CONSUMER BEHAVIOUR IN PRIVATE BANKING

Carol-Ann van der Merwe

A Research Report submitted to the Faculty of Commerce, Law and Management, University of Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg
December 2005

ABSTRACT

Appropriately segmented target markets guide effective business strategies.

Most South African private banks use wealth to segment clients, for example, into high net worth and high income markets. This ignores the differences in and similarities of clients' motivations, expected benefits, attitudes, perceptions and product usage. The purpose of this research was to investigate any differences in the consumer behaviour of high net worth and high income individuals.

Factor analysis was used to reduce 28 variables into four factors reflecting consumer behaviour patterns in private banking: Involved Decision Making, Traditional Private Banking, Valued Bank Relationships and Personal Interaction Trade-off.

T-testing was done to determine any significant differences.

The findings revealed that no significant difference existed between high net worth and high income individuals. The implication is that in addition to using wealth as a segmentation criterion, private banks will have to incorporate consumer behaviour criteria to improve their market segmentation models.

I, Carol-Ann van der Merwe, declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

_____

Carol-Ann van der Merwe

5 December 2005

ACKNOWLEDGEMENTS

I wish to express my thanks to:

- Anthony Stacey, my supervisor, for his guidance, experience, support and encouragement.
- Mike Bendixen, for his motivation and direction.
- Charl van der Merwe, for his patience and support.

CONTENTS **Page no.**

LIST OF TABLES **Page no.**

LIST OF APPENDICES **Page no.**

1. INTRODUCTION

1.1 Purpose of this Study

The purpose of this study is to explore the differences in consumer behaviour between high income and high net worth client segments in the private banking environment. The research focuses on the clients' motivations for dealing with a private bank, the benefits they expected, their attitudes towards and perceptions of their private bank, as well as their usage of private banking products.

Private banks focus on providing products and services to high income earners and high net worth individuals in need of personal and integrated financial assistance. To date, market segmentation models in this part of the banking industry have focused on wealth as a segmentation criterion. This approach, however, tends to overlook the differences and similarities of clients, across the boundaries of wealth. This has limited marketers' understanding of the client base and, therefore, the ability to develop and deliver products and services that are of relevance and value to these individuals.

1.2 Background to the Research

Private banks in South Africa predominantly follow the North American model of private banking. This model focuses on an investment banking approach to the design and development of financial products and services for wealthy individuals. It combines wealth creation, wealth management and wealth preservation with a long-term relationship with a private banker or relationship manager to provide a private banking service to select clients (PricewaterhouseCoopers, 2001).

These banks currently segment and target the market for private banking products and services according to net asset value, net investable assets and annual remuneration.

One wealth criterion, or a combination of wealth criteria, is used to categorise individuals into particular segments. For example: ABSA Private Bank focuses on high net worth individuals with net assets of R10 million or more and RMB Private Bank selects individuals with earnings of R750 000 a year or more. BOE Private Clients targets individuals with R3 million in investable assets or individuals with a household income of R1 million or more a year. Both Nedbank Private Bank and Standard Private Bank focus on individuals earning more than R500 000 a year or with net investable assets of R3 million. Investec Private Bank concentrates on high income earners earning R600 000 a year or high net worth individuals with portfolios of net investable assets valued at R10 million or more (Gleason, 2002 and Ryan, 2005).

PricewaterhouseCoopers (2001:4) conducted a survey among 134 European private banks and identified nine key trends in the private banking environment:

- "A record level of merger and acquisition activity is occurring, with some significant corporate actions among the larger US, Swiss and other European players";
- "Existing and new participants are announcing major expansion and investment plans";
- "The introduction of new organisations, business and service models";
- "The trend for some European institutions to reduce their dependency on the provision of all products and services in-house in favour of adopting an open-product architecture concept";
- "Continuing change and evolution of the needs of the client base across a number of dimensions; in particular the need for advice and a more

holistic approach to managing clients' wealth, requiring more sophisticated products and services";

- "Rapid development of the latest information technologies has opened up new possibilities for managing information flows within organisations";
- "Growth in the use of Internet and e-banking which offers unparalleled opportunities for participants both to communicate with clients and deliver information and products to them through a new, fast and accessible distribution channel";
- "Increased and more co-ordinated competition, governmental regulatory and compliance pressure, particular on the offshore side…"; and
- "…the favourable previous market conditions have become more volatile and this has compounded the already existing evidence of greater pressures on fees".

These trends highlight three underlying themes:

- new entrants to and structural changes in the marketplace are contributing towards a competitive environment that is becoming more intense;
- the business environment is contributing towards increasingly difficult operating conditions, which are putting profit margins under considerable pressure; and
- the pressure on organisations to evolve and innovate products and services according to clients' needs is increasing.

In South Africa these trends are clearly evident. Competition is increasing, with both local (for example Standard Private Bank) and international players (for example Citibank and Barclays) entering the market. Regulatory requirements (such as the Code of Banking Practice, Banks Act, Financial Advisory and Intermediary Services Act and Financial Intelligence Centre Act and other requirements of the South African Reserve Bank and Financial Services Board) and the changes in the technological environment (for example internet banking

security issues) are also contributing towards making South Africa's operating environment as difficult as that of European countries.

The pressure to evolve and improve the creation, communication and delivery of products and services to wealthy clients has resulted in the need to gain more knowledge and a greater understanding of the clients that private banks wish to target. Effective product development (fulfilling financial needs) and marketing efforts (creating financial wants) are completely reliant on what is known about these wealthy individuals. By gaining an understanding of the relevant differences and similarities and grouping homogenous individuals together, marketers and product developers are able to focus on appropriate market segments to gain insights.

Wealth as a criterion in profiling these wealthy individuals is only one determinant of their financial needs. Factors such as expected benefits, perceived risk and product behaviour patterns are other important sources for determining different segments within the broad category of wealthy individuals.

1.3 Relevance of the Research Problem

This research is of significance to the private banking industry in South Africa in that it will help to provide a relevant framework within which to segment wealthy individuals. These individuals have historically been grouped into categories based purely on the economic criteria of net asset value, net investable assets and annual remuneration.

Categorisation according to wealth does have merit as a selection criterion in targeting individuals that meet this criterion. It is, however, limited in its application of developing client relationships over the long term that fulfill the needs and requirements of clients in an appropriate manner. This objective of building and maintaining long-term client relationships is founded in companies'

desire to create customer loyalty to prevent or reduce client attrition. Customer loyalty is dependent on high levels of perceived product and service quality and customer satisfaction. Organisations, by recognising that clients are different and understanding these differences, will be able to coordinate their distribution infrastructure, create products and services, interact and build relationships with clients, communicate and implement marketing strategies that are relevant to specific segments within the broader wealth categories, and use limited resources in the most profitable manner, in order to achieve greater customer loyalty.

In this context, a market segmentation model becomes relevant to the financial, marketing and competitive objectives of the organisation and its shareholders, in that it provides for the ability to deliver a higher degree of value to the client base.

1.4 Introduction to the Research Problem

The research problem can be defined as follows:

The purpose of this research is to analyse the motivations, expected benefits, attitudes, perceptions and product behaviour of selected high net worth individuals to discover how these variables will differ among individuals. The research also analyses the same variables among selected high income earning individuals, to discover what a comparative study of the two analyses reveals within the context of private banking.

The sub-problems in this study can be defined as follows:

- the first sub-problem is to analyse the motivations, benefits, attitudes, perceptions and product behaviour of selected high net worth individuals regarding private banking products and services to discover any differences;

- the second sub-problem is to analyse the motivations, benefits, attitudes, perceptions and product behaviour of selected high income earning individuals regarding private banking products and services to discover any differences;
- the third sub-problem is to determine what a comparative study of these two analyses reveals; and
- the fourth sub-problem is to determine whether any demographic differences in relation to age, gender and geographic location exist among private banking clients.

1.5 Limitations of the Research

This study involves the collection of primary data from one private bank in South Africa. However, the samples extend across the spread of high net worth individuals and high income earning individuals to ensure that the results are as reliable as possible.

