of Sawhney, Mohanbir (2003) on customer value was reviewed.

Woodall, T. (2003) states that, the term 'customer value' is used within the marketing literature to portray both what is derived by the customer from the supplier, and also what is derived by the supplier from the customer. The latter property is now referred to as 'customer lifetime value' (CLV), but there is no agreement on a distinct name for the former. Woodall, T. (2003), has chosen the term 'Value for the Customer' (VC) to represent all similarly associated, demand-side notions of value.

Recent investigations imply that VC is of increasing interest to marketers, both practicing and academic. However, although the notion of VC is not new, the marketing literature offers little evidence to imply that anything by way of conceptual consensus exists. It remains, therefore, an area of continuing ambiguity, subject to both empirical and speculative enquiry, but with no clear theoretical anchor.

Bagozzi (1984) suggests that conceptual meaning within theory construction can be allocated in three ways: via attributional definition, via structural definition, and/or through dispositional definition.

Woodall, T. (2003), established that 'value', in the broadest sense, can best be understood by addressing the fields of philosophy and political economy. In the latter, distinct, but associated, ideas of 'use value' and 'exchange value' were found to inform basic embedded assumptions of what, for most of us, value appears to mean.

However, within the realm of philosophy, two key concepts were found that clarify how and why we choose and prioritise available options. Frondizi (1971) examines the role that object qualities play in our decision making actions, and identifies how we seek out particular product/service attributes to bring advantage to our lives. Critical to the search process are human, or personal, values that Rokeach (1973) perceives primarily as motivational and that, ultimately, determine the choices we make. Combined, these ideas allow 'value' to be viewed as an essentially contingent property that can reside, coincidentally, in the subject, the object, and at the point of interaction between the two. Some preliminary understanding of the nature of VC is therefore established.

VC has attracted growing, and latterly intense, speculation, not least because it is now perceived as a key driver of satisfaction and loyalty. The many recent research documents published on this topic, have, ostensibly, addressed a single property, but preliminary investigation revealed that a range of associated, but different, ideas were being offered. Analysis of relevant sources enabled five distinct VC notions to be identified - Net VC (a utilitarian balancing of benefits and sacrifices), Marketing VC (concerned with product attributes alone), Derived VC (outcome related), Sale VC (low price, or reduction of sacrifice) and Rational VC (benefits expressed in units of exchange).

Further evaluation of the same sources identified that VC could be perceived in four distinct temporal forms - E<x-ante< VC (pre-purchase), Transaction VC, <Ex-poste<VC (post-purchase/consumption), and Disposition VC. It was also demonstrated that considerable consensus existed regarding relationships between quality, satisfaction, purchase and loyalty, and a provisional causal model was developed.

Woodall, T. (2003) concluded that value for the customer (VC) is any demand-side, personal perception of advantage arising out of a customer's association with an organisation's offering, and can occur as reduction in sacrifice; presence of benefit (perceived as either attributes or outcomes); the resultant of any weighed combination of sacrifice and benefit (determined and expressed either rationally or intuitively); or an aggregation , over time, of any or all of these.

Sawhney, Mohanbir (2003), sees value as customer-defined. To understand the true nature of value, you need to get inside the minds and hearts of your customers, whether they're internal or external. Value should be defined in terms of return on assets, ROI and net present value, and in terms of shareholder value, inventory turns and customer churn. Suppliers must communicate the value of their products not in terms of what these products do, but what they do for customers, expressed in a language that customers can relate to. An important consequence of value being defined by customers is that it is very difficult to quantify. To quantify value, you need to understand all factors that customers take into consideration in assessing value, and you have to understand the relative importance that customers place on each factor.

According to Sawhney, M. (2003), besides the more common dimension of value, functional value--a product's features and functionality, value has two other dimensions as well: economic value--what these features and functions are worth to customers in terms of time and money; and psychological value-- the emotional benefits that customers get from your products or your company.

Functional value is a starting point, but you need to translate it into economic value. And you need to get beyond the "arms race" of functional differentiation by developing emotional appeals that are far more sustainable than today's latest feature. value is the perceived worth of something in relation to the total cost that customers pay for it. This definition underscores the fact that value is a trade-off between costs and benefits.

Value is contextual. You cannot divorce the value of an IT system from the context in which it will be used. Consider the purchase of a laptop computer. A salesperson that is on the road a lot and needs to communicate constantly with the home office will place great value on portability and connectivity. On the other hand, a design engineer in the same company who uses the laptop for

computer-aided design and works out of the same office every day will value graphics performance and display quality. Unless you understand the end-usage context, you run the risk of creating value propositions and offerings that are irrelevant for customers.

Value is relative. Customers never assess value of an offering in isolation. They always consider value relative to alternatives.

Value is a mind-set. Value-based management is more than models or processes. The value mind-set is grounded in the belief that the sole purpose of a company is to create value for its customers and to be compensated equitably for its efforts. Therefore, everything the company says and does should revolve around its customers--not its products. This is a radical shift in perspective, and few companies truly embrace this idea despite their claims of being customer-focused.

Keegan, Warren J. (1999) states that the first task of marketing is to create customer value that is greater than the value created by competitors.
Value for the customer can be increased by expanding or improving product and/or service benefits, by reducing the price, or by a combination of these elements. Customers will buy from the firm that is perceived to offer the highest customer delivered value, i.e. the difference between total customer value and total customer cost.
The second principle of marketing according to Keegan (1999) is competitive advantage. A competitive advantage is a total offer, vis-à-vis relevant competition that is more attractive to customers. The advantage can exist in any element of the company's offer: the product/service, the price, the advertising and point of sale promotion, and the distribution of the product.
The third great marketing principle, according to Keegan et.al (1999), points out to the need of a clear focus on customer needs and wants and on the competitive offer is needed to mobilise the effort needed to maintain a differential advantage. This can be accomplished only by focusing or concentrating resources and efforts on customer needs and wants and on how to deliver a product /service that will meet those needs and wants.
The sum total of the above three marketing principles as propounded by Keegan et.al (1999), leads to customer satisfaction.

#### 2.3.2.3 Customer Needs and Expectations.

According to, Anderson, Fornell, and Lehmann 1994, the served market's expectations represent both the served market's prior consumption experience with the firm's offering-including non-experiential information available through sources such as advertising and word-of-mouth-and a forecast of the supplier's ability to deliver quality in the future. As such, the expectations construct is both backward- and forward-looking. It captures all previous quality experiences and information from t - I, t - 2, t - m. Hence, it naturally has a direct and positive association with a cumulative evaluation of the firm's performance, such as overall customer satisfaction. At the same time, the served market's expectations at time t forecast a firm's ability to satisfy its market in future periods t + 1, t + 2, ..., t + n. This role of expectations is important because the nature of the ongoing relationship between a firm and its customer base is such that expected future quality is critical to overall customer satisfaction. This predictive role of expectations also suggests that it should have a positive effect on overall customer satisfaction.

Howard (1977), states that customer expectations should be positively related to perceived quality and, consequently, to perceived value. Customer knowledge should be such that expectations accurately mirror current quality. Hence, we expect the served market to have expectations that are largely rational and that reflect customers' ability to learn from experience and predict the levels of quality and value they receive

#### 2.3.2.4 Customer Loyalty

Following Hirschman's (1970) exit-voice theory, the immediate consequences of increased customer satisfaction are decreased customer complaints and increased customer loyalty (Fornell & Wernerfelt, (1988) When dissatisfied, customers have the option of exiting (e.g. going to a competitor) or voicing their complaints. An increase in customer satisfaction should decrease the incidence of complaints. Increased satisfaction should also increase customer loyalty.

The expected end-results of satisfying customers' needs, is customer loyalty. Bolton, (1998) ; Fornell, (1992); Rust et al., (1994), 1995) claim that through increasing loyalty, customer satisfaction secures future revenues, reduces the cost of future transactions, Reichheld & Sasser,

(1990), decreases price elasticities Anderson, (1996), and minimizes the likelihood customers will defect if quality falters Anderson & Sullivan, (1993). .

Anderson, (1998); and Fornell, (1992) observe that word-of mouth from satisfied customers lowers the cost of attracting new customers and enhances the firm's overall reputation, while that of dissatisfied customers naturally has the opposite effect.

However, Gorst., Kanji, & Wallace (1998), see customer satisfaction as a cyclical process which can increase or decrease over time. Each customer service interaction starts with what the customer thinks will happen, or expectations. Over time, as the customer uses the service, this dimension changes title and becomes past experience. How the customer has been treated in the past will affect what he/ she expects to happen on a particular encounter. If expectations have been raised, then the service will have to live up to what being is expected in order to maintain a steady level of customer satisfaction and subsequently loyalty.

Prus, Brandt & Randall (1995), state that, understanding loyalty - what makes customers loyal and how to ensure and understand loyal customers - enables companies to improve customer-driven quality.

Prus et.al. (1995) explain that customer loyalty is not customer satisfaction. Satisfaction is a necessary component of loyal or secure customers. However, the mere quality of being satisfied with a company does not necessarily make customers loyal. Also customer loyalty is not strong market share. Many businesses mistakenly look at their sales numbers and market share and think, they have loyal customers. This may not be true. Many other factors can drive up market share, including poor performance by competitors or pricing issues. And high share doesn't mean low churn (the rate at which existing customers leave you--possibly to patronize your competition--and are replaced by new customers).

Prus et. al further explain that (1995) loyalty can be influenced by type of market an industry is in. In specialty markets where the product is tailored or customized for the customer, loyalty index scores tend to be higher than general or non-customized markets. Also, the type of customers being measured also may influence the loyalty index scores. For example, business-to-business customers may score differently than general consumers.

Finally, the data collection method may influence the customer's response. Researchers have long recognized that the different methods used to collect information, such as live interviews, mail surveys, and telephone interviews, may produce varying results.

### 2.3.3 Customer Retention

Most marketing theory and practice puts emphasis on the art of attracting new customers rather than retaining existing ones

Companies have five different patterns of interaction with customers based on the nature of the relationship (Webster, 1994; Lowenstein, 1997; Reichheld, 1996): (1) acquisition, (2) retention, (3) attrition, (4) defection, and (5) reacquisition. The most well-known and frequently used behavioral patterns are acquisition and retention.

Wright *&* Scott (2002) claim that both of these patterns are positive, the company and the customer both benefiting from meeting each other's needs. Once a customer has been acquired, the company can lose the customer because of a negative experience or the entry of new competitors to the company's market. The customer relationship can never be taken for granted, for experience demonstrates that customer-company relationships can be fragile. Attrition refers to the loss of customers because they become negative about the relationship with the company. If the negative perception is strong enough to motivate the customer to take action, that can lead to defection. Defection refers to a significant drop in the customer's business with the supplier, or total abandonment. Reacquisition refers to the possibility of regaining part or all of the defected customer's business.

The cost of attracting a new customer is estimated to be five times the cost of keeping a current customer happy (Kotler; 1997). It requires a great deal of effort to induce satisfied customers to switch away from their current suppliers.
Evidence strongly suggests that retention is much more important than acquisition and that long-term customer relationship management clearly affects the company's growth and financial results. Reichheld, (1996) notes that a 5-percent reduction in customer defection can result in profit increases from 30 to 85 percent.
Finally, according to Bhote (1996) if companies increase their customer retention by 2 percent,

they cut their operating expenses by 10 percent.

As Reichheld, (1996) states, "Firms that earned superior levels of customer loyalty and retention also earned consistently higher profits-and they grew faster as well"

Strong arguments and evidence support this statement. It costs five to seven times more to find new customers than to retain current ones. Ninety-eight percent of dissatisfied customers never complain-they just switch to other competitors. Totally satisfied customers are six times more likely to purchase again than are merely satisfied customers.

In conclusion it is quite apparent from the views of many authors that there is strong evidence for the link between customer satisfaction and customer loyalty, and between quality/ satisfaction and retention.

### 2.4 The Economic Benefits of a company CSI

Yeung and Ennew (2001) observed that delivering customer satisfaction is at the heart of modern marketing theory. There is growing research evidence of the beneficial effects of customer satisfaction in terms of both behavioural outcomes such as loyalty, and performance outcomes such as profit.

Fornell (2003) contends that off-balance sheet assets have more leverage for financial returns. Things like quality and productivity of employees and strength of customer relationships are often more important than real estate, buildings, and production facilities.

Yeung and Ennew (2001) further stated that the link between satisfaction and performance is simple. Satisfied customers are thought to be more likely to repeat purchase (loyalty) and since loyal customers are thought to be cheaper to service (and less price sensitive) the expected result should be lower costs (and higher revenues) and thus higher profit. Through the effect on costs and revenues (and any additional business created via positive word of mouth) there should be a positive impact on business performance.

Further, studies on the linkage between ACSI and economic returns, as done by the University of Michigan Business School faculty, suggest a positive and significant relationship between ACSI and accounting return-on-assets (Fornell et al., 1995).

There is a positive and significant relationship between the ACSI and the market value of common equity (Ittner & Larcker, 1996).

However, the importance of the loyalty construct in this relationship should not be underestimated and a growing number of researchers suggest that in many cases, satisfaction may be primarily a hygiene factor, with loyalty being a key driving force for financial performance.

While the complexity of the relationship between marketing variables and financial performance must be acknowledged, satisfaction continues to be an important and widely measured outcome for marketing managers and one which is expected to have an impact on profitability via its effects on retention.

Peters and Waterman (1982) attempt to provide some evidence for the financial benefits of delivering to a high level of quality, while Mahajan, Sharama and Netmeyer (1992) explore the impact of quality on financial performance but rely on expert opinion rather than consumer experiences.

Aaker and Jacobson (1994) found evidence for the impact of quality on financial performance even after controlling for a range of other marketing and non-marketing measures.

Anderson, Fornell and Lehman also provide evidence for the positive impact of satisfaction on profits using data from the Swedish Customer Satisfaction Barometer and ROI for the sample firms using both a lagged and a differenced specification.

In contrast, Inner and Larcker (1998) survey of vice presidents of quality for major US firms suggested that only 28 per cent could relate their customer satisfaction measures to accounting returns and only 27 per cent to stock returns.

Both Reichheld and Hofmeyr (1996) have cautioned against too much emphasis on satisfaction, arguing that satisfaction is in some senses a relatively passive state.

Yeung, Ennew (2001) suggest that satisfaction has a significant effect on performance, but the magnitude of that effect is relatively small.

Kothari and Zimmerman (1995) suggest both price and return models should be employed in assessing the value of additional information (such as customer satisfaction in this case).

Yeung, Ennew (2001) conclude by observing that, links between satisfaction and business performance are complex and there is little doubt that customer loyalty (in terms of both attitude and behaviour) plays a key role.

There is a growing body of evidence to suggest that satisfaction alone cannot deliver superior performance and that the influence of the loyalty effect is significant.

Notwithstanding the role of loyalty, there are clear arguments for believing in the existence of a positive relationship between satisfaction and business performance.

It has been shown that both the ACSI (Ittner and Larcker 1996) and its Swedish counterpart (Anderson, Fornell, and Lehmann 1994) have a positive association with return on investment.

In terms of market value, Ittner and Larcker (1996) estimate that a one-unit change in ACSI is associated with a $654 million increase in the market value of equity above and beyond the accounting-book value of assets and liabilities.

Studies by Fornell, Ittner, and Larcker (1995), (1996) show that Stock trading strategies based on either the ACSI or SCSB have delivered portfolio returns well above market returns, also, recent results suggest that the public release of ACSI scores causes a significant stock market reaction-positive market adjusted returns for high-scoring firms and negative adjusted returns for low-scoring firms (Fornell, Ittner, and Larcker 1996).

Motley (2000) has observed that ACSI statistics show that there is a correlation between customer satisfaction and shareholder value. Customers who are happy offer more compliments, have greater loyalty, generate more revenue, bring about lower costs (especially revenue acquisition costs) and, as a result of the combination of these positives, produce greater profits. The greater

profits, and the greater speed with which they grow, translate into high stock prices and, therefore, greater shareholder value.

Despite the growing body of academic evidence to support the beneficial effect of customer satisfaction on firm performance a number of researchers have begun to question the value of customer satisfaction per se.

To a large degree, these concerns have arisen from empirical observations that suggest that the proposed benefits of both quality and satisfaction have failed to materialise. The subsequent failure of many of Peter's and Waterman's 'excellent' companies is well known.

Jones and Sasser (1996) commented on the propensity of satisfied customers to defect while Reichheld (1996) introduces the concept of the satisfaction trap in which he notes that car manufacturers in the USA consistently report high levels of customer satisfaction (in excess of 90 per cent) and yet observe low levels of repurchase (30-40 per cent).