The study does not attempt to determine whether wealth, as a criterion for a market segmentation model, is more or less relevant to the business environment in contrast to a combination of motivations, expected benefits, attitudes, perceptions and product behaviour criteria as a market segmentation model.

2. LITERATURE REVIEW

2.1 The Private Banking Context

According to Abratt & Russell (1999), the Cape of Good Hope Bank, established in 1837, was the first private bank in South Africa. Gleason (2002) states that the number of players in the industry has grown over time to include both local and international players such as Citibank, Barclays, Standard Private Bank, ABSA Private Bank, RMB Private Bank, Nedbank Private Bank and Investec Private Bank.

Private banks, state Abratt & Russell (1999), essentially provide financial services to high net worth and professional people. With the easing of exchange controls and the increasing development of technology, competition in the private banking arena has intensified, resulting in private banks expanding products and services to the extent of one-stop banking. These products and services, they say, span the complete range of financial and investment products to meet the needs of the wealthy individual.

PricewaterhouseCoopers (2001) comments that the level of sophistication of products and services is increasing, together with a greater need for advice and holistic wealth management approaches.

According to Bendixen, Abratt & Myres (2001), products and services with high credence qualities and functional utility, as in the case of non-transactional private banking products and services based on advice and technical financial expertise, are examples of knowledge products. The characteristics of these knowledge products include:

- self-generative properties;
- their utility decays exponentially with the effluxion of time;

- they enable consumers to know what, why and when the physical or information components of a product should be applied;
- credence rather than search qualities;
- functional rather than hedonistic utility;
- their consumers seek recommendations and references about the product providers before purchase and consumption;
- their consumers tend to form networks, alliances and partnerships with the product providers;
- they are associated with a high degree of perceived risk, particularly specification and psychological risk; and
- their consumers require the providers to demonstrate the realisation of product performance.

According to Bendixen, Spence, Myres & Abratt (1997), the marketing framework for knowledge products should not only consist of the traditional marketing strategy's 4Ps (Product, Price, Place and Promotion). The marketing framework should be complemented by the incorporation of the 4Rs marketing strategy (Relationship, Risk management, Recommendations and Realised Performance).

Abratt & Russell (1999) support the relevance of knowledge products and marketing strategy's emphasis on the 4Rs of which relationships form an important element. They state that maintaining a competitive advantage in the private banking industry is highly dependent on creating and sustaining long-term, profitable relationships with the current client base.

Grönroos (1994) emphasises the importance of relationships by stating that marketing has evolved to a new level – relationship marketing. Relationship marketing focuses on relationships between clients and other stakeholders with a mutually beneficial objective such as profit. Marketing in this context emphasises the establishment, maintenance and enhancement of these relationships through

the exchange and fulfillment of promises from all parties involved. Grönroos (1996) further comments that the issue of trust is fundamental to relationship marketing. Companies must have trust in their own abilities to fulfill promises to clients and clients must have trust in companies that they will be able to fulfill their promises.

Gummesson (1997) says that relationship marketing evolves around interactive relationships where both parties win and where the client is a co-producer and partner in the value delivery process. He also states that both the buyer and the seller drive a network of relationships within the broader society, over the long term, which is to the advantage of both parties.

According to Ravald & Grönroos (1996), the underlying objective of this marketing approach is customer satisfaction. Customer satisfaction translates into customer loyalty, which in turn results in long-term, profitable client relationships. Through relationship marketing, marketing activities focus on retaining customers and providing them with greater value. Herein lies an opportunity to create a competitive advantage for the business.

Consequently, a market segmentation approach that is easy to implement, efficient in its resources requirements and pertinent to the particular business strategies and client base enables effective relationship marketing in private banking.

2.2 Market Segmentation

Customer Watch (2002:6) states that market segmentation focuses on the notion that no company can be all things to all people. Companies need to treat clients differently based on knowing what the client wants and “the firm’s ability to profitably deliver it”.

According to Kotler (1988:256), a market segment is a group within a market that has identifiable and homogeneous "wants, purchasing power, geographical location, buying attitudes or buying habits." Green (1977) and Wind (1978) suggest that market segmentation is founded on the principle that individual clients within a particular market have heterogeneous product preferences and buying behaviour.

Segmentation benefits the whole of the organisation – in the production of products and services, the human resources requirement to service clients, the most appropriate distribution configuration, the marketing efforts and the financial profit implication across the client base.

Dibb (1998:394) states that companies that include market segmentation in their marketing efforts will enjoy several benefits:

> "The customer and competitor analysis which a segmentation approach requires, allows the business to become more in tune with the behaviour of both. The result can be a better understanding of clients' needs and wants, allowing greater responsiveness in terms of product on offer."

A deeper understanding of clients and their behaviour, attitudes and motivations or preferences results in a more satisfied client base with a higher degree of loyalty.

Segmentation, states Dibb (1998), is also beneficial for the development of marketing strategies and marketing activities. According to Marcus (1998), a comprehensive understanding of the client leads to brand management that is more effective and relevant to the target market. It also results in advertising messages that are more original and that engender higher interest levels from the client. Furthermore, an understanding of the client results in the intelligent employment of media strategies. Once again this leads to operational cost

benefits within the business, especially since the cost of retaining a client is generally significantly lower than the cost of acquiring a new client.

Kara & Kaynak (1997) support this thinking by adding that successful targeting and positioning will result from appropriate market segmentation. In addition, market segmentation allows for the allocation of resources within the business in the most effective manner. Customer Watch (2002) notes that appropriate segmentation models enhance strategic and operational decisions to achieve the business purpose. Answers to questions on pricing, distribution channel infrastructure, client relationship management (CRM) activities to achieve client retention and cross-selling objectives, the scope of activities within the business and capitalising on tactical opportunities in the environment, are simplified through understanding the characteristics of homogenous segments within the client base.

2.3 Segmentation Models

According to Harrison (1994), segmentation methodologies fall into two broad categories - *Priori* and *Post Hoc* approaches to segmentation. Traditional financial services segmentation models fall within the *Priori* category. This category focuses on a particular characteristic or one variable at a time within a market segment. Machauer & Morgner (2001) state that this approach is founded on the notion that a notable correlation exists between a particular external characteristic having an impact on the client and his/her needs. Demographic and socio-economic segmentation approaches are examples of *Priori* methodologies.

The second category, *Post Hoc* segmentation, focuses on the determinants of a particular behaviour or the concepts that trigger a particular behaviour. This approach occurs when "…a heterogeneous population is surveyed and segments are determined on the basis of homogeneous response patterns from within the

population" (Machauer & Morgner, 2001:6). Cluster-based models are used to segment individuals with homogenous responses to a particular item. According to Machauer & Morgner (2001), *Post Hoc* segmentation approaches are less common, more difficult to implement and considered to present a more modern approach to market segmentation.

The financial services industry has applied a variety of models to determine market segments, for instance:

- **demographic** segmentation focused on age, according to Harrison (1994);
- **stage in the family life cycle**, according to Harrison (1994);
- **social class**, according to Harrison (1994). Variables such as social class and lifestyle are described by Kotler (1988) as segmentation models in their own right;
- **geographic segmentation**, according to Minhas & Jacobs (1996);
- **psychological segmentation**, which incorporates social class, lifestyle or personality variables, according to Minhas & Jacobs (1996), Harrison (1994) and Kotler (1988);
- **lifestyle segmentation**, which groups markets into segments according to activities, interests and opinions, according to Minhas & Jacobs (1996) and Kotler (1988); and
- **benefit segmentation**, which focuses on the benefits expected by the consumer in dealing with a particular service delivery or buying a particular product, according to Minhas & Jacobs (1996), Machauer & Morgner (2001) and McDougall & Levesqu (1994).

2.4 Shortcomings of Traditional Segmentation Models

According to Dibb (1998), effective market segmentation must predict or determine product needs and buying behaviour that differ from one segment to another.