However, studies by Reichheld, (1996); Lowenstein, (1997) indicates that notwithstanding the above, focusing on customer satisfaction has not been very encouraging or rewarding. For example, in a study with top managers of 200 of America's largest companies, while 90 percent had an ongoing process for measuring and improving customer satisfaction, fewer than 30 percent felt confident that economic value had been realized as a consequence of their higher satisfaction scores (Juran Institute, 1995).

The consulting firm Bain and Company found that, among customers who defected to other brands or services, 65 to 85 percent were "satisfied" or "very satisfied" with their previous supplier.

Reichheld (1996) further states that between 15 to 40 percent of customers who say they are satisfied defect from a company each year. Therefore, customer satisfaction is only marginally related to customer chum and/or turnover.

Lowenstein (1997) concludes, "Customer satisfaction can no longer be considered an operating paradigm, and American business has discovered that customer retention, and the generation of optimal customer loyalty and value, are far more tangible and desirable goals"

Reichheld's research points out the economic impact that customers have on the financial results of the firm. Companies with measured customer satisfaction levels as high as 90 percent can experience more than 20 percent turnover in their customer accounts.

# CHAPTER 3 RESEARCH QUESTIONS

In assessing the satisfaction levels of Sasol Gas customers, 4 subsidiary questions were asked:

**3.1 What is Sasol Gas customers' perception of quality performance?**

**3.2 What is the perception held by customers, of the value derived from using Sasol Gas?**

**3.3 What are customers' needs and expectations of Sasol Gas?**

**3.4 What are the loyalty levels of customers towards Sasol Gas?**

**GENERAL BACKGROUND INFORMATION**

Background exploration section was included in the questionnaire, to cover questions pertaining to the customer's attitudes towards, safety of product and equipment and also the customers' readiness for the product change to natural gas.

# CHAPTER 4 RESEARCH METHODOLOGY

## 4.1 Introduction:

In this section the methodology to be employed in measuring satisfaction levels of customers with Sasol Gas is presented. Both quantitative as well as qualitative paradigms were considered. The qualitative paradigm was chosen considering exploratory nature of the problem, no existing theory, and unknown variables.

The sampling, research instrument, data collection and analysis are discussed below.

## 4.2 Research Instrument

The questionnaire shown in Appendix 1 was developed after discussion with Sasol Gas' Sales and Marketing staff. After consulting literature on customer satisfaction index, the questions in the questionnaire were arranged according to the antecedents and consequences of customer satisfaction as propounded in the American Customer Satisfaction Index model ( see Appendix 2) namely, perceived performance, perceived value, customer needs/ expectations followed by customer loyalty. The satisfaction consequence of customer complaint frequency was not included in the questionnaire, since Sasol Gas has no formal system of complaint data management.

Following Sudman, Bradburn, and Schwarz (1996) assumption that the first questions are more easily and more accurately performed than responses to later questions, the more quantitative questions, addressing perceptions of quality and value were stated first, in the questionnaire.

### 4.2.1 Questionnaire design

The questionnaire was designed to cover the satisfaction antecedents and consequences of customer satisfaction as per the ACSI viz; perceived performance, perceived value, and customer needs/ expectations as in line with the ACSI model. In this study, the consequences were limited to customer loyalty only since Sasol Gas does not have a formal complaints management system to study the complaints component of the consequences.

- **Research question 1 : What is Sasol Gas customers' perception of quality performance?**

This question covered the customer's perception of the service quality Sasol Gas personnel delivered. Customers' evaluation of perceived quality was defined and measured as evaluation of attribute performance (Churchill and Surprenant 1982; Oliver 1997) associated with, communication of company and responsiveness of personnel. The quality of the product was not an issue discussed here since it was felt that the customers were all unanimously in agreement, about the superior quality of Sasol gas, the product.

- **Research Question 2: What is the perception held by customers, of the value derived from using Sasol Gas?**

The question addressed customers' perceptions of the value derived considering the price paid for the gas - economic value - as well as the value derived from the service delivered by Sasol - the psychological value.

- **Research Question 3: What are customers' needs and expectations of Sasol Gas?**

Direct questions on, aspects of gas equipment safety, future expansion prospects of customers business that may lead to demand of more gas from Sasol, competitor offerings, and any underlying needs the customers seemed to have, were asked.

- **Research Question 4: What are the loyalty levels of customers towards Sasol Gas?**
  The question addressed the customer satisfaction consequence of customer loyalty. The assessment of customers' propensity to churn to other energy suppliers is done here. The most likely alternative source of energy customers might convert to is assessed.
- **General Background Information:**

The last part of the questionnaire, was used to gather background information on various aspects and concerns of Sasol Gas customers. This presented Sasol Gas with an opportunity to find out more about the Sasol Gas' customers was taken by including in the questionnaire.

### 4.3 Sample Population

All Sasol Gas pipeline gas customers were considered in the population of the study. Sasol Gas' pricing mechanism is volume based. This means that the customers are categorized in accordance with their product volume consumption. This obviously introduces a factor of discrimination in price. The unit of energy used is the GigaJoule ( $10^9$ Joules). The customer segmentation is according to the customer's annual consumption of gas. The different categories are:

V 1 – 0 GJ to 5000 GJ per annum

V2 customers - 5001GJ – 15000GJ per annum

V3 category – 15001GJ – 40000GJ per annum

V4 category: 40001GJ – 100000GJ per annum

V5 category: 100001GJ – 400000GJ per annum

Contract Customers – Customers whose pricing mechanism is negotiated with company. These are mostly customers whose consumption volumes are above 400000GJ per annum, and those whose price is related to the national Producer Price Index (PPI).

### 4.4 Sample size

All Sasol Gas customers in Gauteng and KwaZulu Natal were targeted. 152 Responses were returned .

### 4.5 Data Collection methods

Respondents were identified from the Sasol Gas data base, and were contacted by telephone to explain the purpose of the research. The questionnaire was disseminated to customers through the Internet, electronic mail and by fax respectively as applicable to the customers' communication resources.

### 4.6 Data Analysis

Since the data is of nominal and ordinal nature the chi-square test statistical method is considered relevant in analyzing the data.

No other statistical analysis was performed on the results. The frequency of each theme of significance was recorded, to inform the researcher of its importance across the responses.

# CHAPTER 5 RESEARCH RESULTS

## 5.1 Introduction

This chapter tabulates where appropriate, the responses of the survey questionnaire. Due to the exploratory nature of the study both qualitative and quantitative analysis are applied. Where statistical analysis could be done a chi-squared test was found to be the appropriate statistical analytical method.

## 5.2 Research Question 1: What is Sasol Gas customers' perception of quality performance?

Customers' evaluation of perceived quality was defined and measured as evaluation of attribute performance (Churchill and Surprenant 1982; Oliver 1997) associated with the company's communication and responsiveness towards customers.

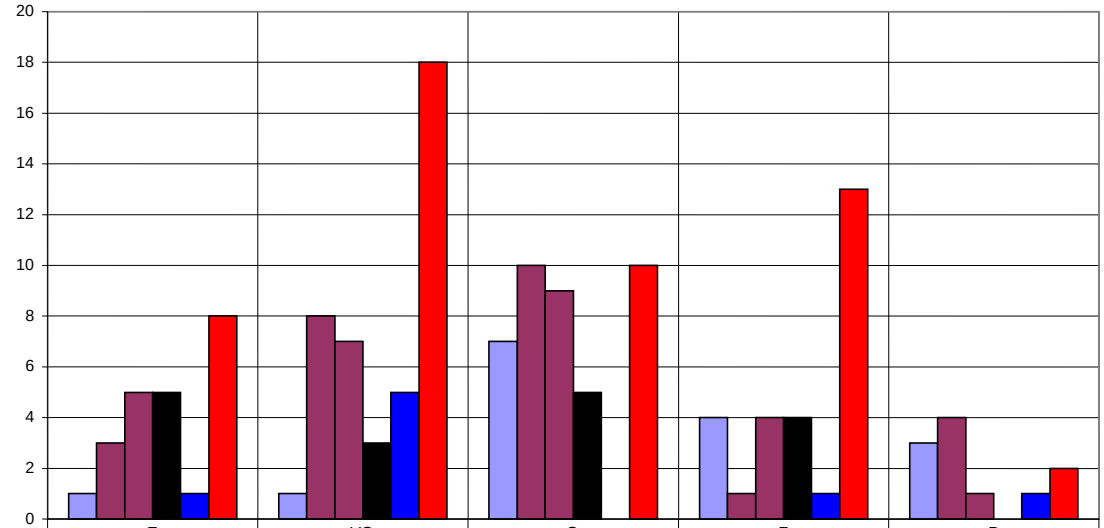
The quality of the product supplied by Sasol Gas, is undoubtedly the best to all customers. This fact was taken into consideration and as a result the perception of product quality was not tested for in the questionnaire.

The performance attribute, communication of Sasol Gas personnel in the Marketing and Sales, Management, Credit Control and the Maintenance department was assessed, on a 5-point likert scale ranging from excellent (E), very good(vg), good(G), fair(F) to poor(P).

Responses are tabulated in Table 1 of Appendix 2.

### 5.2.1 Question: 1

How are the communication channels between you and Sasol Gas?

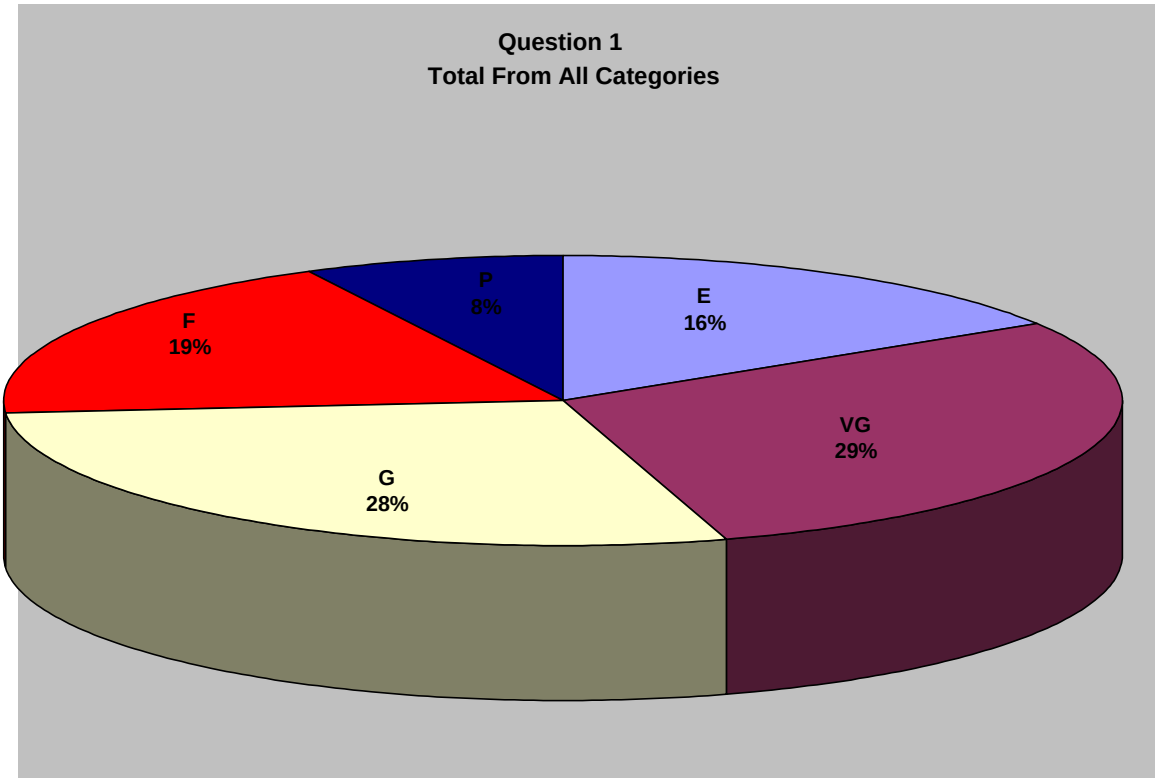



| | E | VG | G | F | P |
|---|---|---|---|---|---|
| V1 | 1 | 1 | 7 | 4 | 3 |
| V2 | 3 | 8 | 10 | 1 | 4 |
| V3 | 5 | 7 | 9 | 4 | 1 |
| V4 | 5 | 3 | 5 | 4 | 0 |
| V5 | 1 | 5 | 0 | 1 | 1 |
| Contr. | 8 | 18 | 10 | 13 | 2 |

- Results on this question are interesting in that a cursory inspection of the graph above shows the relative dissatisfaction of the V1 and V2 category customers compared to Contracts customers.

Below is a pie –chart representation of the results.

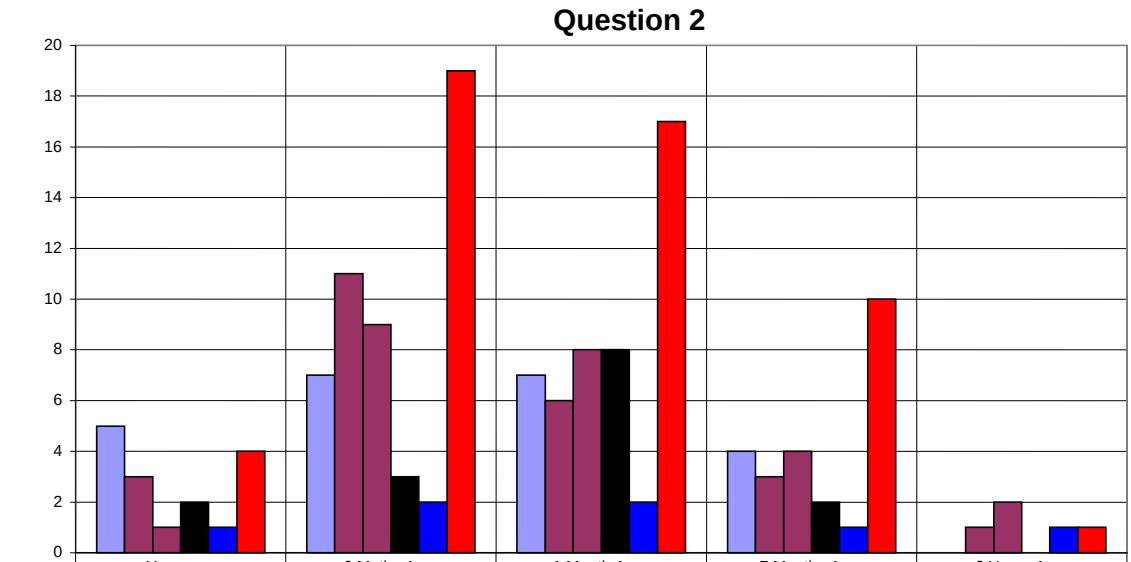
How are the communication channels between you and Sasol Gas?




- As an index of customer satisfaction as regards communication, a weighted index gives a percentage index of 63.4%. Clearly with reference to the discussion in literature review section this is a relatively poor result.