Traditional segmentation models in the financial services environment include geographic, socio-economic and psychological models, according to Minhas & Jacobs (1996). These segmentation models have severe shortcomings in that they do not predict the future buying behaviour of clients effectively. Segments are first identified and behaviour is then analysed, as opposed to "…identifying a certain kind of behaviour, and then finding out what kinds of people are grouped in a segment" (Minhas & Jacobs, 1996:3).

Harrison (1994) supports this statement by stating that traditional segmentation models of age, stage of family life cycle and social class offer little explanation of consumer behaviour in the financial services environment. They also do not measure the profitability or market size in relation to the total market. Machauer & Morgner (2001:7) state that "…demographic and economic criteria are only rough indicators for the need structures and the reaction patterns of retail customers."

According to Minhas & Jacobs (1996), geographical segmentation is inappropriate as market boundaries keep on changing. The emergence of the internet has further negated the importance of location as a market segmentation tool.

Demographics and socio-economic approaches, although useful in locating the target market, do not link directly to the needs of the client base, state Machauer & Morgner (2001).

Social class, when used in isolation as a segmentation approach, needs to be treated with caution as it ignores social mobility.

Finally, the dilemma with lifestyle segmentation is the lack of a clear understanding of what defines lifestyle and its relevance to financial services. Harrison (1994) asserts that some definitions focus on attitudes, values and beliefs whereas others refer to personality characteristics.

In contrast, Harrison (1994) suggests a multi-dimensional model focused on understanding clients' perceptions, attitudes and motivations to determine heterogeneous segments of buying behaviour in financial services. Machauer & Morgner (2001) support this thinking by stating that attitudes and expected benefits result in segmentation that achieves better customer orientation within companies as opposed to demographic segmentation.

Minhas & Jacobs (1996) argue that benefit segmentation can be regarded as a form of behavioural segmentation which directly links the behaviour of the client to the perceived and realised benefits of the products and services. In this context, benefit segmentation is a predictor of future buying behaviour. McDougall & Levesqu (1994) highlight the concept of benefit segmentation from a different perspective. They state that service quality, more specifically the dimensions of process and outcome, as well as convenience and perceived competitiveness, provide for an effective market segmentation approach.

From this review, the shortcomings of traditional market segmentation models engaged in financial services can be overcome by segmenting the market according to a model focused on the motivations, benefits, attitudes and perceptions that drive the behaviour of clients.

2.5 Motivations, Expected Benefits, Attitudes, Perceptions and Product Behaviour

In the *Model of the Motivational Process* by Shiffman & Kanuk (1978), the link between motivation, perceptions, benefits and behaviour is clarified.

The needs, wants and desires of clients ignite a process by which the client seeks fulfilment of a particular goal or benefit. The clients are steered along the process by their drive or motivation, which forces them to act in a certain way. Buyers will behave in a particular way driven by their motivations and perceptions. According to Shiffman & Kanuk (1978), perceptions are the realities of individuals. As each individual is different, their perceptions vary. Perceptions are not objective but are determined by the needs, values, expectations and past experiences of individuals. Therefore, motivations, perceptions and particular goals or benefits affect consumer behaviour in a meaningful way.

Shiffman & Kanuk (1978:357) define consumer behaviour as the "behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs."

According to Beckett, Hewer & Howcroft (2000), knowledge of consumer behaviour within markets allows for a better understanding of the client to anticipate, influence and determine behaviour. They identify two factors that affect consumer buying behaviour in financial services - the level of involvement and the level of uncertainty required in the decision making process. Wirtz & Bateson (1999) define the concept of involvement in terms of customer control, customer participation and level of contact.

According to Shostack (1977), uncertainty or confidence is a function of perceived risk. Perceived risk is essentially the outcome of the complexity of the product and the uncertainty related to the outcome of the product purchased.

In addition, Beckett *et al* (2000) state that institutional factors such as trust and loyalty of the delivery channel, as well as the extent of client participation, affect the behaviour of clients in financial services.

By gaining knowledge of the factors that underpin buying behaviour and linking these factors to clients' needs, Beckett *et al* (2000) assert that the motivations for specific client interactions and relationships can be analysed effectively. Accordingly, their consumer behaviour model identifies four forms of consumer behaviour:

- Repeat-Passive: Low levels of involvement and limited perception of uncertainty;
- Rational-Active: High levels of involvement and high levels of confidence;
- No purchase: No involvement and no confidence; and
- Relational-Dependent: High levels of involvement and low levels of confidence.

Clients in the Rational-Dependent category rely heavily on a "banker-customer relationship" to provide the necessary advice to ensure a satisfactory outcome associated with the product or service purchased.

When this theory is applied to the private banking context, it is clear that decision making among clients, ranging from vanilla products such as which daily transactional banking facility to use, to non-vanilla, advice-driven solutions found in structured and specialised lending or investment management, is influenced by factors which extend beyond the boundaries of wealth.

High income earning clients, it is generally believed, have an inherent motivation to create wealth. Their financial needs are focused on leveraging their assets to increase their debt in order to acquire or generate wealth. In contrast, high net worth individuals are driven to maintain or preserve the wealth they have already

accumulated. These statements of motivation may not necessarily be true. The research may reveal that high net worth individuals are also motivated by wealth creation or that high income earning individuals are motivated by wealth preservation as opposed to wealth creation.

Therefore, a particular motivation will guide the requirements and expectations of individuals across the spectrum of clients. For instance, a client might expect and value a relationship with a private banker on a personal and social level, while another might see their private banker as a necessary associate.

Perceptions, whether positive or negative, have an impact on the attitude and propensity to trust the private banker advising or servicing the client, as well as the loyalty demonstrated towards the organisation. For instance, loyal clients choosing to deal with a particular private bank may pay a higher interest rate on asset finance with that bank than they would have, had they chosen a competitor.

It is critical to have an understanding of a client's perceived risk in order to tailor a suitable offering for the client. For instance, a risk-averse client will be offered more conservative products and serviced differently from a client who is comfortable investing in alternative investment products with higher yields. Frequently, the time taken to make decisions correlates with the level of risk a client is comfortable with – risk takers are generally excited by the opportunity and make quick but calculated decisions.

Another important consideration is the client's level of financial knowledge, which often directs the extent of their involvement. Clients who are more financially literate are more involved in the management of their own financial affairs. With these insights in mind, the motivations, expected benefits, attitudes, perceptions and product behaviour relating to wealthy individuals must be explored to determine whether they have relevance as a market segmentation model for private banking.

3. HYPOTHESES

The hypotheses addressed in this study are the following:

Hypothesis 1:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the motivations and benefits of selected high net worth individuals and high income earning individuals in the context of private banking.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the motivations and benefits of selected high net worth individuals and high income earning individuals in the context of private banking.

This hypothesis is based on the theory of Harrison (1994), McDougall & Levesqu (1994), Minhas & Jacobs (1996) and Machauer & Morgner (2001).

Hypothesis 2:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the perceptions and attitudes of selected high net worth individuals and high income earning individuals in the context of private banking.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the perceptions and attitudes of selected high net worth individuals and high income earning individuals in the context of private banking.

This hypothesis is based on the theory of Harrison (1994), Beckett *et al* (2000) and Machauer & Morgner (2001).

Hypothesis 3:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the product behaviour of selected high net worth individuals and high income earning individuals in the context of private banking.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the product behaviour of selected high net worth individuals and high income earning individuals in the context of private banking.

This hypothesis is based on the theory of Harrison (1994) and Minhas & Jacobs (1996).

Hypothesis 4:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the demographics of age, gender and geographical location among private banking clients.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the demographics of age, gender and geographical location among private banking clients.

This hypothesis is based on the theory of Kotler (1988) and Schiffman & Kanuk (1978).

4. RESEARCH METHODOLOGY

This research study is inferential by nature and the research methodology is quantitative.

4.1 Population

The research population can be defined as all active private banking clients, in particular all high net worth and high income earning individuals in South Africa. For the purposes of this study, high income earning individuals are those individuals with an annual remuneration of R550 000 or more. High net worth individuals are individuals with net investable assets of R5 million or more.