### 5.2.2 Question 2:

**When was the last time you were contacted by Sasol Gas?**

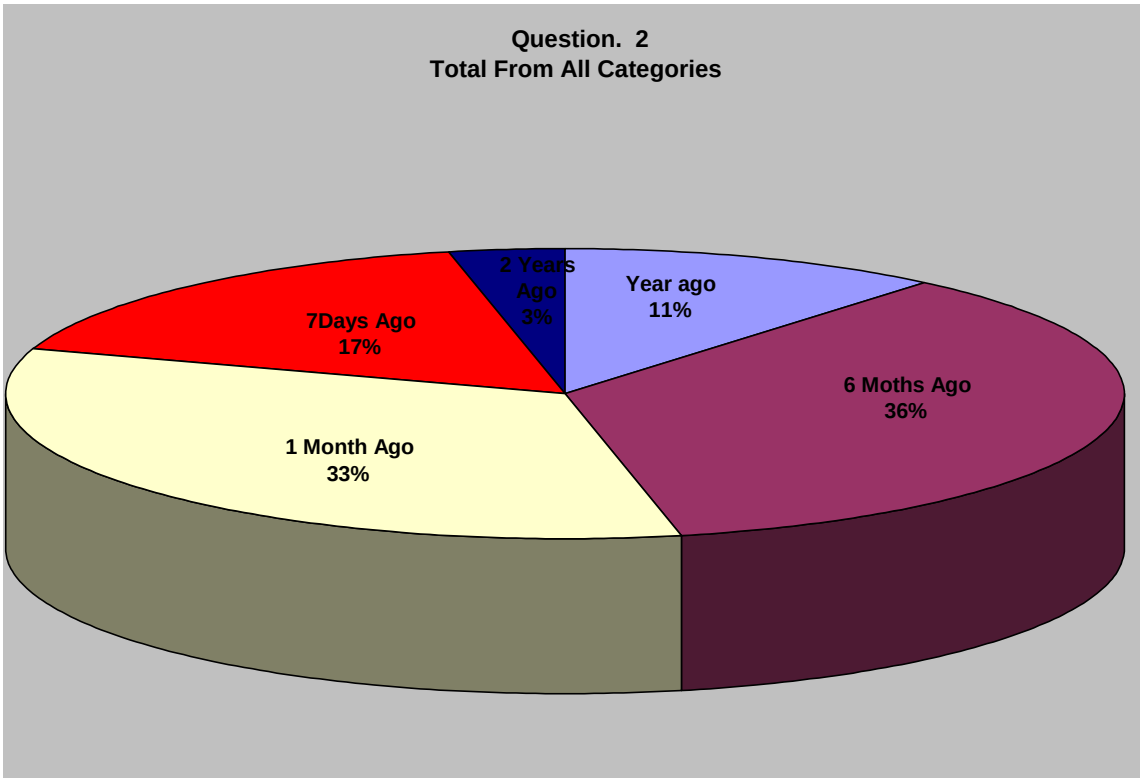



| | Year ago | 6 Moths Ago | 1 Month Ago | 7 Months Ago | 2 Years Ago |
|---|---|---|---|---|---|
| V1 | 5 | 7 | 7 | 4 | 0 |
| V2 | 3 | 11 | 6 | 3 | 1 |
| V3 | 1 | 9 | 8 | 4 | 2 |
| V4 | 2 | 3 | 8 | 2 | 0 |
| V5 | 1 | 2 | 2 | 1 | 1 |
| Contr. | 4 | 19 | 17 | 10 | 1 |

- From the graph contract customers seem to have been contacted quite frequently as compared to the other categories.
- V5 category customers have had less contact in more recent times with the company.

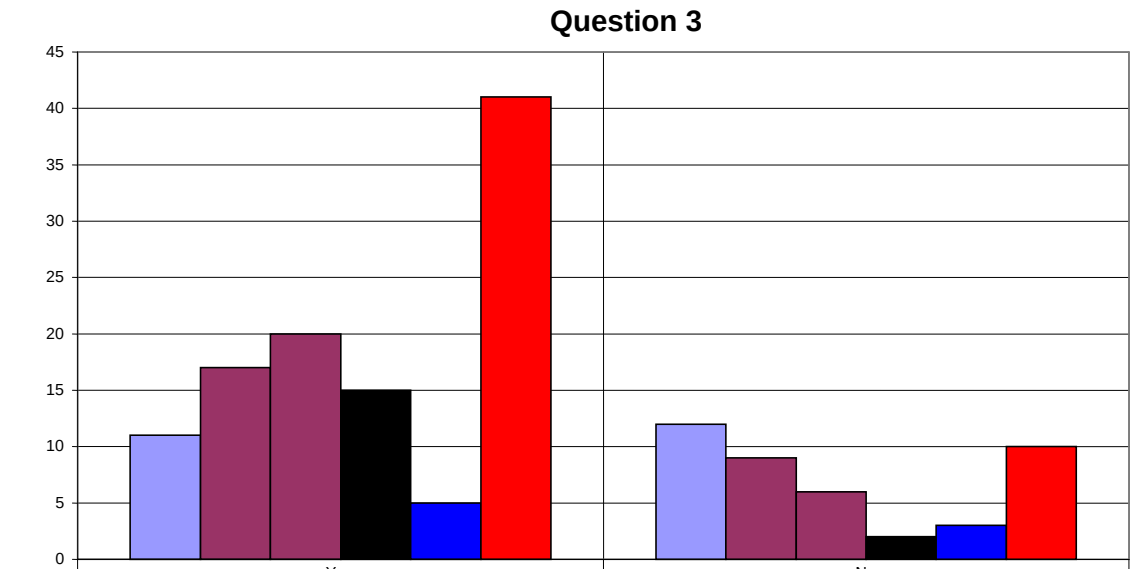
- The pie chart below shows the results of the total responses from all respondents.

**When was the last time you were contacted by Sasol Gas?**



### 5.2.3 Question 3:

**Are you satisfied with the personal interaction with the Energy Advisor, Maintenance, Credit Control, and Management ?**

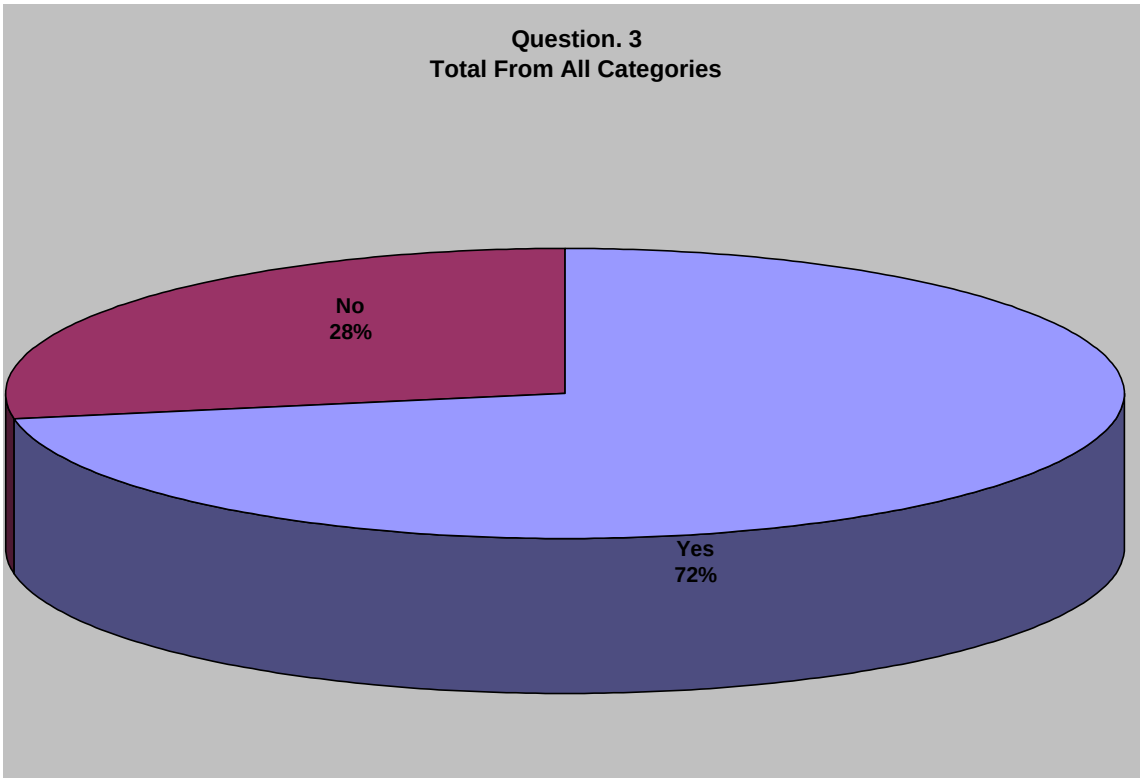



| | Yes | No |
|---|---|---|
| V1 | 11 | 12 |
| V2 | 17 | 9 |
| V3 | 20 | 6 |
| V4 | 15 | 2 |
| V5 | 5 | 3 |
| Contr. | 41 | 10 |

- Chi-square statistic was done for this question and there was a significant difference at the 0.005 level between the different categories of customers.
- Inspection of the graph shows that the contract customers are responsible for the difference in that they are significantly more satisfied than the other categories.
- It is also interesting to note that the percentage results for V1 and V5 customer categories are very similar on this question.

Below is the pie- chart representation of results for this question.

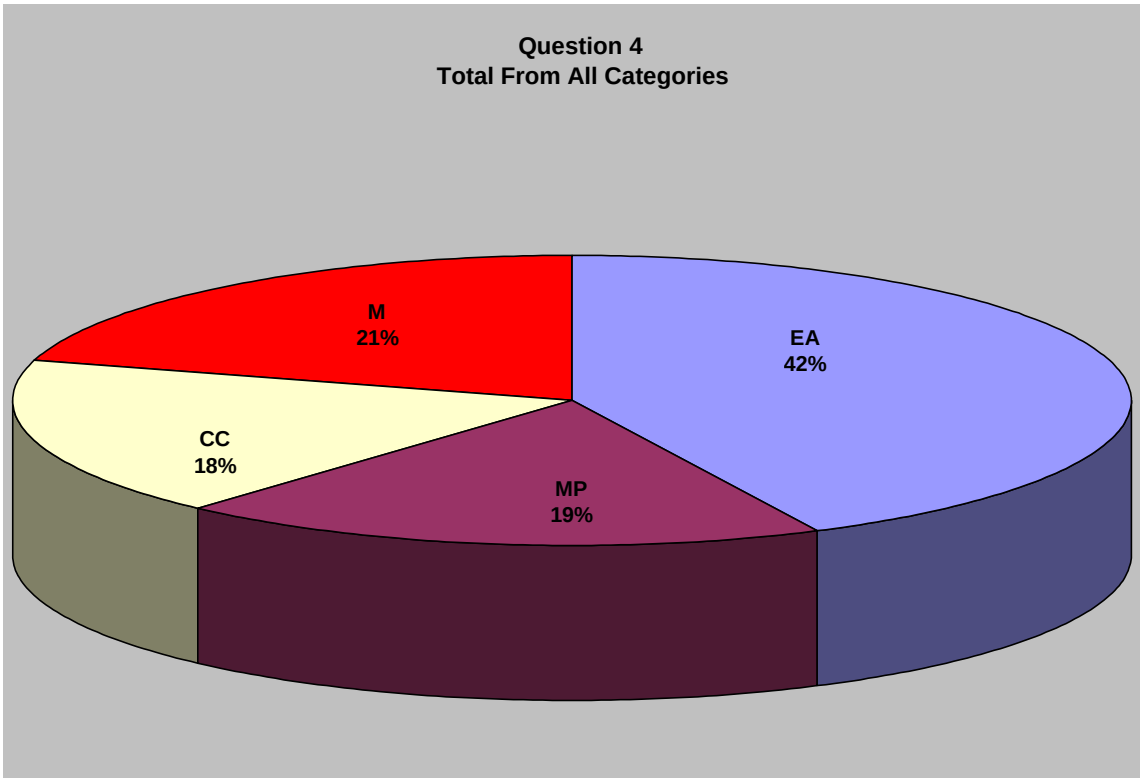
**Are you satisfied with the personal interaction with the Energy Advisor, Maintenance, Credit Control, and Management ?**




- Overall 72% of respondents indicate to be satisfied with interaction with Sasol Gas personnel involved with their accounts.
- This leaves 28% of customers who are not satisfied with responsiveness of Sasol Gas personnel.

### 5.2.4 Question 4:

**If "no" please indicate the one you are not satisfied with.**




- Overall, 42% of the customers seem not to be satisfied with their interactions with Sasol Gas Energy Advisors. Energy Advisors have to defend each and every decision taken by Sasol Gas which might be perceived to affect the customers negatively. This highlights the importance of the Energy Advisor in the supply value chain.
- 21% of customers have displayed their unhappiness with interactions with Sasol Gas seior management staff.
- Credit control staff are perceived negatively by 18% of customers
- Lastly 19% of customers were not satisfied with maintenance personnel's responsiveness to their queries.

### 5.2.5 Question 5:

**Please state why you were not satisfied?**

| Sasol Gas Personnel | Reason for dissatisfaction | %age |
|---|---|---|
| | | |
| Energy Advisor | No visit/contact; insufficient explanation of pricing mechanism; poor response to queries. | 42% |
| Credit Control | Indifferent service; No response to communication; no empathy on cash- flow situation of customer; invoices not timeous. | 18% |
| Maintenance | Not visible; no interaction; no feedback on incidents. | 19% |
| Management | Not visible at all; No response to pricing mechanism queries. | 21% |

## 5.3 RESEARCH QUESTION 2:

**What is the perception held by customers, of the value derived from using Sasol Gas?**

The respondents were asked to indicate their overall feelings toward the value for money they derive using the product and value for money for the services rendered by Sasol Gas. A 2-point semantic scale anchored by Yes or No was used. Customers who stated No were then asked to explain the reason for their dissatisfaction.

### 5.3.1 Question 6:

**Do you get value for your money?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 1 | 1 | 4 | - | - | - | 6 | - |
| Yes | 12 | 13 | 9 | 8 | 1 | 40 | 83 | 56.9 |
| *No | 12 | 13 | 13 | 9 | 6 | 10 | 63 | 43.1 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

- Inspection of the results suggested that there are two major deviations from the total results.
- The Contract customers were clearly more positive in their responses than the other categories of customers. A chi-square test result of $X^2 = \sum (f_o - f_e)^2 / f_e = 19.22$ indicate a significant difference at the 0.005 level between (V1-V5) customers and Contract customers exists. This confirms the original perception that the contract customers are significantly more satisfied than the other customers.
- Secondly V5 category customers were clearly more negative than the other customers in their responses. A chi-square test result of, $X^2 = \sum (f_o - f_e)^2 / f_e = 3.2$, obtained. The results indicate a significant difference at the 0.1 level between V5 category customers and (V1-V4) customers.

### 5.3.2 Question 7:

**If "no", what price level would present value for money?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | Percentage |
|---|---|---|---|---|---|---|---|---|
| No responses | 14 | 15 | 13 | 8 | 1 | 40 | 81 | 0 |
| Price increase related issues | - | - | - | - | 1 | 10 | 11 | 15.5 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Local CPI/PPI not R/$** | **-** | **3** | **1** | **2** | **-** | **-** | **6** | **8.5** |
| **Non fluctuating /stable price** | **-** | **-** | **1** | **-** | **-** | **-** | **1** | **1.4** |
| **Based on alternative source price e.g electricity, coal** | **3** | **3** | **1** | **-** | **1** | **-** | **8** | **11.3** |
| ***Other** | **8** | **6** | **10** | **7** | **4** | **-** | **35** | **49.3** |
| | **25** | **27** | **26** | **17** | **7** | **50** | **152** | **100** |

Observations:

- Excepting for category V5, a large number (81%), of customers did not respond to this question.
- Of those who responded, 15.5% registered their unhappiness with the high Sasol Gas pricing mechanism increases.
- 11.3% of those who responded indicated their prices should be linked to their real alternative energy source. This was quite apparent in the V1 and V2 categories, which are generally enduring the higher side of the pricing mechanism.
- 8.5% of respondents would like to see prices linked to local CPI or PPI changes rather than the crude oil and R/$ employed in the current pricing mechanism.
- Other – a potpourri of customers' suggestions of price levels related to their individual businesses.

### 5.3.3 Question 8:

**Do you get value for your money concerning services rendered?**

| Themes | V1 | V2 | V3 | V4 | V5 | Total | %age of responses |
|---|---|---|---|---|---|---|---|
| No responses | - | - | 3 | - | 1 | 4 | 3.9 |
| Yes | 17 | 23 | 18 | 15 | 4 | 77 | 75.5 |
| *No | 8 | 4 | 5 | 2 | 2 | 21 | 20.6 |
| Total | 25 | 27 | 26 | 17 | 7 | 102 | 100 |

- No significant differences were found across all categories in this question.

Respondents probably could not distinguish the difference between this question and Question 6

### 5.3.4 Question 9:

**If "no", please state why?**

| Themes | V1 | V2 | V3 | V4 | V5 | *Contractors | Total | %age of respondents |
|---|---|---|---|---|---|---|---|---|
| No responses | 19 | 23 | 20 | 15 | 5 | - | 82 | 0 |
| No contact with Sasol personnel | 2 | 2 | - | - | - | - | 4 | 20 |
| Technical advice | 1 | - | - | - | - | - | 1 | 5 |
| Maintenance staff related issues | 1 | - | - | - | 1 | - | 2 | 10 |
| No service provided | 2 | 1 | 2 | - | - | - | 5 | 25 |
| *Other | - | 1 | 4 | 2 | 1 | - | 8 | 40 |
| | 25 | 27 | 26 | 17 | 7 | - | 102 | 100 |

*** Question not included in contract customers' questionnaire**

Observations:

- Again a high number of customers in all categories did not respond to the question. This indicates a positive response to Question 8 and thus no need to respond.
- A significant number of respondents (25%) from the V1 and V2 and V3 categories feel ignored by Sasol personnel and do not see any service provided by Sasol to them at all.
- Again, individual customer themes related to their individual businesses were recorded in Others.

## 5.4 RESEARCH QUESTION 3: What are customers' needs and expectations of Sasol Gas?

### 5.4.1 Question 10:

**Do you need assistance for the safe use of gas in your plant?**

Responses based on individual customer categories from V1 to Contract customers are summarized below.

- V1 = 32% (5.3% overall)
- V2 = 42% ( 7.3% overall)
- V3 = 57 7% ( 10% overall)
- V4 = 41% (4.7% overall)
- V5 = 14.3% ( 0.7% overall)
- Contract = 36% ( 11.8% overall)

From the above responses it is clear that a significant number of customers, 39.8% of total respondents, feel the need for safety training in use of gas.

### 5.4.2 Question 11:

**What are the future prospects for your plant?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | - | 7 | 4 | - | - | 8 | 19 | - |
| Growth an Expansion | 17 | 13 | 16 | 14 | 5 | 28 | 93 | 69.9 |
| No growth | 4 | 3 | 1 | 1 | - | - | 9 | 6.8 |
| Converting to alternative | 3 | 1 | - | - | - | - | 4 | 3.0 |
| Maintain current position | 1 | 3 | 1 | 1 | 1 | 4 | 11 | 8.3 |
| *Other | - | - | 4 | 1 | 1 | 10 | 16 | 12.0 |
| | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

Observations:

- Growth and expansion is the main theme in most respondents' (69.9%)
- About 8% of respondents are to maintain the businesses as they are.
- About 3% of respondents indicate churning to an alternative energy source.
- "Other" is again a mixed theme of individual companies' prospects.

### 5.4.3 Question 12:

**What are the major factors that have an impact on your business?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 1 | 4 | 4 | - | - | 4 | 13 | 0 |
| Cost | 19 | 11 | 11 | 10 | 5 | 22 | 78 | 56,0 |
| Availability/Reliability | - | 2 | - | - | 1 | 9 | 12 | 8.6 |
| Safety/Environmental | - | - | 1 | - | 1 | 6 | 8 | 5.8 |
| Ease of use/Quality of gas | - | - | - | - | - | 6 | 6 | 4.3 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Labour/ Raw materials** | **4** | **2** | **4** | **2** | **-** | **-** | **12** | **8.6** |
| **Exchange rate** | **1** | **--** | **-** | **-** | **-** | **-** | **1** | **0.07** |
| **Consumer spending** | **-** | **2** | **2** | **1** | **-** | **-** | **5** | **3.6** |
| **Other** | **-** | **6** | **4** | **4** | **-** | **3** | **17** | **12.2** |
| | **25** | **27** | **26** | **17** | **7** | **50** | **152** | **100** |

Observations:

- Cost (56%) is the major factor to most customers, especially in the V1 (76%) and V5 (71%) category customers.
- Reliability and availability of supply, raw materials and labour also play a significant role in the customers' business.

### 5.4.4 Question 13:

**What do you see our competitors doing that you would like Sasol Gas to do better?**

| **Themes** | **V1** | **V2** | **V3** | **V4** | **V5** | **Contractors** | **Total** | **%age of responses** |
|---|---|---|---|---|---|---|---|---|
| **No responses** | **4** | **12** | **9** | **2** | **2** | **11** | **40** | **0** |
| **Price adjustments** | **3** | **3** | **6** | **6** | **3** | **12** | **33** | **29.5** |
| **Technical visits/Communication** | **4** | **3** | **2** | **1** | **1** | **10** | **21** | **18.8** |
| **Sasol has no competitor/Monopoly** | **-** | **3** | **3** | **2** | **-** | **2** | **10** | **8.9** |
| **Relations with SMME** | **7** | **2** | **-** | **-** | **-** | **-** | **9** | **8.0** |
| **No comment** | **6** | **4** | **5** | **5** | **1** | **14** | **35** | **31.3** |
| **Other** | **1** | **-** | **1** | **1** | **-** | **1** | **4** | **3.6** |
| | **25** | **27** | **26** | **17** | **7** | **50** | **152** | **100** |

Observation:

- Price adjustment at 29.5% is the main theme that separates Sasol from its competitors

according to the customers that responded to the question.

- Technical visits, advise and communication with Sasol personnel is indicated as being important by 18.8% of the total respondents to the question.
- A large number of customers (31.3%) chose not to comment on this theme. Probably because of having had no personal experience with Sasol's competitors in this industry. This could be qualified by the emerging theme viewing Sasol as a monopoly (8.9%).

### 5.4.5 Question 14:

**What service do you require that we do not provide?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 7 | 9 | 10 | 3 | 4 | 14 | 47 | 0 |
| None/Nil | 12 | 9 | 8 | 8 | 1 | 21 | 59 | 56.2 |
| Technical assistance / advice | 6 | 8 | 4 | 6 | 1 | 14 | 39 | 37.1 |
| Cost savings | - | - | 3 | - | - | 1 | 4 | 3.8 |
| Safety Training | - | 1 | - | - | - | - | 1 | 1.0 |
| *Other | - | - | 1 | - | 1 | - | 2 | 1.9 |
| | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

Observations:

- Other - Supply of forklift fuel (LPG); Sasol should display more flexibility
- 56% of respondents did not have any additional service requirements that Sasol should provide them with.
- A significant number of respondents, 37.1% sight technical assistance and advice as an imminent need in their plants.

### 5.4.6 Question 15:

**What is your biggest concern regarding the conversion to natural gas?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 2 | 2 | 1 | - | 1 | 7 | 13 | 0 |
| None/Nil | 5 | 4 | 4 | 6 | 1 | 8 | 28 | 20.1 |
| Downtime | 9 | - | 10 | 3 | 2 | 21 | 45 | 32.4 |
| Price / cost | 5 | 12 | 5 | 3 | 2 | 4 | 31 | 22.3 |
| Quality of natural gas | 1 | 4 | 3 | 2 | 1 | 3 | 14 | 10.1 |
| Equipment modification | 1 | 4 | 3 | 3 | - | 3 | 14 | 10.1 |
| Safety of new product | 1 | - | - | - | - | - | 1 | 0.7 |
| *Other | 1 | 1 | - | - | | 4 | 6 | 4.3 |
| | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

Observation:

- A significant number of customers have concerns about downtime (32.4%), increase in price of gas (22.3%).
- 20.1% of respondents are happy wit the way things are being handled by Sasol Gas and have no reason to be concerned.
- Quality of the new gas as well as equipment modifications, are concerns to some customers at 10.1% each, especially in the V2, V3 and V4 categories.
- Other concerns were communication and or not being informed about the conversion by Sasol Gas.

## 5.5 RESEARCH QUESTION 4: What are the loyalty levels of customers towards Sasol Gas?

Bloemer and Kasper (1995); Jacoby and Chestnut (1978) assert that the most common assessments of loyalty are behavioral frequency or repurchase patterns. The behavioral measure is also in accordance with Jacoby and Chestnut's (1978) formal definition of loyalty as a behavioral response expressed over time.

### 5.5.1 Question 16:

**Will you recommend Sasol Gas to other industrial energy users?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | - | 1 | - | - | - | 1 | 2 | 0 |
| *Yes | 14 | 21 | 19 | 13 | 5 | 46 | 118 | 78.7 |
| No | 11 | 5 | 7 | 4 | 2 | 3 | 32 | 21.3 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

*** The "yes" responses indicate an expression of loyalty to Sasol Gas in this instance.**

The question seeks to determine the appropriateness of gas as a source of energy, and the willingness of customers to recommend Sasol gas to other energy users. A loyalty index score of 78.7% across the categories was found for this question. Given the fact that Sasol gas is environmentally friendly, and has better combustion properties than other energy sources, the score is reasonably higher, although lower than would have been preferred. Given a strong enough incentive like a competitive price and assistance in converting their gas equipment to another alternative source, customers would certainly churn.

### 5.5.2 Question 17:

**Are you considering converting to an alternative energy source?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | - | 2 | 1 | - | - | 1 | 4 | 0 |
| Yes | 10 | 9 | 12 | 7 | 2 | 9 | 49 | 33.1 |
| *No | 15 | 16 | 13 | 10 | 5 | 40 | 99 | 66.9 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

*** The "no" responses indicate an expression of loyalty to Sasol Gas in this instance.**

This is a test to determine the propensity of customers to churn to another energy source supplier.

The loyalty index score was calculated and found to be 66.9%.

This should ring warning bells to Sasol Gas, since it shows that given a viable alternative supplier, 33.4% of Sasol Gas customers will change to another supplier.

### 5.5.3 Question 18:

**What are your perceptions of Sasol Gas?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | - | 5 | 4 | 1 | 2 | 6 | 18 | 0 |
| Positive | 10 | 11 | 9 | 10 | - | 23 | 63 | 47.0 |
| None | - | 1 | 1 | - | - | - | 2 | 1.5 |
| Overpriced | 5 | 2 | 7 | 3 | 2 | 7 | 26 | 19.4 |
| Communication | 6 | - | - | - | - | 1 | 7 | 5.2 |
| Monopolistic | 3 | 8 | 3 | 3 | 3 | 12 | 32 | 23.9 |
| Other | 1 | - | 2 | - | - | 1 | 4 | 3.0 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

Observations:

- A significant number of customers (23.9%) perceive Sasol Gas as a monopoly.
- 19.4% of respondents perceive Sasol gas as an overpriced commodity.

## 5.6 GENERAL BACKGROUND EXPLORATION

Background exploration section was included in the questionnaire, to cover questions pertaining to the customer's attitudes towards, safety of product and equipment and also the customers' readiness for the product change to natural gas.

### 5.6.1 Question 19:

**Are you aware of your obligations in terms of the different Acts e.g. Vessel under pressure acts?**

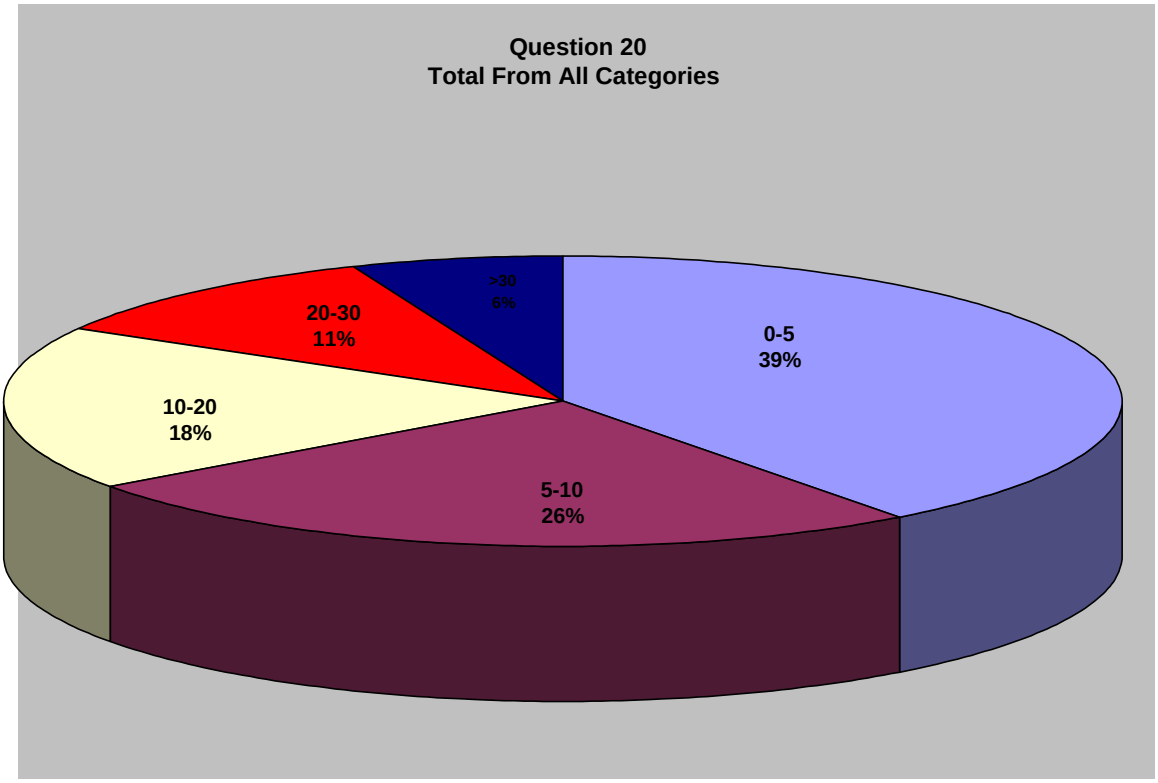
| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| Yes | 16 | 25 | 22 | 16 | 7 | 44 | 130 | 85.5 |
| No | 9 | 2 | 4 | 1 | - | 6 | 22 | 14.5 |
| No responses | - | - | - | - | - | - | - | - |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

Observations:

- A large number of customers, 85.5%, seem to be aware of the different Acts ruling their equipment utilization.
- However a significant number of customers, 14.5%, still need assistance with familiarization of the pertinent Acts.

### 5.6.2 Question 20:

**What is the percentage gas costs related to your total input costs?**




Observation:

- Gas cost as a percentage of input cost is between 0 - 5% to 39% of the respondents in all categories.
- 26% of respondents experience gas to be 5 – 10% of input costs.
- 18% of respondents in all categories experience gas to be 10 – 20% of input costs.
- 11% of respondents in all categories experience a gas cost that is 20 -30% of all input costs.
- 6% of all respondents experience gas cost to be greater than 30% of their total input costs.

### 5.6.3 Question 21:

**If pipeline gas was not available, what alternative energy source would you have used?**

| | V1 | V2 | V3 | V4 | V5 | Contracts | Total |
|---|---|---|---|---|---|---|---|
| **Electricity** | 19 | 21 | 20 | 7 | 5 | 36 | 108 |
| **HFO** | 2 | 6 | 3 | 9 | 4 | 10 | 34 |
| **LFO** | 5 | 2 | 1 | 3 | 1 | 4 | 16 |
| **LPG** | 4 | 4 | 5 | 1 | 1 | 12 | 27 |
| **Coal** | 2 | 1 | 1 | 3 | 3 | 10 | 20 |
| **Diesel** | 8 | 3 | 1 | 2 | 1 | 4 | 19 |
| **Waste oil** | 5 | 0 | 1 | 1 | 2 | 0 | 9 |
| **Illuminating Paraffin** | 2 | 2 | 2 | 3 | 1 | 0 | 10 |
| **Total** | 47 | 39 | 34 | 29 | 18 | 76 | 243 |

Observations:

Since most respondents chose more than one alternative energy source, a comprehensive statistical observation could not be made. But observance of the data collected indicated that:

- Clearly electricity seems to be the energy source that threatens Sasol gas in all of the categories.
- LPG is also viewed as a possible substitute of Sasol gas, especially in the V1, V2, V3 and Contracts categories.
- Coal is significantly strong in the V4 (18%), V5 (43%) and Contracts (20%) categories.

### 5.6.4 Question 22:

**Which alternative energy source would you have used?**

| | V1 | V2 | V3 | V4 | V5 | Contracts | Total |
|---|---|---|---|---|---|---|---|
| Electricity | 6 | 4 | 7 | 3 | 1 | 5 | 26 |
| HFO | 1 | - | 1 | - | 1 | 1 | 4 |
| LFO | 1 | - | - | - | - | - | 1 |
| LPG | - | - | 1 | 1 | - | 1 | 3 |
| Coal | 1 | - | - | 2 | - | 2 | 5 |
| Diesel | 2 | - | - | - | - | - | 2 |
| Waste oil | 1 | 2 | 1 | 1 | - | - | 5 |
| Illuminating Paraffin | 1 | 1 | 1 | - | - | - | 3 |
| No responses | 16 | 20 | 16 | 11 | 5 | 42 | 110 |

Observation:

Since most respondents chose more than one alternative energy source, a comprehensive statistical observation could not be made. But observance of the data collected indicated that:

- Electricity is clearly the choice alternative energy source to gas in all the categories.

### 5.6.5 Question 23:

**Are you aware of the future conversion of your plant from Hydrogen rich gas to natural gas?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| Yes | 19 | 24 | 25 | 16 | 6 | 43 | 133 | 90.5 |
| No | 6 | 3 | 1 | 1 | 1 | 2 | 14 | 9.5 |
| No responses | - | - | - | - | - | 5 | 5 | 0 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

Observations:

- A large number of respondents are aware of the forthcoming conversion to natural gas.
- However a significant number (9.5%) of respondents seem to be unaware.