4.2 Sample and Sampling

A non-probability, convenience sampling technique was used to draw the samples. Two samples, one for high net worth individuals and another for high income earning individuals, were drawn at random from a corporate database of existing private banking clients. To improve contactability, respondents without known email addresses were excluded from the samples. Thereafter the discretion of the researcher was used to filter the respondents to increase the likelihood of participation. The research questionnaire was emailed to all the respondents. A total of 173 responses were received of which 14 questionnaires were incomplete. Twenty-eight clients who were not originally selected as part of the samples, but had heard of the survey through friends, also participated and a decision was made to include their responses. Refer to Table 1 for a summary of the demographics of the respondents.

Table 1: Summary of the Demographics of the Respondents

Demographics	Number of Respondents	Number of Complete Questionnaires
High Income Earning Respondents	92	87
High Net Worth Respondents	81	72
Original Sample Respondents	145	134
Non-original Sample Respondents	28	25
Registered Respondents	157	143
Non-registered Respondents	16	16
Male	131	123
Female	41	36
Unknown Gender	1	N/A

4.3 Data Collection

Ordinal data was collected from the respondents through self-administered questionnaires. A structured questionnaire consisting of Likert Scale questions was used in the questionnaire. To differentiate between questionnaires completed by high net worth as opposed to high income earning individuals, the questionnaires were market differently – questionnaires for high net worth individuals were marked with an 'X' and those for high income individuals with a 'Z'. Refer to Appendix A for an example of the research instrument.

As it is usually difficult to attract a response from these individuals, respondents were incentivised to participate in this study through the company's banking loyalty programme. On completion of the questionnaire, respondents who were registered as members of the loyalty programme received loyalty points to the value of R250. Of the total responses received, 16 respondents were not registered with the loyalty programme and did not receive any loyalty points.

4.4 Pilot

The initial pilot consisted of five respondents who were asked to complete the questionnaire to test that the questions were clearly understood and that the questionnaire was relevant in the context of the study. Thereafter, a pilot consisting of 100 respondents representing both samples was conducted to test the practical implications of sending the research questionnaire electronically and administering the loyalty points successfully. Responses from this pilot were included in the data analysis.

4.5 Data Analysis

The data was rescaled from ordinal to interval data. This conversion was achieved through correspondence analysis (Bendixen & Sandler, 1995). A factor analysis reduced the number of variables into four factors. Based on the results of the factor analysis, a Two Sample T-test was used to establish any difference in the motivations, benefits, attitudes, perceptions and product usage that drive behaviour among high net worth and high income earning clients. To supplement the findings, Two Sample T-testing was done for each of the individual variables.

Two Sample T-testing was used to analyse any significant differences between responses from respondents who were registered for the loyalty programme and those who were not, respondents who were drawn as part of the original sample and those who responded through word of mouth, and male and female respondents.

Finally, Analysis of Variance was conducted to explore any significant differences relating to age and geographical location, while K-means Clustering was used to identify any particular set of variables with similarities. The Number Cruncher Statistical System (NCSS) was used to conduct the analysis of the data.

4.6 Validity and Reliability

Cooper & Schindler (1998:166) state that sound research results from a measurement tool that is “an accurate counter or indicator of what we are interested in measuring”. Therefore, a good measurement tool has to be valid and reliable, as well as practical and efficient.

4.6.1 Validity

Validity is the degree to which a research instrument measures what it is intended to measure. In defining the extent of validity, Leedy & Ormrod (2001) include content validity, criterion validity and construct validity as aspects of internal validity. For this research instrument, construct validity has particular relevance. It occurs when characteristics that are measured cannot be directly observed as is the case in this research where perceived value, behaviour, attitudes and opinions of respondents are measured. Construct validity is achieved by measuring characteristics derived from the theory highlighted in the literature review.

Therefore, questions for the research instrument were constructed based on the following sources:

- questions 1, 2, 10, 11 and 14 were supported by Machauer & Morgner (2001);
- questions 1, 3, 4, 5, 6, 7 and 8 were supported by Minhas & Jacobs (1996);
- questions 2 and 9 were supported by McDougall & Levesqu (1994);
- questions 9, 14 and 20 were supported by Abratt & Russel (1999);
- questions 15, 16, 17, 26, 27 and 28 were supported by Harrison (1994);
- questions 14, 16, 17, 21 and 18 were supported by Beckett *et al* (2000);
- questions 18, 19, 21 and 22 were supported by Bendixen *et al* (1997); and

- questions 12,13, 23, 24 and 25 were supported by the experience of the researcher in the private banking industry.

According to Cooper & Schindler (1998), external validity is the extent to which findings from the research can be generalised across the population. External validity was addressed by virtue of the convenience sampling technique used to draw the two samples.

4.6.2 Reliability

A research tool is reliable when it measures what it is intended to measure, consistently. Cooper & Schindler (1998) state that stability, equivalence and internal consistency (the measurement instrument has more than one question testing the same subject) are the key elements contributing towards consistent results. Reliability for this research tool was achieved by using a structured questionnaire, with constructs defined to minimise a variety of interpretations from the interviewers. In addition, Cronbach's Coefficient Alpha was applied as a measure of reliability.

5. RESULTS

5.1 Rescaling

The ordinal data was rescaled to facilitate statistical analysis. Table 2 below details the rescaled values.

Table 2: Rescaled Values

	Original Value	Rescaled Value
Strongly Agree	1	1
Agree	2	1.8
Neutral	3	2.46
Disagree	4	3.08
Strongly Disagree	5	5

5.2 Factor Analysis

According to Cooper & Schindler (1998), factor analysis is used to reduce a number of variables to a smaller number of factors. The variables that make up a composite variable or factor are independent but measure characteristics that overlap or display a similar pattern of variance. A matrix showing the inter-correlations between the variables determines the underlying factors within the variables measured. The principal component analysis method is generally used to identify the number of factors, where the cumulative variance of these factors accounts for the total variance in the data and the correlation between these factors is very low. Loadings are the correlation coefficients between a variable and a particular factor. The total variance as described by a factor is shown in its Eigenvalue. The cumulative Eigenvalues of the identified factors should account for 100% of the total variance. Varimax Rotation is used to amplify the variables loaded onto a particular factor or highlight the factor most accurately associated with a specific variable.

Initial factor analysis with three, four and five numbers of factors was explored. On analysis of the results, the Scree Plot showed Eigenvalues of more than one for four clearly identifiable factors, which presented the most sensible interpretation of the results. Therefore, the decision was made to proceed with factor analysis of four factors. These four factors account for 97.62% of the variance in consumer behaviour. Refer to Table 3 for details of the Eigenvalues after Varimax Rotation. For more detail, refer to Appendix B for the Factor Analysis Report for Four Factors after Varimax Rotation.

Table 3: Eigenvalues after Varimax Rotation

		Individual	Cumulative	
No.	Eigenvalue	Percent	Percent	Scree Plot
1	2.712102	33.05	33.05	|||||||
2	2.477874	30.19	63.24	|||||||
3	1.645582	20.05	83.29	|||||
4	1.176694	14.34	97.62	|||
5	0.692876	8.44	106.07	||
6	0.552447	6.73	112.80	||
7	0.489300	5.96	118.76	||
8	0.436075	5.31	124.07	||
9	0.392135	4.78	128.85		
10	0.345583	4.21	133.06		
11	0.240267	2.93	135.99		
12	0.144869	1.77	137.75		
13	0.059098	0.72	138.47		
14	0.025542	0.31	138.79		
15	-0.001529	-0.02	138.77		
16	-0.042747	-0.52	138.25		
17	-0.087876	-1.07	137.18		
18	-0.091204	-1.11	136.06		
19	-0.146823	-1.79	134.28		
20	-0.210603	-2.57	131.71		
21	-0.225681	-2.75	128.96		
22	-0.236060	-2.88	126.08		
23	-0.296472	-3.61	122.47		
24	-0.312040	-3.80	118.67		
25	-0.352970	-4.30	114.37		
26	-0.357491	-4.36	110.01		
27	-0.397187	-4.84	105.17		
28	-0.424557	-5.17	100.00	||

Table 4 below details the structure of the four factors after Varimax Rotation. Refer to Appendix C for the Key to the Descriptors of the Questions.