### 5.6.6 Question 24:

**Any other comments you would like to make which were not covered by this survey?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contractors | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| **No responses** | **11** | **16** | **12** | **8** | **5** | **20** | **72** | **0** |
| **No comment** | **11** | **6** | **9** | **5** | **2** | **18** | **51** | **63.8** |
| **Price and related issues** | **1** | **3** | **3** | **2** | **-** | **6** | **15** | **18.8** |
| **Communication** | **1** | **1** | **1** | **-** | **-** | **1** | **4** | **5.0** |
| ***Other** | **1** | **1** | **1** | **2** | **-** | **5** | **10** | **12.5** |
| **Total:** | **25** | **27** | **26** | **17** | **7** | **50** | **152** | **100** |

Observations:

- About 64% of respondents had no further comment to make.
- Price and related issues of account payment dates were sighted as final comments by a significant number (18.8%) of respondents.
- Other: - Your staff try harder; Safety training; Central depot for combustion equipment; Value added expansion; changing to alternative source.

# CHAPTER 6 DISCUSSION OF RESULTS

The objective of this study was to assess the satisfaction levels of Sasol Gas customers. The American Customer Satisfaction Index model, see Appendix 2, of measuring the antecedents of customer satisfaction of namely, customers', perception of performance, perception of value, and customers' expectations of Sasol Gas, as well as the satisfaction consequence construct of loyalty, was used in the study.

This chapter discusses the results of the survey as reported in the chapter 5, and an attempt to interpret the implications thereof is made in this chapter. The form of discussion will be in accordance to responses to the research questions posed in chapter 3, and trends observed in the various categories, as reported in chapter 5 will be interpreted accordingly. The discussion will also make references to any issues relating to the literature reviewed in chapter 2.

## 6.1 Research Question 1: What is Sasol Gas customers' perception of quality performance?

Gronholdt, L.; Martensen, A.; Kristensen, K. (2000 :11: 509) describe perceived quality as conceptually divided into two elements: `hard ware', which consists of the quality of the product/service attributes, and `human ware', which represents the associated customer interactive elements in service, i.e. the personal behaviour and atmosphere of the service environment. There is general consensus among the whole spectrum of Sasol Gas customers, that the quality of the "hard ware", pipeline gas in this case, is unquestionably of the best standard. Thus the survey did not try to measure satisfaction with the quality of the gas as this was assumed to be a "given" in all categories, but the attribute of "human ware" as described by Gronholdt et al ( 2000 ) was tested.

Thus in this question the quality of performance of Sasol Gas was measured by evaluating the performance attributes (Churchill and Surprenant 1982; Oliver 1997), associated with communication and responsiveness of the company.

The results shown in Table 1 chapter 5, show that the satisfaction levels of customers with Sasol Gas' communication are relatively poor. A satisfaction score of 64. % was calculated. This score is

not in line with the expectations of the American Customer Satisfaction Index of ratings of good companies in most industries.

The next dimension of quality performance assessed in the study was responsiveness of Sasol Gas personnel to customers' queries. The results as tabulated in chapter 5, show that the Energy advisors are perceived to be less popular with the customers across all categories.

However this comes as no surprise in an environment where the Energy Advisors interact mostly face to face with customers. Information pertaining to all aspects of a customer's account, "good" or "bad" is mostly imparted by the Energy Advisors to the customer.

The conclusion to be made from the question is that the customers feel marginalized by Sasol Gas and would have preferred a much closer partnership in their businesses by Sasol.

## 6.2 Research Question 2: What is the perception held by customers, of the value derived from using Sasol Gas?

Value is the perceived worth of something in relation to the total cost that customers pay for it. This definition underscores the fact that value is a trade-off between costs and benefits.

According to Sawhney, M. (2003), besides the more common dimension of value, functional value, a product's features and functionality, value has two other dimensions as well: economic value-what these features and functions are worth to customers in terms of time and money; and psychological value- the emotional benefits that customers get from your products or your company. Functional value is a starting point, but you need to translate it into economic value.
Sasol Gas customers' perception of the economic value, as inquired by the questions "Do you get value for money?" and the psychological value, "Do you get value for your money concerning services rendered?" in question 6 and 8 of chapter 5 was tested here.

The responses clearly show that customers place a lot of weight on economic value. The responses show very little indication if at all, of the customers responding to the psychological value of the question.

For Sasol Gas customers, functional value, as referring to the quality of the product is a given and without any doubt all customers are satisfied with the gas as supplied by Sasol Gas.

The question, "**Do you get value for your money"?,** addresses the economic value dimension aspect. Inspection of the results suggested that there are two major deviations from the total results, namely:

- The Contract customers were clearly more positive in their responses than the other categories of customers.

Contract customers of Sasol Gas are those customers that have negotiated contracts with Sasol Gas. The contracts customers' pricing mechanism differ from other customers' volume based mechanism, in that the price is fixed for a period of 1 year, and has an escalation clause attached to the Producer Price Index as supplied by Statistics South Africa.

This fact provides the customers in this category with the benefit of having stable low prices for a year, as opposed to the fluctuating nature of the volume based mechanism ruling the other customers' gas prices. The customers in this category derive both economic as well as psychological value from Sasol Gas. Economic value in that their prices are usually lower than the higher market related prices on the volume based mechanism. Stability of the price for a period of 1 year bodes well with most customers since it makes budgeting easier. This surely diminishes the emotional aspect of running the business and thus provides psychological value to the customers. This supports the findings of Sawhney, M. (2003).

The second noticeable deviation observed from the results, is that the V 5 customers scored very low on the value antecedent. This is contrary to expectations, since the Sasol Gas pricing mechanism is volume based, and one would expect customers within this category to be satisfied with the economic value derived from Sasol Gas.

Clearly, here although not apparent from the themes captured on this question, the V5 customers are displaying that, although they may be satisfied with the functional and economic value derived from the product, they have reservations as to the psychological dimension of value as mentioned by Sawhney, M. (2003), which deals with the "human-ware" aspect as described by Gronholdt et al

( 2000 ), in their relationship with Sasol Gas. However a close look at the categories' responses to question 3, shows that just over 70% of the respondents in this category displayed a positive attitude with the Sasol Gas personnel. One can only come to the conclusion that this deviation by V5 customers could be attributed to the fact that customers in this category are appealing to the emotional side of the company in order to obtain a further lower price on their already better price. Another display of the psychological value as propounded by Sawhney, M. (2003).

Although a large number of respondents were satisfied with the value of the product, clearly there is a significant number that felt they were not getting value for their money. Themes identified here are listed in Tables 6, 7, 8 and 9 of Appendix 2.

### 6.3 Research Question 3: What are customers' needs and expectations of Sasol Gas?

The third research question was an attempt to unearth the most prominent needs or expectations of customers of Sasol Gas.

Howard (1977), states that customer expectations should be positively related to perceived quality and, consequently, to perceived value.

In order to reveal customers latent needs, on issues of critical importance to the continuity of Sasol Gas' business, customers were prompted by direct questions pertaining to safety, growth or expansion, competitor offerings, services required, and customers' attitude toward the new product, natural gas , that Sasol was to introduce to replace the synthetic Hydrogen rich gas currently being supplied. These aspects are of paramount importance to the future success of Sasol Gas in supplying natural gas to the Industrial sector.

Expansion plans of customers plants requiring pipeline gas, is of importance to Sasol Gas since it allows the company to plan its future strategy of growth.

Themes from the responses of customers across the categories display significant needs of Sasol Gas customers pertaining to safety and cost of product.

As said before the quality of the product is regarded by all and sundry as being the best. Customer knowledge should be such that expectations accurately mirror current quality. Hence, we expect

the served market to have expectations that are largely rational and that reflect customers' ability to learn from experience and predict the levels of quality and value they receive.

- Safety:

From the responses to question 10, it is clear that a significant number of customers, 39.8% of total respondents, feel the need for safety training in use of gas.

Failure to comply with the safety handling of customer's equipment might result in damages that could put the equipment out of commission for some time if not permanently. This would mean loss of business for Sasol Gas.

- Growth and expansion is the main theme in most respondents' (69.9%). This creates an opportunity for Sasol Gas to align its marketing strategy to cater for the future demand that will be brought about by the growth in their customers business.
- On technical needs we observed that, a significant number of respondents, 37.1% sight technical assistance and advice as an imminent need in their plants.

- The issue of knowing its competitors is of critical importance to any business. It is through the eyes of customers that a clear picture of who the direct competitors to Sasol Gas are. Electricity was the most sighted alternative energy source to most of the Sasol Gas customers. It was interesting to note that, a significant number of customers (31.3%) chose not to comment on this theme. We can only conclude that this was because of having had no personal experience with Sasol's competitors in this industry.

### 6.4 Research Question 4: What are the loyalty levels of customers towards Sasol Gas?

The expected end-results of satisfying customers' needs, is customer loyalty. Bolton, (1998) ; Fornell, (1992); Rust et al., (1994), 1995) claim that through increasing loyalty, customer satisfaction secures future revenues, reduces the cost of future transactions, Reichheld & Sasser, (1990), decreases price elasticities Anderson, (1996), and minimizes the likelihood customers will defect if quality falters Anderson & Sullivan, (1993). .

Responses to loyalty questions in this survey, indicate that a significant number of customers, 78.7%, are willing to recommend Sasol gas to other industrial users. According to observations of Anderson, (1998); and Fornell, (1992), word-of mouth from satisfied customers lowers the cost of attracting new customers and enhances the firm's overall reputation, while that of dissatisfied customers naturally has the opposite effect. In this regard Sasol Gas customers are showing loyalty to the product and the company.

Also 66.9% of customers indicate, from the study that they are not willing to convert to another energy source. Although this could be conclude as a show of loyalty to the company, the number of customers indicating willingness to churn is very significant, 33.1%, and should not be ignored.

Lastly Sasol Gas customers' perception of the company, 47%, should be a big concern. The perception of the company as a monopoly is very strong, 23.9%, among customers, and Sasol Gas could do itself a favour by trying to eliminate this perception which stems from the old apartheid days.

## 6.5 GENERAL BACKGROUND EXPLORATION

For the sake of completion, the scope of the study was extended to include a quick check of customers' background information that could prove useful to the company. The questions which were posed covered among others, aspects of customers' sophistications as far as gas knowledge of the safe and compliance of a customer to the various statutory acts pertaining to the safety of their gas equipment, the percentage of gas cost as a total of customers' input costs, customers alternative energy source in the absence of gas.

Here Sasol Gas unearthed valuable information relating to which energy source alternative suppliers could be a competitive threat, and also establish the reasonableness of customers' dissatisfaction with the price of Sasol gas.

A large number of customers, 85.5%, seem to be aware of the different Acts ruling their equipment utilization. A significant number of customers 14.5%, however, still need assistance with familiarization of the pertinent Acts.

A significant number of customers seem to have gas costs as 0 -20% of their total input costs. This

fact should enable Sasol to look closely at those customers that have valid complaints and reassess their pricing structure.

Clearly electricity seems to be the energy source that threatens Sasol gas in all of the categories. LPG is also viewed as a possible substitute of Sasol gas, especially in the V1, V2, V3 and special contracts categories. Coal is significantly strong in the V4 (18%), V5 (43%) and Contracts (20%) categories.

# CHAPTER 7 CONCLUSION

## 7.1 Introduction

This being an exploratory survey, Sasol Gas hopes to identify the pertinent factors to consider when it develops a baseline customer satisfaction index.

Further research is to be undertaken once a questionnaire in line with the ACSI model, based on customer antecedent i.e. expectations of customers (before and after), perceived value and perceived quality. The questionnaire will also include the consequences of satisfaction i.e. complaints and loyalty, as explained in the ACSI model.

It is then hoped that results fro the company CSI will be used for continuous improvement of customer relations at Sasol Gas.
The ultimate aim is to convert most customers from just being satisfied with the offering of Sasol Gas, to loyal customers. The company should then be in a position to retain most of its customers when deregulation is effected in future.

## 7.2 Recommendations:

The ultimate purpose of the study is to increase customer retention, through stimulation of customer loyalty. The following recommendations based on the results of the survey are proposed:

### 7.2.1 Perceived Performance

From the themes stated by customers as the main source of dissatisfaction Sasol would do well to start addressing the issue of communicating more often with the customers, keeping a satisfactory visit schedule by Energy Advisors and Management. Credit control issues should preferably be communicated via the Energy Advisors. Customers should be encouraged to take part in discussions of the industry.

### 7.2.2 Perceived Value

Clearly responses from customers indicate that a great number of them put emphasis on economic value more than the psychological value. Low cost of energy is still regarded by customers as a driver for choosing an energy supplier. Sasol is still perceived to be a monopoly and thus able to command high prices for their product in the absence of competition.

Sasol Gas pricing mechanism is clearly not acceptable to most customers. In response to this perception, Sasol could do well to ensure that their pricing mechanism, which is line with international gas pricing mechanisms, is well understood by customers. Emphasis on the emotional value of the product should be communicated to customers at every opportunity. This can be achieved by Sasol Gas organizing frequent customer forums where the global economic trends in natural gas are disseminated to customers.

The benefits of the use of natural gas should also be communicated at customers to balance their economic value perspective with a psychological value perspective.

### 7.2.3 Customer Expectations

The themes from the responses indicated issues of safety, growth and expansion , technical assistance as paramount needs of Sasol Gas customers.

Sasol Gas is very much geared up to address these issues to the satisfaction of customers. Sasol should leverage its technical and safety features to customers' satisfaction. Safety seminars blending some technical advise on efficient usage of gas should be scheduled regularly for all customers.

### 7.2.4 Customer Loyalty

Responses to loyalty questions in this survey, indicate that a significant number of customers, 78.7%, are willing to recommend Sasol gas to other industrial users.

Also 66.9% of customers indicate, from the study that they are not willing to convert to another energy source. Although this could be concluded as a show of loyalty to the company, the number of customers indicating willingness to churn is very significant, 33.1%, and should not be ignored.

The perception of the company as a monopoly is very strong, 23.9%, among customers, and Sasol Gas could do itself a favour by trying to eliminate this perception which stems from the old apartheid days.

### 7.2.5 General Background Exploration

This section of the study revealed that

- Electricity is clearly the choice alternative energy source to gas in all the categories.
- A large number of respondents are aware of the forthcoming conversion to natural gas, although a significant number (9.5%) of respondents seemed to be unaware.
- About 64% of respondents had no further comment to make.
- Price and related issues of account payment dates were sighted as final comments by a significant number (18.8%) of respondents.

## 7.3 Further Research

It is the intention of the author of this report that the end result of this study should encourage Sasol Gas to create a baseline customer satisfaction index (CSI) which will be in line with the ACSI model. As such, any firm's CSI provides a leading indicator of the firm's future financial health. By establishing a standard measure of quality with clear links to long-term performance, CSI may even help instill more of a long-term perspective in both management and investors.

Since this study was of an exploratory nature, and thus more qualitative than quantitative, it is the author's opinion that a questionnaire that is more quantitative and in line with the antecedents and consequences of satisfaction as in line with ACSI model should be designed for Sasol Gas as further work. This questionnaire should be exploded to include more competitors in the energy sector.

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# APPENDIX A:

**Questionnaire**

**A. Perceived Quality of Performance.**

Customers' evaluation of perceived quality was defined and measured as evaluation of attribute performance (Churchill and Surprenant 1982; Oliver 1997) associated with communication and customer contact.

1 How are the communication channels between you and Sasol Gas?

2 When was the last time you were contacted by Sasol Gas?

3 Are you Satisfied with the personal interaction with:

   a. Energy Advisor,

   b. Maintenance,

   c. Credit Control, and

   d. Management?