Table 4: Factor Structure after Varimax Rotation

Factor 1	Factor 2	Factor 3	Factor 4
Low level of knowledge and understanding (Q16)	Investments with competitive returns (Q3)	Trusting private banker vs private bank (Q12)	Technology vs personal relationships (Q14)
Confident in financial matters (Q17)	Wealth management (Q25)	Relationship with private banker vs private bank (Q13)	
Low enjoyment in being active with financial affairs (Q18)	Extensive products and services (Q6)		
Difficult to evaluate product performance (Q19)	Cash investments with competitive returns (Q5)		
Higher product risk (Q22)	Financial advice (Q8)		
Wealth creation (Q24)	Wealth preservation (Q26)		
Importance of information to make decisions (Q10)			
Products must perform as intended (Q23)			

However, according to the Bar Chart of Communalities, refer to Table 5, the four factors do not adequately explain variances in the attitude of consumers towards a safe and secure environment in which to conduct, for example, transactional banking. Similarly, these four factors do not explain the variance in perception of whether or not the opinions of friends and family regarding private banking products and services, influence consumers' decisions on using these products and services or not.

Table 5: Bar Chart of Communalities

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Personal service from private banker (Q1)	I	III	I	III	IIIIIII
Convenience through information technology (Q2)	II	II	I	I	IIII
Investments with competitive returns (Q3)	I	IIIIIIII	I	I	IIIIIIIII
Transactional banking facilities (Q4)	I	I	I	IIII	IIII
Cash investments with competitive returns (Q5)	I	IIIII	I	I	IIIIIII
Extensive products and services (Q6)	I	IIIIII	I	I	IIIIII
Limited products and services (Q7)	I	I	I	II	IIII
Financial advice (Q8)	II	IIIII	I	I	IIIIIII
Quality service vs lending rates (Q9)	II	I	II	I	IIII
Importance of information to make decisions (Q10)	IIII	I	I	I	IIIII
Investment management vs adhoc alternative investment products (Q11)	I	III	I	I	III
Trusting private banker vs private bank (Q12)	II	I	IIIIIIIIIIII	I	IIIIIIIIIIIII
Relationship with private banker vs private bank (Q13)	I	I	IIIIIIIIIII	I	IIIIIIIIIIII
Technology vs personal relationships (Q14)	II	I	I	IIIIIIII	IIIIIIIII
Convenience and control vs safety (Q15)	I	I	I	I	I
Low level of knowledge and understanding (Q16)	IIIIIII	I	I	I	IIIIIIIII
Confident in financial matters (Q17)	IIIIIII	I	I	I	IIIIIIIII
Low enjoyment in being active with financial affairs (Q18)	IIIIIII	I	I	I	IIIIIIIII
Difficult to evaluate product performance (Q19)	IIIIIIII	I	II	I	IIIIIIIII
Opinions of family and friends (Q20)	I	I	I	I	I
Long term relationship with private banker (Q21)	I	II	III	II	IIIIIII
High product risk (Q22)	IIIII	I	I	I	IIIII
Products must perform as intended (Q23)	IIII	II	I	I	IIIIII
Wealth creation (Q24)	IIII	III	I	I	IIIIIIII
Wealth management (Q25)	I	IIIIII	I	I	IIIIIII
Wealth preservation (Q26)	I	IIIII	I	I	IIIIII
Basic products (Q27)	II	I	II	I	IIII
Complex products (Q28)	I	I	I	I	III

5.2.1 Involved Decision Making

The correlation matrix reveals a high correlation among a set of eight variables, creating the first principal component that accounts for the biggest variance in the data as a whole. According to the Eigenvalues, 33.05% of the variance in consumer behaviour is explained by Factor One.

The set of variables shows a strong relationship between: the attitude towards financial information to make one's own financial decisions (as opposed to relying on a private banker to make these decisions), perceptions of one's own knowledge and understanding of private banking products, confidence in dealing with one's own financial matters, active involvement in managing one's own financial affairs, evaluating the performance of private banking products and services, the risk associated with private banking products and services, the performance of these products and the motivation to create wealth for oneself. Refer to Table 6 for a summary of the factor loadings.

Table 6: Summary of Factor Loadings (Involved Decision Making)

Involved Decision Making (Factor 1)	Factor Loadings
Low level of knowledge and understanding (Q16)	0.59
Confident in financial matters (Q17)	-0.58
Low enjoyment in being active with financial affairs (Q18)	0.58
Difficult to evaluate product performance (Q19)	0.56
High product risk (Q22)	0.47
Wealth creation (Q24)	-0.44
Importance of information to make decisions (Q10)	-0.41
Products must perform as intended (Q23)	-0.41

Analysis of the factor loadings for the set of variables indicates that four of the variables load positively onto Factor One. These variables are: the perception that private banking products have a higher risk than retail banking products and services, difficulty in evaluating the performance of private banking products, lack

of enjoyment in being actively involved in managing one's own financial affairs and a lack of knowledge and understanding of products and services. These results reflect the complexities and difficulties consumers face in making financial decisions.

The remaining four variables - confidence to deal with one's own financial affairs, wealth creation as a key motivator, private banking products that should achieve their intended performance and the importance of information in making one's own decisions - load negatively onto Factor One. The results suggest that these variables are the drivers for consumers' involvement in making financial decisions that affect them.

Overall, this set of variables can be interpreted as the emergence of an Involved Decision Making theme among private banking consumers. Clients rely on the private bank and private banker to participate actively in their finances. As they choose to become more involved, their need for being educated by the private banker and private bank increases. As clients become more sophisticated in their knowledge and understanding of financial products and services, their independence from the private banker grows. As clients choose to empower themselves more, they become more demanding and the banking environment becomes more competitive.

The Involved Decision Making theme is supported by Beckett *et al* (2000), who suggest that both client involvement and client confidence levels drive consumer decision making, which ultimately results in a particular buying behaviour. Client involvement incorporates aspects of client control, client participation and the level of contact a client engages in, whereas confidence levels relate to the perceived product risk and uncertainty of the performance of a particular product.

5.2.2 Traditional Private Banking

The second factor is a result of a high correlation between six variables, accounting for 30.19% of the variance in consumer behaviour. Involved Decision Making and Factor Two therefore explain 63.24% of the variance in consumer behaviour.

The variables loading onto Factor Two include: the benefits expected from investment and cash investment opportunities that achieve competitive returns, an extensive range of private banking products and services, financial advice and the motivations to maintain one's current wealth and preserve it for generations to come.

The factor loadings indicate that all of the variables load negatively onto Factor Two. Refer to Table 7 for a summary of the factor loadings.

Table 7: Summary of Factor Loadings (Traditional Private Banking)

Traditional Private Banking (Factor 2)	Factor Loadings
Investments with competitive returns (Q3)	-0.63
Wealth management (Q25)	-0.55
Extensive products and services (Q6)	-0.51
Cash investments with competitive returns (Q5)	-0.49
Financial advice (Q8)	-0.48
Wealth preservation (Q26)	-0.47

This result reflects the traditional and more conservative requirements of private banking clients. It is in keeping with the European model of private banking, which focuses on managing the assets of private banking clients (Gleason, 2002). This finding translates into a Traditional Private Banking consumer behaviour pattern.

5.2.3 Valued Bank Relationships

The third factor accounts individually for 20.05% of the variance in consumer behaviour and cumulatively for 83.29% of the variance in the data as a whole. Factor Three is described by two variables relating to the attitude of respondents: trusting the private banker is more important than trusting the private bank and having a relationship with the private banker is more important than having a relationship with the private bank. Both these variables load negatively onto Factor Three. Refer to Table 8 for a summary of the factor loadings.

Table 8: Summary of Factor Loadings (Valued Bank Relationships)

Valued Bank Relationships (Factor 3)	Factor Loadings
Trusting private banker vs private bank (Q12)	-0.74
Relationship with private banker vs private bank (Q13)	-0.73

According to Ravald & Grönroos (1996), relationships are an important contributor towards the total value perceived by clients. As relationships are not only underpinned by trust, but also by the parties with whom the relationship is forged, this factor reflects a theme of Valued Bank Relationships in private banking consumer behaviour.

5.2.4 Personal Interaction Trade-off

Factor Four accounts for 14.34% of the variance in the data. The factor is described by one variable that loads negatively onto the factor, namely the attitude of respondents towards the importance of information technology and its benefits of convenience and control, as opposed to a relationship with a private banker. This factor suggests a consumer behaviour pattern that relates to the Personal Interaction Trade-off in achieving the benefits that information technology bring. Refer to Table 9 for a summary of the factor loading.

Table 9: Summary of the Factor Loading (Personal Interaction Trade-off)

Personal Interaction Trade-off (Factor 4)	Factor Loading
Technology vs personal relationships (Q14)	-0.56

This finding is also supported by Machauer & Morgner (2001) in that clients' expectations regarding the benefits of banking and their attitudes towards information services and technology contribute towards meaningful insights into consumer behaviour in financial services.

5.2.5 Reliability Results

Across the four factors, the internal consistency according to Cronbach's Coefficient Alpha is 0.54. Refer to Table 10 for a summary of the Cronbach's Coefficient Alpha for each of the factors.

Table 10: Summary of the Cronbach's Coefficient Alpha

Factors	Cronbach's Coefficient Alpha
Involved Decision Making	0.12
Traditional Private Banking	0.67
Valued Bank Relationships	0.77
Personal Interaction Trade-off	1

The low result for Involved Decision Making is of concern and requires further investigation to establish the reliability of this factor.

5.3 T-testing

To test for a significant difference in consumer behaviour using a Parametric test such as the Two Sample T-test, the following assumptions should be met, according to Cooper & Schindler (1998):

- data should at least be interval;
- observations should be independent and normally distributed; and
- populations should have equal variances.

In addition, the type of Parametric test is dependent on the number of samples involved and the extent to which the samples are related.

Following from the research methodology, all observations are independent and two samples with no relationship have been selected in this study. The original data collected was ordinal but, by rescaling the data, the study meets the assumption that the data is interval.

Both the Variance Ratio Equal-Variance test and the Modified-Levene Equal Variance test provide an indication of equal variances. Where the assumption of equal variance was not met, the results of the Aspin-Welch test were analysed.

Normality of the data is determined by using the measurements of Skewness Normality, Kurtosis Normality and Omnibus Normality, as well as the Normality Probability Plot, Histogram and Box Plot. Where normality was rejected, the results of the T-test were analysed as the size of the sample exceeded 30 respondents, i.e. a big sample size.

A 5% alpha level was chosen to present a moderate indication of significance. This is consistent with alpha levels generally used in this type of research.

Since the stated propositions do not suggest a direction of difference, a Two-tailed Test was used.

All four factors were tested for any significant difference in behaviour between high income and high net worth individuals. Refer to Appendix D for the Two Sample T-test Report for Significant Difference Among High Income Earning and High Net Worth Individuals.

The demographics were analysed by testing for any significant difference in consumer behaviour between those respondents selected to be part of the research study and those who volunteered to complete the questionnaires after having heard of the study by word of mouth, those respondents registered with the loyalty programme and those who were not, and respondents who were male and those who were female. Refer to Appendix E, F and G for the reports on the Two Sample T-test for Significant Difference Among Original Sample and Non-original Sample of Respondents, Two Sample T-test for Significant Difference Among Registered and Non-registered Respondents and the Two Sample T-test for Significant Difference Among Male and Female Respondents.

Table 11 summarises the results of the T-tests on these factors.

Table 11: Results of the T-tests on the Four Factors

	Factors	Equal Variances	Normality	Alternative Hypothesis
Difference in consumer behaviour between high income earning and high net worth individuals	Involved Decision Making (Factor 1)	Cannot reject	Cannot reject	Accept H_o P-value=0.19
	Traditional Private Banking (Factor 2)	Cannot reject	Cannot reject	Accept H_o P-value=0.18
	Valued Bank Relationships (Factor 3)	Reject	Reject	Accept H_o P-value=0.15
	Personal Interaction Trade-off (Factor 4)	Cannot reject	Reject	Accept H_o P-value=0.99
Difference in consumer behaviour between the original sample and that of respondents who volunteered	Involved Decision Making (Factor 1)	Cannot reject	Cannot reject	Accept H_o P-value=0.76
	Traditional Private Banking (Factor 2)	Cannot reject	Reject	Accept H_o P-value=0.21
	Valued Bank Relationships (Factor 3)	Cannot reject	Reject	Accept H_o P-value=0.07
	Personal Interaction Trade-off (Factor 4)	Cannot reject	Reject	Accept H_o P-value=0.39
Difference in consumer behaviour between respondents registered for the loyalty programme and those not registered	Involved Decision Making (Factor 1)	Cannot reject	Cannot reject	Accept H_o P-value=0.98
	Traditional Private Banking (Factor 2)	Cannot reject	Cannot reject	Accept H_o P-value=0.56
	Valued Bank Relationships (Factor 3)	Cannot reject	Reject	Accept H_o P-value=0.90
	Personal Interaction Trade-off (Factor 4)	Cannot reject	Reject	Accept H_o P-value=0.54
Differences in consumer behaviour between male and female respondents	Involved Decision Making (Factor 1)	Cannot reject	Reject	Accept H_o P-value= 0.10
	Traditional Private Banking (Factor 2)	Cannot reject	Cannot reject	Reject H_o P-value=0.01
	Valued Bank Relationships (Factor 3)	Cannot reject	Reject	Accept H_o P-value=0.56
	Personal Interaction Trade-off (Factor 4)	Cannot reject	Cannot reject	Accept H_o P-value=0.23

The data reflect equal variances in all instances with the exception of Valued Bank Relationships in the test for a significant difference in consumer behaviour between high income and high net worth individuals. Here the result for the Aspin-Welsh test was documented.

The results indicate a normal distribution of data for each factor across the four tests with a number of exceptions:

- the data for Valued Bank Relationships and Personal Interaction Trade-off in the test for a significant difference in consumer behaviour between high income and high net worth individuals;
- the data for Traditional Private Banking, Valued Bank Relationships and Personal Interaction Trade-off in the test for a significant difference in consumer behaviour between respondents originally selected to be part of the research study and those participating through word of mouth;
- the data for Valued Bank Relationships and Personal Interaction Trade-off in the test for a significant difference in behaviour between respondents registered for the loyalty programme and those who were not; and
- the data for Involved Decision Making and Valued Bank Relationships in the test for a significant difference in behaviour as a result of gender differences.

Given the size of the samples, the results of the Two Sample T-tests were analysed. The tests failed to reject the null hypothesis in all instances with the exception of Traditional Private Banking (in the test for a significant difference in consumer behaviour between males and females), where the 0.01 p-value of the factor is less than the alpha value of 5%.

This means that the only significant difference in consumer behaviour between males and females exists with regard to their perceptions and expectations of the Traditional Private Banking factor.

In particular, the tests indicate that there is no significant difference between the consumer behaviour of high net worth individuals and high income earning individuals.

The results of the T-tests at a significance level of 5% were compared to T-tests done at 10% and 1% levels. The results are similar with the exception of the following:

- T-test at a significance level of 10% rejected H_0 for Involved Decision Making in the test for a significant difference in consumer behaviour between males and females, as well as H_0 for Valued Bank Relationships in the test for a significant difference in consumer behaviour of the original sample compared to respondents who volunteered for the study through word of mouth; and
- T-test at a significance level of 1% failed to reject H_0 for Traditional Private Banking in the test for a significant difference in consumer behaviour between males and females.

These results supported the decision to continue testing at a significance level of 5%.

Further analysis was done to explore any significant difference in consumer behaviour among the initial 28 variables of the study. Refer to Appendix H for a summary and a discussion of the results.