4 If no (to the above), please indicate the one you are not satisfied with?

5 Please state why you were not satisfied?

**B. Perceived Value**

**6** Do you get value for your money concerning price?

**7** If no, what price level would present value for money?

8 Do you get value for your money concerning services rendered?

9 If no, please state why?

**C. Customer Needs / Expectations**

**10** Do you need assistance for the safe use of gas in your plant?

**11** What are the future prospects for your plant?

**12** What are the major factors that have an impact on your business – understanding hidden needs.

**13** What do you sees our competitors doing that you would like Sasol Gas to do better?

**14** What service do you require that we do not provide?

**15** What is your biggest concern regarding the conversion to natural gas?

## D. Customer Loyalty

16 Will you recommend Sasol Gas to other industrial energy users?

17 Are you considering converting to an alternative energy source?

18 What are your perceptions of Sasol Gas?

## E. Background Information

19 Are you aware of your obligations in terms of the different Acts e.g. Vessel under pressure acts?

20 What is the percentage gas costs related to your total input costs?

a. 0 – 5%
b. 5 – 10%
c. 10 – 20%
d. 20 – 30%
e. >30%

21 If pipeline gas was not available, what alternative energy source would you have used?

22 If yes, which one?

23 Are you aware of the future conversion of your plant from Hydrogen rich gas to natural gas?

24 Any other comment you would like to make which is not covered by this survey?

## Appendix: 2

## List of Tables:

**Table 1: How are the communication channels between you and Sasol Gas?**

| | Question 1 | | | | |
|---|---|---|---|---|---|
| | E | VG | G | F | P |
| **V1** | 1 | 1 | 7 | 4 | 3 |
| **V2** | 3 | 8 | 10 | 1 | 4 |
| **V3** | 5 | 7 | 9 | 4 | 1 |
| **V4** | 5 | 3 | 5 | 4 | 0 |
| **V5** | 1 | 5 | 0 | 1 | 1 |
| **Contr** | 8 | 18 | 10 | 13 | 2 |
| **Total** | 23 | 42 | 41 | 27 | 11 |

**Table 2: When was the last time you were contacted by Sasol Gas?**

| | Question 2 | | | | |
|---|---|---|---|---|---|
| | Year ago | 6 Moths Ago | 1 Month Ago | 7Days Ago | 2 Years Ago |
| **V1** | 5 | 7 | 7 | 4 | 0 |
| **V2** | 3 | 11 | 6 | 3 | 1 |
| **V3** | 1 | 9 | 8 | 4 | 2 |
| **V4** | 2 | 3 | 8 | 2 | 0 |
| **V5** | 1 | 2 | 2 | 1 | 1 |
| **Contr** | 4 | 19 | 17 | 10 | 1 |
| **Total** | 16 | 51 | 48 | 24 | 5 |

**Table 3:**

### 5.4.7 Question 3:

**Are you satisfied with the personal interaction with the Energy Advisor, Maintenance, Credit Control, and Management?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 2 | 1 | - | - | - | - | 3 | - |
| Yes | 11 | 17 | 20 | 15 | 5 | 40 | 108 | 72.5 |
| *No | 12 | 9 | 6 | 2 | 2 | 10 | 41 | 27.5 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

**Table 4:**

### 5.4.8 Question 4:

**If "no" please indicate the one you are not satisfied with.**

| | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | - | - | - | - | - | - | | - |
| Energy Advisor | 10 | 5 | 4 | 2 | 1 | 7 | 29 | 40.9 |
| Maintenance Personnel | 3 | 4 | 2 | - | 1 | 3 | 13 | 18.3 |
| Credit Control | 4 | 3 | 3 | 0 | 2 | 3 | 15 | 21.1 |
| Management | 4 | 4 | 1 | 0 | 2 | 3 | 14 | 19.7 |
| Total | 21 | 16 | 10 | 2 | 6 | 16 | 71 | 100 |
| | | | | | | | | |

**Table 5:**

**Please state why you were not satisfied**.

| Sasol Gas Personnel | Reason for dissatisfaction | %age |
|---|---|---|
| | | |
| Energy Advisor | No visit/contact; insufficient explanation of pricing mechanism; poor response to queries. | 42% |
| Credit Control | Indifferent service; No response to communication; no empathy on cash- flow situation of customer; invoices not timeous. | 18% |
| Maintenance | Not visible; no interaction; no feedback on incidents. | 19% |
| Management | Not visible at all; No response to pricing mechanism queries. | 21% |

**Table 6:**

### 5.4.9 Question 6: Do you get value for your money?

| Themes | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 2 | 1 | 3 | - | - | - | 6 | - |
| Yes | 11 | 12 | 10 | 8 | 1 | 40 | 82 | 56.2 |
| *No | 12 | 14 | 13 | 9 | 6 | 10 | 64 | 43.8 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |
| | | | | | | | | |

**Table 7:**

**If "no", what price level would present value for money?**

| Volume Category | Expected Price level | %age of total. |
|---|---|---|
| | | |
| V 1 | Reduce by 30%; Ridiculous for price to have increased by 25% per annum; Should pay less for gas; Change to higher category where consumption has increased to next category; base price of gas on coal price. | 8% |
| V 2 | Use electricity price; comparative fuel pricing; pricing mechanism has caused a sharp increase in gas price; at least 3% of input cost; South African based prices; pricing mechanism not based on R/$ exchange rate and international oil prices; Remove import parity. | 8.7% |
| V 3 | Price not linked to overseas prices; Price matching electricity price; decrease price of gas by 11%;R55 – R60/GJ; A stable price for budgeting purposes – not monopolistically dictated price. | 8.7% |
| V 4 | 25% Less; Experienced 30% increase in price over 9 months is ridiculous; Presently @R44/GJ – feel R30 –R35/GJ is more realistic compared to electricity; Local CPI; use Rand not $/R;based on PPI; coal price. | 6% |
| V 5 | R30 –R35/GJ; Electricity alternative or R25/GJ; South African based pricing structure; R80/GJ; Cost has more than doubled in last year. | 4% |
| Contractors | Gas too expensive; cost of gas increased out of proportion; high cost of gas affects competitiveness; Remove import cost parity; Monopolistic – use of "bully tactics"; cheaper to use electricity; | 6.7% |

**Conclusion:**

**The majority of respondents in categories V2 to contracts customers have indicated a price**

**level attached to electricity price should be acceptable.**

**Table 8:**

### 5.4.10 QUESTION 8:

**Do you get value for your money concerning services rendered?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 2 | 1 | 2 | - | - | 0 | 5 | - |
| Yes | 16 | 22 | 19 | 15 | 6 | 0 | 78 | 80.4 |
| *No | 7 | 4 | 5 | 2 | 1 | 0 | 19 | 19.6 |
| Total | 25 | 27 | 26 | 17 | 7 | 0 | 102 | 100 |
| | | | | | | | | |

**Table 9:**

**If "no", please state why?**

| Volume Category | Value considering services rendered | %age of total. |
|---|---|---|
| | | |
| V 1 | No services; no personal contact with Sasol Gas; Need technical assistance with burner optimization; Never hear or see Sasol personnel; Maintenance personnel do not keep to schedule; leading to downtime. | 8% |
| V 2 | No contact from Sasol; Gas price increase too high compared to our product price; No communication with Sasol Gas for at least 6 months; What service? No service. | 4% |
| V 3 | Not utilised; No services rendered; Substandard service from Energy Advisor, however good service from Maintenance; Indifferent(1); | 4% |
| V 4 | Virtually no after sales service etc; No service given. | 2% |

| | | |
|---|---|---|
| V 5 | Sasol should pass part of the benefits they enjoy from their privileged position in the market to their industrial customers; No follow up. | 2% |
| Contractors | This Question was not included in the contract customer's questionnaire. | |

Table 11:

What are the future prospects for your plant?

| Volume Category | Future Prospects Responses |
|---|---|
| | |
| V 1 | Good; Growth over the next 5 years; Expansion and new equipment to be commissioned; Prospects for using gas in future are weak; Reasonable; Converting to electricity; Unchanged. |
| V 2 | Reduction in gas usage; Increase volumes per hour output; Nothing now – maintaining existing business; Becoming more efficient; "Excellent. Hard to keep up with customer requirements"; Planning upgrades and higher production; Growth; Uncertain; Changing some equipment to electricity; Expansion in progress; Improved efficiency to reduce gas consumption; Excellent prospects. |
| V 3 | Constant expansion to fulfill production needs; Expansion in future; Larger boilers; Good but limited growth; New heat Treatment plant; To double gas volumes in 2 to 3 year, through acquisition of additional new Thermopaks; None; Hoping to expand 15% per annum; Expanding into new markets and product lines, equipment being upgraded; Expansion of 3 furnaces ( electrical). |
| V 4 | Good; Possible to expand by 20%, but not in near future; Demand to decline slightly; Increasing capacity to maximum; Expansion; Brilliant; Expansion relating to 10 – 15% capacity increase; ±40% growth at present site this to double at new location. Maintain current; 5% growth to attain 100% plant capacity; Production to increase 10 – 20%; Stable ±10% growth per annum; Feasibility study undertaken to increase capacity by up to 30%; Move away from gas. |

| | |
|---|---|
| **V 5** | **Expand and upgrade; constant growth; Growth; Recommissioning redundant gas firing kiln in Gauteng/ Vereeniging; Possible export opportunities; To continue minimizing costs and improve environmental processes; Static market. "No fireworks".** |
| **Contractors** | **This Question was not included in the contract customer's questionnaire.** |

**Table 12:**

**What are the major factors that have an impact on your business?**

| Volume Category | Major factors having an impact on business | |
|---|---|---|
| | | |
| **V 1** | **Expansion/ contraction in Engineering trade; Price cash-flow; $/R exchange; Steel prices; Labour costs and unrest; Untimely price increases; Raw materials; Input costs; Source of raw material.** | |
| **V 2** | **Economic climate in RSA; Rent and gas price; Gas price; Raw material and energy costs; Dependent on building industry; Consumer spending on food and product choice; Gas supply failure; Economic activity mainly in steel and mineral processing business; Costs; Supplier's prices; Metal prices; Price of Zinc; Mining demand; Economic growth rate; Energy and labour costs; Overseas Motor car sales markets; Quality, efficiency and technology.** | |
| **V 3** | **Prices; Environmental issues; Opening up of export market in foundries and steel plants; Gas and electricity interruptions; Cost of fuel; Demand; None; Raw material price increases; Imports; Mining economy; Rising gas costs; $/R exchange rate.** | |
| **V 4** | **Gas market pricing; Energy costs; Scrap and labour costs; Seasonality of product; $/R exchange rate, and massive gas** | |

| | | |
|---|---|---|
| | **price hikes; Product quality & competitiveness on international markets; Own technology innovation; Electricity supply; Crime, rising food & gas prices; Demand & ore supply; Raw material availability.** | |
| **V 5** | **Costs; Market based pricing; Productivity; LME exchange prices; Environmental issues and imported inflation; Availability and quality of energy supply; $/R exchange rate; Energy prices and activities in the building industry; Cost and delivery time.** | |
| **Contractors** | **Quality and price; Cost & pollution; Cost; Speed of response in process; Temperature, clean & constant availability; Ease of use, safety, consistency and cost; Cost & practicality; Reliability and efficiency; availability and effectiveness; Constant availability; Price; Cost and availability; Stable and reliable; Cost, safety, maintenance, cost and convenience; Gas distributor's business depends entirely on supply from Sasol Gas; Consistency of product, hardware suppliers and expertise i.e. burner and control instruments; Ease of handling, safety, environmental issues; availability, price & service; Greenhouse gases; Payback; Types of raw material available i.e. optimum yield. Cost of energy i.e. efficiencies.** | |

**Table13:**

**What do you see our competitors doing that you would like Sasol Gas to do better?**

| Volume Category | Competitor's offerings | %age response within category. |
|---|---|---|
| | | |
| V 1 | Technical services; None; Provide YTD usage stats; Not applicable; Improved service and play active role in our business; Treat us like VALUED customers; Evaluate the price of gas; Help the small companies; Eliminate unfair price disparity between big users and SMMEs; Decrease price; Think big but act small ( enterprise culture); Communicate more about the better use of gas relating to price savings or utilization of equipment; Better relations with smaller businesses, help us grow; Delivering more, cost effective; Improve communication with small size business; Quicker response on enquiries and complaints. | 84% |
| V 2 | Nothing much; The statutory demands on gas fired burners are just a lot more demanding than electrode steam generators; No comment; To be competitive in price; What competitors?; Providing safety inspections of the vessels under pressure and advising on maintenance requirements; Cost incentives; None; Communicate; Better communication; stable pricing; cost incentives; Work closely with your small business & help them grow. | 52% |
| V 3 | Sasol representative to see Safety Officer when visiting plant; No real competitors regarding piped gas; Not applicable; None; Higher BTU; Seriously look at gas price; Nothing; Communicate more – good and bad things; Supply cheaper product; Understanding how competitive you have to be to survive in today's market; Industrial survey and advise on cost reduction; Electricity prices fixed for 12 months; No comment. | 4% |

| | | |
|---|---|---|
| **V 4** | **None; Pricing; More stable prices; Did not know you had competitors; Pricing policy needs to be revised and more competitive; Very little competitors in the market available; Nothing; Supply Oxygen and be involved in the process of each plant as in Europe; N/A; Cannot think of anything; Eskom provide an advisory service which has led to dramatic reduction in electrical energy cost at our company; They are more like a partner than merely a supplier; Nothing except that it is very expensive, the related COP/GJ is dramatically lower than price asked for the product.** | **88.2%** |
| **V 5** | **Control price increases – below CPI and PPI; Communicate; In terms of overseas benchmarking – Aggressive real term price competitiveness; Do not Know.** | **71.4%** |
| **Contractors** | **Advise on gas savings; Nothing; Improve relationships and share all future developments/ initiatives with regard to products and services; Keep the price down; Try and keep price increases under control; cut pricing; Assisting in more efficient usage; Commit more human and natural resource it controls to the long term upliftment of S.A as industrial country; Get tariff structure in line – a 10% increase cannot be justified when the rest of the industry is about 8%; N/A in our business; Other suppliers are more flexible regarding tariffs and support to ensure competitiveness; Other suppliers are interested in our process and try and assist us to reduce costs and become more efficient; Nothing; Cut costs; Understanding flexibility required in our industry to international markets; Unfortunately they are not much better; To have a preferential price or export rebate; Not sure; Reduce costs; Openness is lacking – no other focus; Don't know; Sasol is the only supporter; Nothing to mention; Have competition?; Trying to get gas competitive; Open to negotiation; Flexibility in deal structuring; Nothing; Need longer** | |

| | | |
|---|---|---|
| | **term pricing strategy; More feedback on developments; None; More cost effective.** | |

**Table 14:**

**What service do you require that we do not provide?**

| Volume Category | Services Required | %age of total. |
|---|---|---|
| | | |
| **V 1** | **Nothing; What other services do you provide; Technical backup with, Technical expertise on the combustion of gas; More personal contact with Works Manager"; Energy advisor to make presence felt; Itemised billing – how much gas we consume per day; Personalised business advise on gas and how to ensure a more effective way of using it; N/A; None.** | **Responses: 17**<br><br>**No response:8** |
| **V 2** | **Technical service; None; Gas leak detection from supply point to point of usage; Regular flue gas analysis of boiler equipment; Supply downstream consumption monitoring gauges ( each unit); Nothing; Cost and technical info about gas usage; No comment; No complaint about service; Do not know.** | **Responses: 18**<br><br>**No response: 9.** |
| **V 3** | **Gas leak detection on customer internal line; None; Advise on gas savings; Lower prices; Cost reduction exercise; Forum to discuss gas price in relation to survival; Forklift truck gas; Maintenance visits to ensure equipment is in working condition and safe; Nothing; Cannot think of any; Inspection service to be "jacked up".** | **Response: 16**<br><br>**No response: 10.** |
| **V 4** | **Regular inspection of gas burning equipment for efficiencies; Hazardous gas management support; Assistance in utilizing** | **Response: 14** |

| | | |
|---|---|---|
| | **product efficiently – share new technologies(*Gigajoule Magazine Opportunity?*); No complaints about services; Nothing; Maintenance on furnace burners and burner control systems ( *Independent contractors opportunity?);* None; Informal six monthly meetings (*Forums opportunity?*);** | **No Response: 3.** |
| **V 5** | **More flexibility; None; Ongoing advising capacity.** | **Response: 3**<br><br>**Non response: .4** |
| **Contractors** | **Nothing; Gas equipment maintenance – waste energy utilisation; None; Feedback on calorific value of gas; Safety survey of pipelines, calibration of gas meters and general gas equipment maintenance; Cooperation from Sasol on internal gas line rerouting; Sasol Gas losing lot of technical expertise that Energy Advisors used to have; Gas monitoring on the internet; Don't know; More interaction and more communication; More frequent visits from advisory personnel; N/A; An annual visit offering a site inspection with technical advise on safety and improvements; Technical assistance; Cheaper gas; Tips on how to better utilize our gas consumption; Current service is fine; Help us to eliminate gas leaks; Online monitoring of gas consumption on hourly basis.** | **Responses: 36**<br><br>**Non response: 14** |

**Table 15:**

**What is your biggest concern regarding the conversion to natural gas?**

| Volume Category | Concerns regarding conversion to natural gas | |
|---|---|---|
| | | |
| V 1 | Not applicable; Impact on existing equipment; Nothing; Costs and availability; Will the price be the same or higher?; The purity level of natural gas; Will Sasol complete conversion in given time frame?; Cannot comment since we have not been informed concerning this conversion; Is it safe; Will the price be reduced?; Energy value and price; Downtime during the conversion; Not sure; Costs; None; Not sure but will it affect downtime and production thus sales?; Meeting production time, no interference; Value for money; Stoppage of production. | Responses: 23<br><br>No response: 2 |
| V 2 | None; Availability; No concern; Safety aspects of the vessels using this type of gas, and cost implications of upgrading the vessels; Change over renozzles and effectiveness; Price increase; The sulphur content; Input costs; Do I need to alter my equipment; Monopolistic, inflexibility and pricing; Alterations that may be required to burners; Cost; That the change will not affect any processes and that consumption will not increase; Cost and efficiency of natural gas; No concern at the moment as long as price of gas don't increase; Efficient running of our plant. | Responses: 25<br><br>No responses: 2 |
| V 3 | Calorific value – will the wear and tear of burner equipment not deteriorate; Disruption to the manufacturing process; Downtime; Loss of production during conversion; Looking forward to it – improved luminosity, heat transfer; Efficiency and timing; With higher calorific value of natural gas we will be using less gas; Hope we will not see the price increase | Responses: 25<br><br>No response: 1 |

| | | |
|---|---|---|
| | **again; That the gas does not affect the quality of our product; Shutdown period and re-commissioning time; Please inform for planning purposes; Changing burners; Price; Not sure; No real problem – Sasol is keeping us informed; No real concern; Time, costs to our company.** | |
| **V 4** | **More expensive?; What must I do to my equipment; That it may cost more and may not have the energy content claimed; Price linked to oil price "Dollars"; Nothing; None; Performance of the new product and cost savings; Nil; The fact that my burners are set for a low energy gas I would not like to see an increase in energy cost because of a waste fuel gas due to gas recuperator inefficiency; Nothing; None really, mainly due to Sasol's proactive approach; Will my current equipment be compatible to natural gas and if not at what and whose cost will it have to be modified; Smooth switchover; Change over in a short time; Pricing, efficiencies, capex required; Variation in heat value; Downtime.** | **Responses: 17**<br><br>**No response: 0** |
| **V 5** | **No product knowledge; Price; Price – conversion of burners; That change-over happens on time without production downtime; Time scale and resources for the change-over, environmental impact of the conversion (latter handled excellently to date); None.** | **Responses: 6**<br><br>**No response: 1** |
| **Contracts** | **None; Nothing; Downtime; Capital costs; Energy content and upgraded equipment; Loss of production during commissioning phase; That we are advised of what is required and exactly what is going to happen; The technical challenge, time frame and cost of conversion; None; Specific date of changeover to this methane rich gas; Continuous operation of our business; Poor communication by Sasol; Same or better heating value/ quality; The time and research and development factors in replacing a carbon rich gas with** | |

| | | |
|---|---|---|
| | a hydrogen rich gas; Smooth, problem free transition; Shutdown; Conversion of existing burners – who pays for the conversion; Possible downtime or production loss; Setting up the equipment for the new gas; A smooth transition; No major concerns, but major opportunity to convert our melting furnaces fro liquid fuel firing to gas firing; Shutdown; Plant downtime; Loss of production – as no detailed strategy for the changeover is in place at this late stage of progress; When will it take place? Production disruption/ cost of conversion? Effect on product quality? ; Price, reliability of supply and quality of gas; Escalation of price due to forex (R/$ exchange).Nothing; Production time; Is our equipment to be changed?; Price; Downtime on our furnaces; Period of conversion and its effect on production. | |

**Table 16:**

### 6.2.1 Question 16:

**Will you recommend Sasol Gas to other industrial energy users?**

| Themes | V1 | V2 | V3 | V4 | V5 | Contract | Total | %age of responses |
|---|---|---|---|---|---|---|---|---|
| No responses | 2 | 1 | 1 | - | - | - | 4 | - |
| Yes | 13 | 21 | 18 | 13 | 5 | 47 | 117 | 79 |
| *No | 10 | 5 | 7 | 4 | 2 | 3 | 31 | 21 |
| Total | 25 | 27 | 26 | 17 | 7 | 50 | 152 | 100 |

**Table18:**

**What are your perceptions of Sasol Gas?**

| Volume Category | Customer Perceptions | |
|---|---|---|
| | | |
| V 1 | Not Good; Good; Nothing; Good company – overpriced product; Great business but poor communication; Providing alternate energy source; An energy source competitor with great potential to do better; Global player, popular brand; Great company, poor communication – but I am prepared to continue association with you despite slow response time and slow feedback ; Large bureaucratic, unapproachable, expensive monopoly; Too large to communicate with us – Appears to be a forward thinking company but poor relations with smaller business; Big player – poor communication; Not always that negotiable when it comes to price; Expensive fuel; Big Brother; Major supplier of energy to S.A. Industry; No communication, no advice on energy conservation, no explanation for price increases; Efficient and effective supplier; Price fluctuations; Poor in response and feedback – Great business but poor communication; A monopoly; Service with backup. | Responses: 24<br>Positive: 12<br>Negative: 12<br>No response: 1 |
| V 2 | Good company; Attitude of a semi-government company; Stable reputable organization; Inflexible and dictatorial; Monopolistic, however technically competent; Good continual supplier; Industry leader in petrochemicals, linked to a high standard of awareness in customer support and services; Very happy with pipeline gas; Inflexible monopoly; Not applicable; Expensive, but fair in their approach to business; Monopoly; Efficient but expensive; Price too high; Good; Excellent customer complaints handling; Impressed | Responses: 22<br>Positive: 11<br>Negative: 5<br>Indifferent: 6<br>No response: 5 |

| | | |
|---|---|---|
| | with availability of gas; Good, reliable and cheap. | |
| V 3 | O.K; No comment; In our opinion Sasol Gas has an infrastructure which was set up for the benefit of S.A. taxpayers and consumers, The conversion of your pricing structure to one based on international commodity prices and R/$ exchange rate has enabled Sasol to make super profits – the new pricing structure has no benefits to consumers; Clean burning product – Monopolistic company; O.K. but expensive; Big Brother attitude – to the cost of small businesses; Good company – expensive gas; Large profitable company – not really interested in the needs of its smaller customers; Efficient but corporate; Professional company with diverse interests – tends to group smaller companies in with larger ones; Professional; Good reliable supplier; Very pricey for waste gas. | Responses: 21<br>Positive: 8<br>Negative: 5<br>Indifferent: 8<br>No response: 5 |
| V 4 | Clean user friendly product; Good standards; Large dominant supplier with little competition; Sound company; One of the best suppliers; Highly professional – I do believe that Sasol should consider the industry that each customer operates in and do their pricing accordingly; Major energy supplier with global interests; Good; A company with a very competitive edge; Excellent; Gas pricing policy not market related but based on international prices; Monopoly; Good quality – high priced ; Very good; Dictator " take it or leave it"; A world class company. | Responses: 16<br>Positive: 10<br>Negative: 4<br>Indifferent: 2<br>No response: 1 |
| V 5 | Monopolistic; Reliable costly supplier – excellent technical support, indifferent accounting; A monopoly – priced local material against a non related Singapore commodity; A "take it or leave it attitude"; Efficient but expensive. | Responses: 5<br>Positive: 0<br>Negative: 3 |

| | | |
|---|---|---|
| | | **Indifferent: 2**<br><br>**No response:2** |
| **Contractors** | **Monopolistic( price related) and dictatorial; Good – Well managed business; Reliable source of energy; Process commodity; Always to assist whenever needed; Good; Very professional; Profit driven and not customer driven ( Sasol not sensitive to the business requirements and needs of their customers); Monopoly; Good, efficient but monopolistic; They have marginalized local industry with their pricing policies; Safe and reliable but expensive; Easy and cheap to use; Monopolistic business; Efficient but monopoly; Modern management – here to stay; Best supplier we have; Professional supplier that understands the importance of delivery and cost; Reliable supplier but monopolistic e.g. "Dollar" based prices; Good supplier; Well run company; Good and professional business; Professional; Price competitive supplier with high quality standards – reliable supplier; Monopolistic; Selling S.A resources overseas and we have to bear the cost; Not good; Fat and Happy company; Autocratic when dealing with higher levels; Big company – inflexible(pricing) hindering local manufacturers to be competitive in export markets; Good but highly profitable supplier; A large company which sometimes gives the impression that it does not care about its customers; A competent energy supplier, who focuses on a customer's need, but more importantly understands their customer's needs. Used to be a dynamic company, but has recently become very greedy; Excellent company; Efficient, effective and cost effective; Highly professional business making maximum use of monopolistic position in S.A energy market.** | **Responses: 44**<br><br>**Positive: 23**<br><br>**Negative: 12**<br><br>**Indifferent: 9**<br><br>**No response: 6** |

**Table 20: What is the percentage gas costs related to your total input costs?**

| | Question 20 | | | | |
|---|---|---|---|---|---|
| | 0-5 | 5-10 | 10-20 | 20-30 | >30 |
| **V1** | 5 | 8 | 9 | 0 | 1 |
| **V2** | 13 | 6 | 1 | 4 | 2 |
| **V3** | 10 | 7 | 5 | 3 | 0 |
| **V4** | 5 | 6 | 1 | 4 | 1 |
| **V5** | 2 | 2 | 1 | 2 | 1 |
| **Contr** | 24 | 9 | 10 | 3 | 4 |
| **Total** | 59 | 38 | 27 | 16 | 9 |

**Table 24:**

**Any other comments you would like to make which were not covered by this survey?**

| Volume Category | Other comments |
|---|---|
| | |
| V 1 | No; Communicate with us, lower prices and help us grow; Your staff try hard; Account having to be paid mid-month is totally unacceptable – SMME unable to comply due to cash-flow problems. |
| V 2 | Sasol does not trust us - since becoming subsidiary of a large corporation Sasol is failing to effect name change for past 4 months; Safety consultant visit requested; Please explain a 100% increase in price in 2 years? None; Why work price in R/$ exchange rate and crude oil?; Huge fluctuation in pricing need to be addressed. |
| V 3 | No; No Sasol contact in past 14months; Cost down discussion should be arranged to assist us to remain competitive in the international markets; Good company but not shy about price increases; None; Why is your price regulated by international fluctuations; Sasol keeping a central depot for things like gas fired boilers, heat exchangers etc. |
| V 4 | Pricing structure is too inflexible; Achieving good results with Sasol presently, albeit at increased cost ( 102% increase on weighted average gas price since |

| | |
|---|---|
| | **1999) – converting our heat treating furnaces to electrical heating would show a return within 12 – 24 months, presently considering all future expansions in this light; It is our expectation that gas prices will come down in due course to the Mozambique pipeline and that the pricing formula will become more consumer friendly; Value added is not only selling a product, it is making your client more profitable using your product – Please come and talk to the plat managers for expansion of Sasol gas.** |
| **V 5** | **No.** |
| **Contractors** | **No; None; Sasol slow to react to requests (finalise our contract); Since Sasol Gas has no direct gas energy competitor in S.A., it would be more realistic to set the energy price relative to electricity prices; Address our concern regarding conversion (period of conversion, and effect on production); "I think Sasol Gas is to a certain extent exploiting the situation and charging too much for the gas. It was better run when in the hands of the public, now being a "Private" company, the gas has just become more expensive"; Gas price should be based on marginal costing not on market value – natural gas from Mozambique should only be subject to exchange rate fluctuations and not oil fluctuations as well; I am finance orientated and so can actually not answer the technical questions; Specific date of change over to methane rich gas; The increasing cost of energy are impacting directly on the company as well as our customers, who do not accept the rising cost of products in the market place; In spite of my plant growing by over 100% in the last 12 months, we have not been rewarded for the additional consumption but rather have been punished.** |

## Appendix 3:

**List of Figures.**

**Figure 1: The American Customer Satisfaction Index (ACSI) Model**

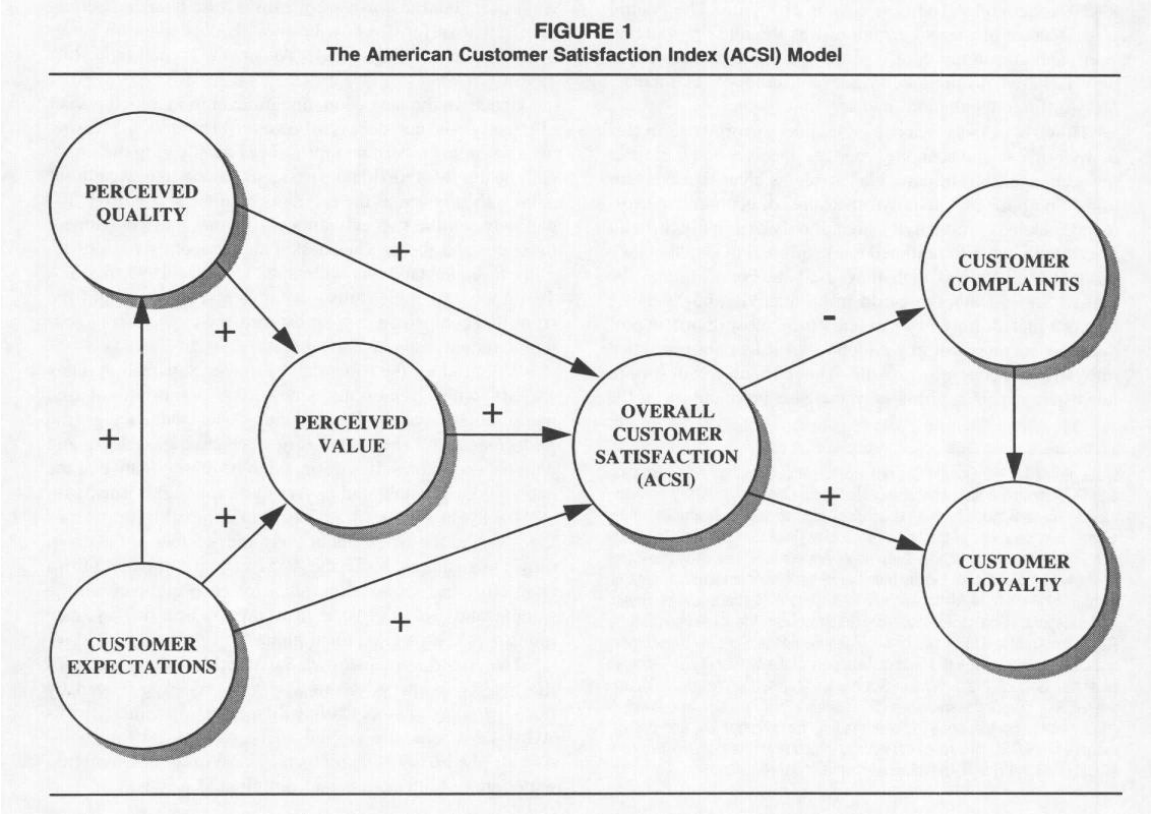
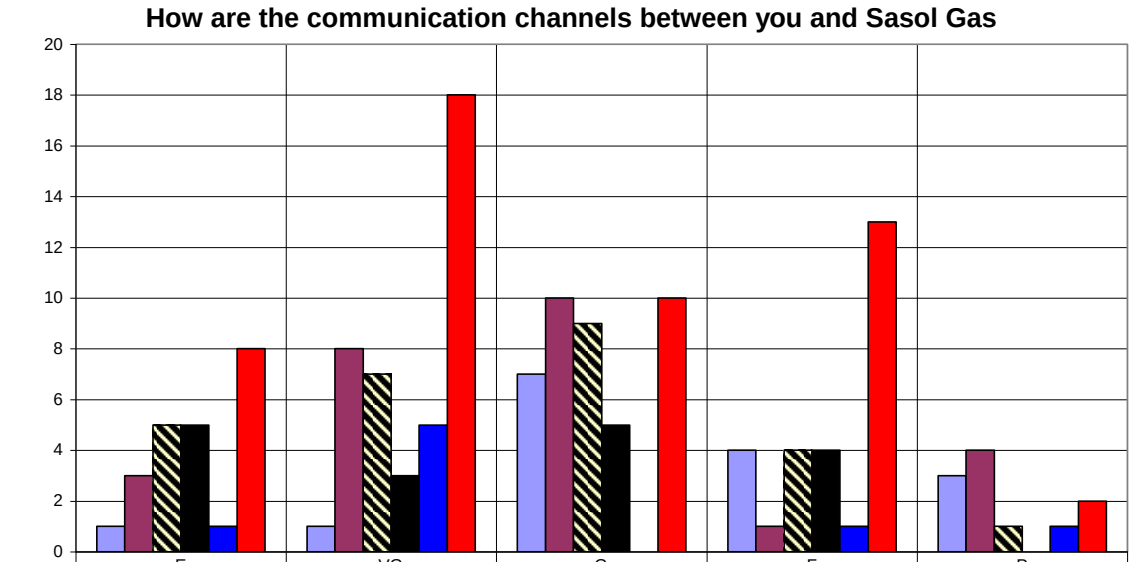
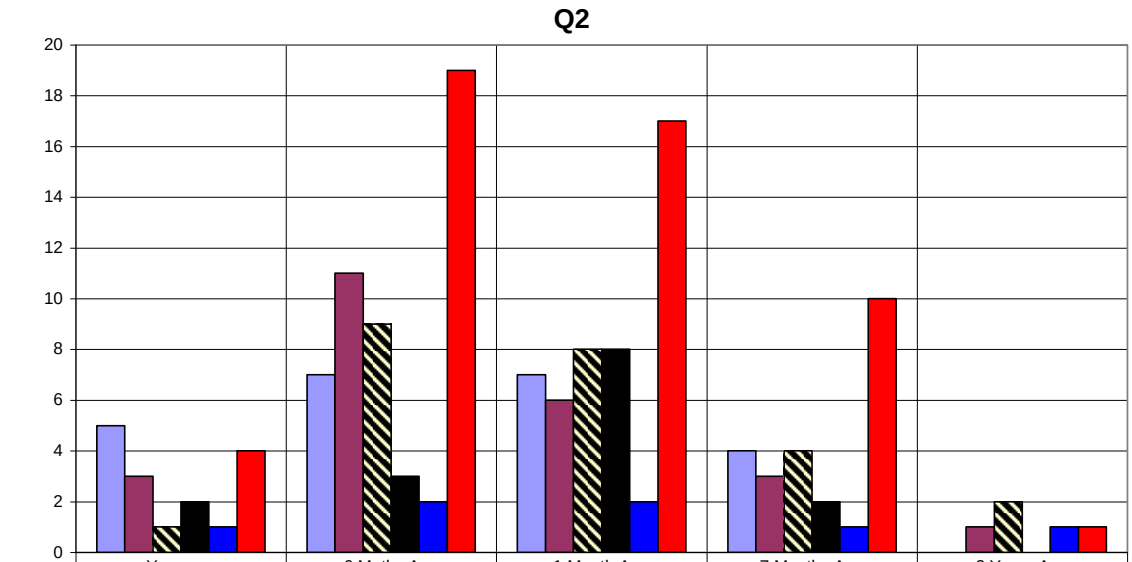