5.4 Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) investigates the variability between groups and within groups, state Cooper & Schindler (1998). The variability within groups refers to the variance in the observation from the mean of that particular sample. The variability between groups is the variance of the mean of the sample in relation to the grand mean. The grand mean is the sum of all the data observations. ANOVA tests whether the means of the various populations are equal and, if so, accepts the null hypothesis. The computed result is presented as the F-ratio, which is calculated as the variance between groups divided by the variance within groups. If the F-ratio equals 1, there is no difference in populations and therefore the null hypothesis is not rejected. ANOVA is an appropriate test for significance where the populations have normal distributions and where equal variances exist.

5.4.1 Analysis of Variance in Age Groups

The Kruskall-Wallis One-Way ANOVA on Ranks was used to analyse potential variances in responses across the various age groups. No significant differences in responses were found across the different age groups. Table 12 presents a summary of the results of the Analysis of Variance in Age Groups. For more detail, refer to Appendix I for the Analysis of Variance Report for Age Groups.

Table 12: Analysis of Variance in Age Groups

Factors	Equal Variances	Normality	Alternative Hypothesis
Involved Decision Making	Cannot reject	Cannot reject	Accept H_o P-value= 0.06
Traditional Private Banking	Cannot reject	Cannot reject	Accept H_o P-value= 0.08
Valued Bank Relationships	Reject	Reject	Accept H_o P-value= 0.96
Personal Interaction Trade-off	Cannot reject	Reject	Accept H_o P-value= 0.64

Further analysis was done to explore any variance in age groups among the initial 28 variables of the study. Refer to Appendix J for a summary and a discussion of the results.

5.4.2 Analysis of Variance in Geographical Groups

The results of the Kruskall-Wallis One-Way ANOVA on Ranks were used to analyse any variances in responses across the different geographical groups. The results of the test across all variables failed to reject the null hypothesis in all instances. There is, therefore, no significant difference in responses across the various geographical groupings.

A summary of the results is presented in Table 13 below. For more detail, refer to Appendix K for the Analysis of Variance Report for Geographical Groups.

Table 13: Analysis of Variance in Geographical Groups

Factors	Equal Variances	Normality	Alternative Hypothesis
Involved Decision Making	Cannot reject	Cannot reject	Accept H_0 P-value= 0.85
Traditional Private Banking	Cannot reject	Cannot reject	Accept H_0 P-value= 0.17
Valued Bank Relationships	Cannot reject	Reject	Accept H_0 P-value= 0.87
Personal Interaction Trade-off	Cannot reject	Reject	Accept H_0 P-value= 0.53

Further analysis was conducted to explore whether any variance existed among geographical groups across the initial 28 variables of the study. Refer to Appendix L for a summary and discussion of the results.

5.5 Cluster Analysis

Cooper & Schindler (1998) describe Cluster Analysis as the methodology in which homogenous people or objects are grouped together. Once variables on which to measure the individuals have been identified, correlation analysis can be used to identify mutually exclusive segments of similar individuals or objects. Table 14 below provides details of the results. Refer to Appendix M for the results of the K-Means cluster analysis.

From the Percent of Variation and the Bar Chart of Percent, it is clear that no meaningful clusters can be identified.

Table 14: Percent of Variation and Bar Chart of Percent

Iteration number	Number of Clusters	Percent of Variation	Bar Chart of Percent
3	2	91.95	||||||||||||||||||||||||
5	3	85.51	|||||||||||||||||||||||
9	4	82.24	||||||||||||||||||||||
12	5	79.28	||||||||||||||||||||
14	6	76.93	|||||||||||||||||||||
17	7	74.74	|||||||||||||||||||
20	8	72.34	||||||||||||||||||
23	9	70.19	||||||||||||||||||
27	10	68.75	|||||||||||||||||
29	11	66.55	|||||||||||||||||
31	12	64.98	|||||||||||||||||
36	13	63.01	||||||||||||||||
39	14	63.04	||||||||||||||||
40	15	60.42	||||||||||||||||
45	16	59.18	|||||||||||||||
48	17	58.35	|||||||||||||||
49	18	57.22	|||||||||||||||
53	19	56.20	||||||||||||||
55	20	54.98	||||||||||||||

6. INTERPRETATION

6.1 Differences in Consumer Behaviour Between High Income Earning and High Net Worth Individuals

According to the results of the tests for significant differences for the four identified factors, no evidence could be found of a significant difference between the consumer behaviour of high income earning and that of high net worth individuals.

Therefore, no difference could be established regarding the motivations, benefits, perceptions, attitudes and product behaviour of the two samples. The segmentation methodology that principally focuses on individuals' wealth situation as an appropriate tool to identify and group consumers that are similar, is therefore flawed when assessed from a purist perspective.

This finding is supported by Machauer & Morgner (2001) in their argument for expected benefits and attitudes as a tool for segmenting homogenous consumers in clearly heterogeneous groupings, rather than using demographic characteristics that ignore specific attitudes. They regard income, wealth, profession and age as external segmentation criteria.

According to Harrison (1994), motivations, attitudes and perceptions are psychographic factors that address the limitations of external segmentation criteria in that they drive consumer behaviour and, in particular, inform consumer decision making by understanding the consumer's mindset.

Minhas & Jacobs (1996) assert that demographic and socio-economic factors are useful in locating the target segment but fail to predict consumer behaviour. In contrast, segmentation based on the consumer's expected benefits presents a more meaningful basis for segmentation.

However, on testing for a significant difference within the initial 28 variables, a significant difference was found for the expectations of cash investment products, a long-term relationship with a private banker and the use of complex products.

This finding is supported by Harrison (1994), who acknowledges that it is possible to identify unique consumer segments based on external factors. However, these factors do not necessarily drive the behaviour of consumers. It could therefore be argued that in the instance of the above three variables, wealth can be used as a logical and effective tool to segment consumers.

6.2 Differences in Consumer Behaviour Between the Original Sample and That of Respondents Who Volunteered

No significant difference was found in the factor analysis for consumer behaviour of respondents originally selected for the sample and those participating voluntarily after hearing about the research through word of mouth. These voluntary respondents were motivated to participate through the incentive of the loyalty programme benefits. In view of the above results not materially affecting the outcome of the tests for a significant difference in consumer behaviour, the responses of these respondents were included in the study.

The test for a significant difference within the initial 28 variables found a significant difference with regards to respondents' expectations of financial advice and in the use of basic products. As this finding falls outside the scope of the intended research, further investigation could be explored in future research.

6.3 Differences in Consumer Behaviour Between Respondents Registered for the Loyalty Programme and Those Not Registered

On analysing the four factors, no significant difference was found between the consumer behaviour of respondents who subscribe to the loyalty programme and those who do not. This finding is probably due to the nature of the research in that the study focused on the private banking client rather than the private bank and how it rates in terms of performance.

This finding shows that participants who supported the loyalty programme were not biased in terms of their responses and, as such, contributed towards the external validity of the study.

However, a significant difference was found in the wealth creation and wealth preservation motivations within the initial 28 variables. This result reflects the inherent nature of these consumers – wealth creation and wealth preservation are more important to respondents who subscribe to the loyalty programme and benefit from the incentive received than to respondents who do not subscribe to the programme. While exploration of this result falls outside the ambit of this research project, the finding provides an opportunity for future research to investigate these differences.

6.4 Differences in Consumer Behaviour Between Male and Female Respondents

There is no significant difference between the consumer behaviour of male and female respondents, with the exception of perceptions and expectations relating to the Traditional Private Banking factor. This finding is possibly due to the conservative nature of wealthy females who, in many instances, have either inherited their wealth or have made significant personal sacrifices to become a

high income earner. They may also be a single parent supporting a family, which highlights their risk averse behaviour.

In addition, testing for significant difference within the initial 28 variables indicated a significant difference for the expected benefit of personal service from a private banker, convenience through information technology, investment opportunities and the perception of confidence in the ability to deal with one's own financial matters.