**Figure 2:** **QUESTION 1: How are the communication channels between you and Sasol Gas?**



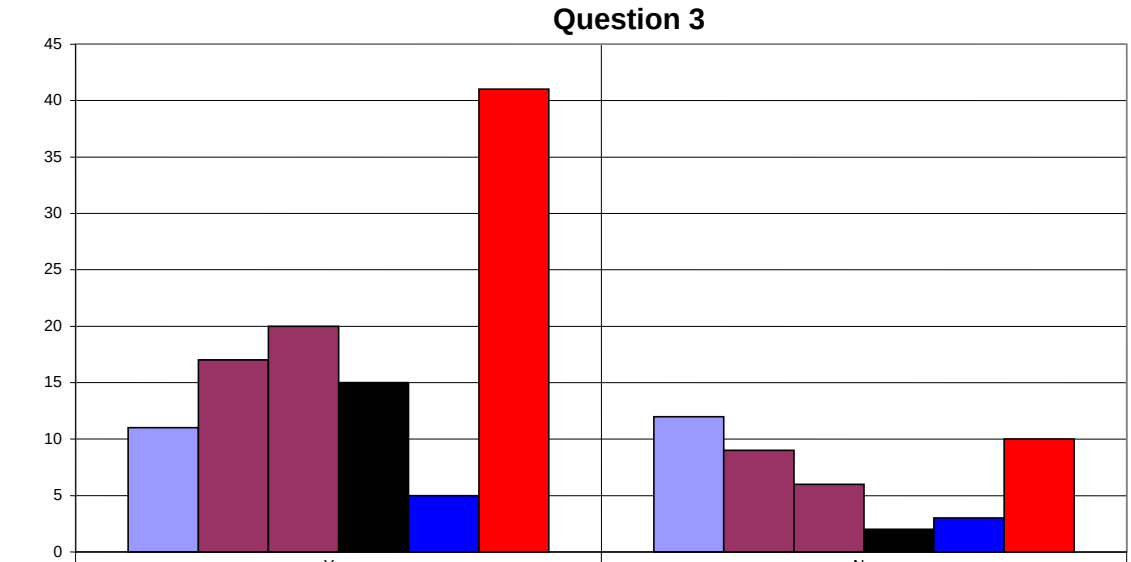

| | E | VG | G | F | P |
|---|---|---|---|---|---|
| V1 | 1 | 1 | 7 | 4 | 3 |
| V2 | 3 | 8 | 10 | 1 | 4 |
| V3 | 5 | 7 | 9 | 4 | 1 |
| V4 | 5 | 3 | 5 | 4 | 0 |
| V5 | 1 | 5 | 0 | 1 | 1 |
| Contr. | 8 | 18 | 10 | 13 | 2 |

**Figure 3: Question 2: When was the last time you were contacted by Sasol Gas?**



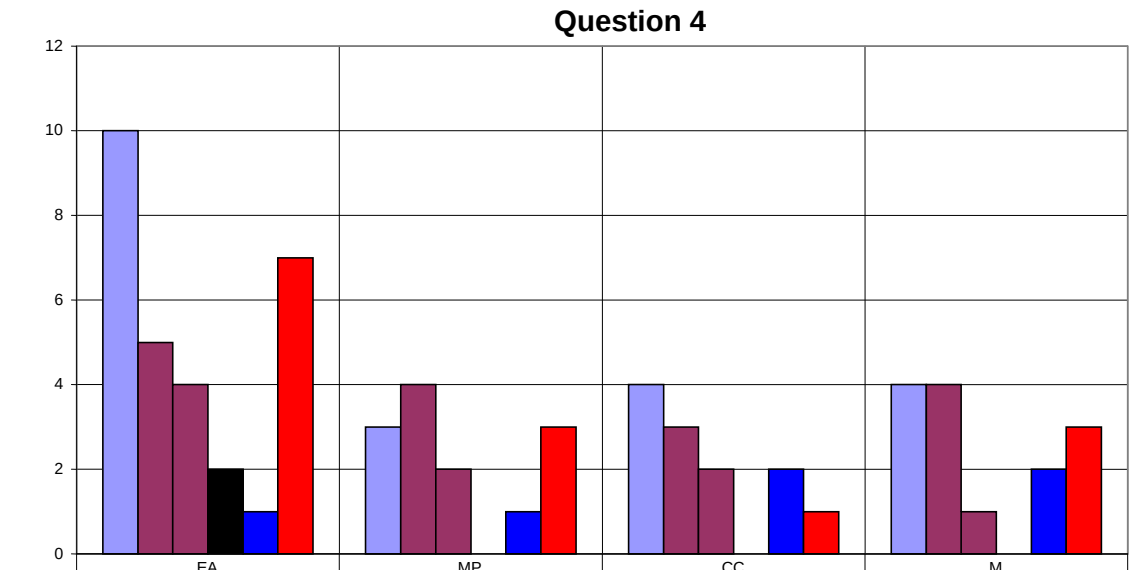

| | Year ago | 6 Moths Ago | 1 Month Ago | 7 Months Ago | 2 Years Ago |
|---|---|---|---|---|---|
| V1 | 5 | 7 | 7 | 4 | 0 |
| V2 | 3 | 11 | 6 | 3 | 1 |
| V3 | 1 | 9 | 8 | 4 | 2 |
| V4 | 2 | 3 | 8 | 2 | 0 |
| V5 | 1 | 2 | 2 | 1 | 1 |
| Contr. | 4 | 19 | 17 | 10 | 1 |

**<u>Figure 4:</u> Question 3: Are you satisfied with the personal interaction with the Energy Advisor, Maintenance, Credit Control, and Management**




| | Yes | No |
|---|---|---|
| V1 | 11 | 12 |
| V2 | 17 | 9 |
| V3 | 20 | 6 |
| V4 | 15 | 2 |
| V5 | 5 | 3 |
| Contr. | 41 | 10 |

**<u>Figure 5:</u> Question 4: If "no" please indicate the one you are not satisfied with.**

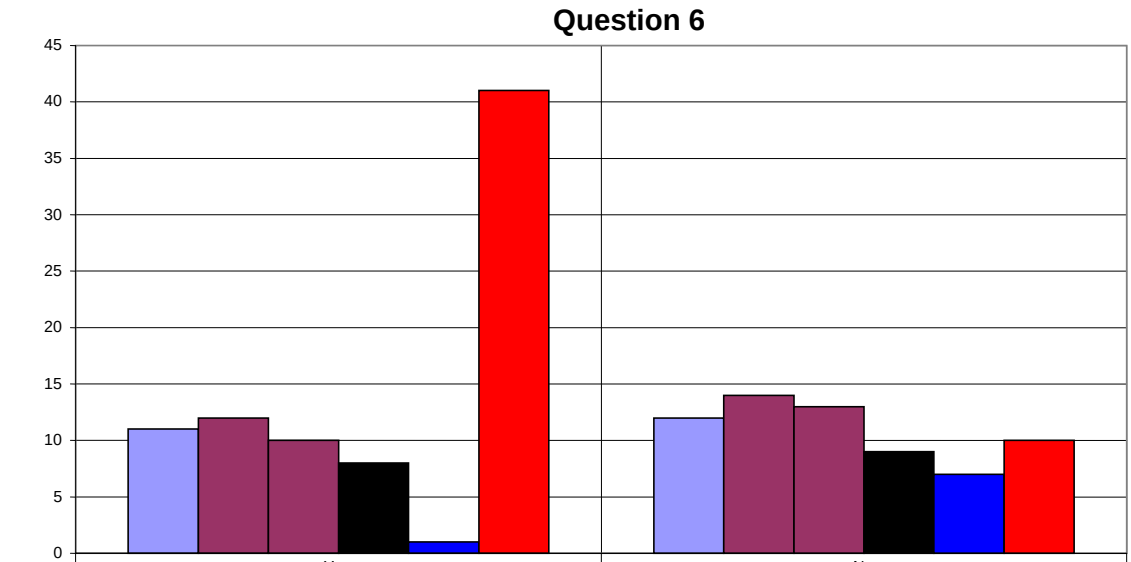



| | EA | MP | CC | M |
|---|---|---|---|---|
| V1 | 10 | 3 | 4 | 4 |
| V2 | 5 | 4 | 3 | 4 |
| V3 | 4 | 2 | 2 | 1 |
| V4 | 2 | 0 | 0 | 0 |
| V5 | 1 | 1 | 2 | 2 |
| Contr. | 7 | 3 | 1 | 3 |

- The individuals that deal face-to-face with an Energy Advisor would have higher satisfaction ratings where other managers e.g. Finance who do not interact directly with the Advisors were quite harsh in their ratings.

**Figure 6a:**

**Question 6: Do you get value for your money?**




| | Yes | No |
|---|---|---|
| V1 | 12 | 12 |
| V2 | 13 | 13 |
| V3 | 10 | 13 |
| V4 | 8 | 9 |
| V5 | 1 | 7 |
| Contr. | 40 | 10 |

**Figure 6 b**:

**Question 6: Do you get value for your money?**

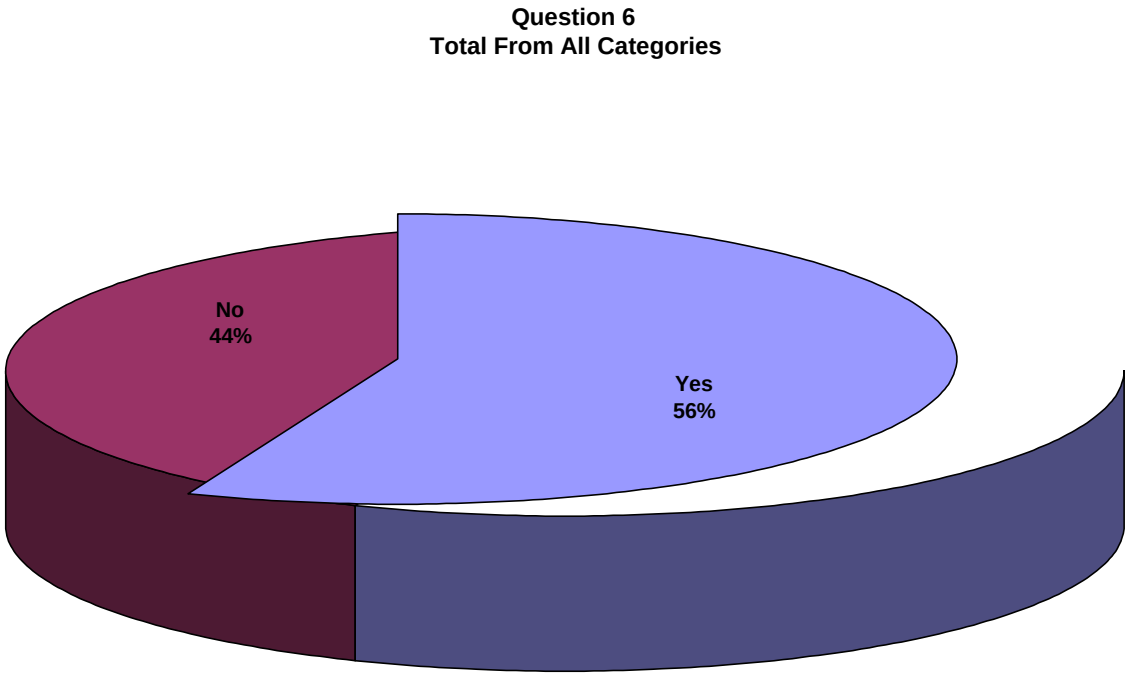
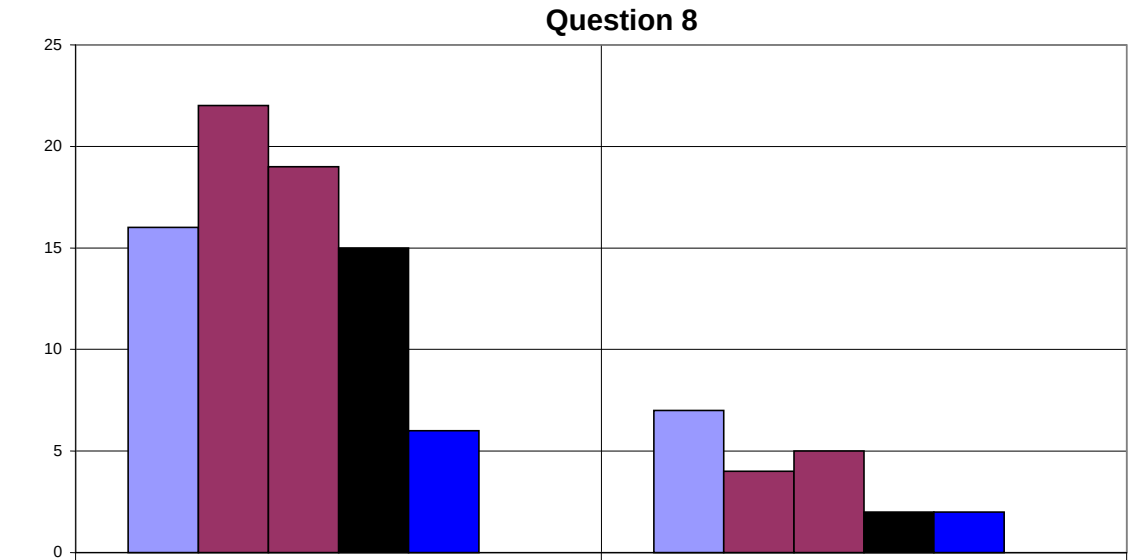


**Figure 7:**

**QUESTION 8: Do you get value for your money concerning services rendered?**




| | Yes | No |
|---|---|---|
| V1 | 17 | 8 |
| V2 | 23 | 4 |
| V3 | 18 | 4 |
| V4 | 15 | 2 |
| V5 | 4 | 2 |
| Contr. | 0 | 0 |