Kotler (1967) suggests that demographic segmentation based on gender is effective in determining homogeneous consumer preferences, wants and product usage. This statement is supported by Schiffman & Kanuk (1978), who describe market segmentation through the use of demographic gender segmentation as effective in locating consumers, but not necessarily in understanding these consumers.

6.5 Differences in Consumer Behaviour Within Age Groups

No difference was found in how the various age groups responded with regards to the Involved Decision Making, Traditional Private Banking, Valued Bank Relationships or the Personal Interaction Trade-off consumer behaviour patterns.

However, the age groups responded differently to the initial 28 variables in some instances: the expectations from investment and cash investment opportunities, the expectation of financial advice, the attitude towards trusting the private banker rather than the private bank and the perceived ability to deal with one's own financial matters.

Reasons for the difference in responses to cash investments and investment opportunities possibly relate to the financial life cycle of the individuals, where individuals in the older groups are becoming more aware of the financial

requirements of old age and, perhaps, have larger discretionary income portfolios to participate in these types of financial products.

The difference in response towards the expectation of financial advice potentially reflects the need for information and guidance to make financial decisions.

The responses towards the importance of trusting the private banker rather than the private bank, can be as a result of the difficulty in distinguishing the tangible individual from the intangible service organisation.

These findings are supported by Harrison (1994), who asserts that age in the context of the family life cycle can be an important consideration in market segmentation as it influences financial requirements and goals.

6.6 Differences in Consumer Behaviour Within Geographical Groups

No difference was found in the responses from respondents from different geographical areas. This finding is supported by Minhas & Jacobs (1996), who argue that geographical segmentation provides no indication of consumer preference or decision making and, therefore, does not make for an effective segmentation approach.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Differences in High Net Worth Individuals and High Income Individuals

The findings of this research questions the business models of most, if not all, private banks in South Africa. It challenges the assumptions that have been made in relation to each of the two target market segments. These assumptions fundamentally underpin distinctly different approaches to doing business with these sets of clients.

The findings have the potential to add significant value to both the client and the organisation. They have the ability to change current thinking and offer private banks a competitive advantage to move beyond the boundaries of current business practice. It provides an opportunity to adapt current business models and evolve a new paradigm for private banking.

To recognise the lack of distinction among high net worth and high income earning individuals extends product development, marketing, distribution, talent, client acquisition and client retention strategies.

The implications for management in relation to the above strategies for private banks are discussed below.

7.1.1 Product Development

The findings suggest that product development, which is focused mainly on banking products and services and directed at the high income market, should be expanded to include high net worth individuals.

Not only do high net worth individuals require daily transactional banking facilities as much as high income earners do, but they also have expectations around the use of technology. All clients see this as part of the private banking product offering and technology should therefore be actively developed and integrated as a product enabler to accommodate and service client needs.

Expectations for convenience and excellent service delivery are not only reserved for high net worth individuals. All clients expect these deliverables from their private bank and these elements should be incorporated in the product offering throughout. Here again, technology presents an opportunity to enhance the client experience through, for example, aspects such as updating client information, application and documentation processes, as well as clients' requests for information.

The requirement for a comprehensive set of both investment and lending type products, is not reserved for high net worth clients only. Affordable investment products that suit the risk appetite of high income earners should be developed to satisfy this particular need and should be supported by financial advice.

The wealth creation motivation is not reserved exclusively for high income earners – high net worth individuals are also driven by this objective. New products should reflect this need and incorporate different levels and structures of gearing to allow clients in both segments to increase their wealth.

Wealth management and preservation are also seen as a key motivator for high income individuals, contrary to popular belief that these individuals are only interested in wealth creation. Products that focus on wealth management such as investment management services and wealth preservation services such as trusts and fiduciary activities should be adapted for high income clients.

Although the tests for significant differences among the 28 variables found a significant difference in the expected benefits relating to cash investments, the results indicate that both groupings are positively inclined towards the expectations of cash investment products, with high net worth individuals more so than high income earners. This presents an opportunity for deposit products to be developed and launched at the entire client base.

Another significant difference exists in the use of complex products. However, high net worth individuals' neutral stance is supported by high income individuals' disagreement that they use these types of products. The implication for product development is clear: care should be taken to simplify private banking products in their design so as to prevent new products from being too sophisticated and involved. More focus should be placed on explaining and communicating product features and benefits to clients. Herein lies an application for client research, which is generally limited, to be introduced as part of the product development process and extend across both high income and high net worth individuals.

7.1.2 Marketing

The results of the research clearly suggest that all private banking clients seek personal interaction and relationships with their private bankers and private bank. Clients' expression of a need for a personal relationship emphasises the importance of a one-on-one approach to marketing, not only for high net worth but also for high income earners. A dedicated client relationship strategy (CRM) strategy presents an opportunity to deliver this requirement to clients. Personalisation is key – communication should always be individualised, relevant and of interest to the client. Systems enhancements and technology will be an important enabler in making this approach both cost effective and people efficient.

Marketing activities within the private banking context are dominated by client entertainment, in particular for high net worth clients. In view of the findings, client entertainment should include high income clients. The entertainment requirement for the larger number of high income clients places a demand on functions and events to be cost effective, yet distinctive and practical.

Sponsorships, direct marketing and promotional activities focus primarily on banking type products. These are mainly directed at the high income market as it is generally believed that high net worth clients do not value banking products such as transactional banking and cash investments. In contrast, the findings indicate that all clients have expectations relating to these products. Therefore, more emphasis should be placed on sponsorships, direct marketing and promotional activities across the broader product range and directed at all clients. Common lifestyle interests such as travelling, participation in sporting events or supporting charities could be used as a suitable platform to facilitate these marketing efforts.

Similarly, advertising is limited to and reserved for the high income market as it tends to focus on promoting banking products. Given the results, more advertising should be included in the marketing mix to build informed brand awareness across all markets. In addition, marketing communication should not reserve the message of wealth creation for the high income market. Rather this message should also be included in positioning the organisation and promoting the offering to high net worth clients.

All clients responded neutrally to their own level of knowledge and understanding of private banking products, the evaluation of the performance of these products and their enjoyment of being involved in the management of their own financial affairs. This presents an opportunity for marketing efforts to be directed at meeting the needs of clients who search for information that will empower them to make their own financial decisions. Content driven marketing material, with

examples of investment or lending structures, will assist in educating these clients. Regular press releases and educational functions and events will contribute towards meeting the need for information. Workshops and seminars can also be used to achieve the educational objective.

7.1.3 Distribution and Talent

No significant difference exist between high income and high net worth individuals in relation to the Valued Bank Relationship factor and, in addition, both high net worth and high income clients respond positively to the expectation of a personal and long-term relationship with a private banker.

These findings underscore the importance of consistency and continuity in the relationship with private bankers, as well as the personal nature of the exchange with the private bank. By implication, even though technology brings convenience and control, it cannot replace people as a distribution channel and it cannot satisfy the need for personal attention and interaction. Caution should be applied to a call centre approach to distribution, which is sometimes used to service high income individuals, as it may not necessarily meet the expectations of the client.

In addition, the long-term requirement emphasises the importance of low staff turnover, particularly for business units focusing on the high income market segments where staff turnover is often higher than in the high net worth niches. It also suggests that staff turnover should be well managed and effectively communicated to the client. Staff retention strategies, often reserved for those tending the high net worth businesses, should be extended to staff servicing high income earners.

7.1.4 Client Acquisition

Generally, acquisition activities for high income earners and high net worth individuals are different. By exploring the acquisition activities for high income earners and high net worth individuals, similar strategies can be employed to attract clients. For example, a typical client acquisition strategy for high income earners would be to ask existing clients to bring a colleague or friend to a client function, introducing them to the organisation and product offering. A similar strategy could be applied to the high net worth market.

7.1.5 Client Retention

The concept of client retention includes a number of elements in the private banking context. Client retention extends from minimising client attrition through increased levels of client satisfaction, to increasing the client's exposure to the organisation through effective cross-selling of products, resulting in an increased share of the client's wallet.

A common practice in private banking is to refer to high net worth clients as being deal driven as opposed to relationship driven, which provides a legitimate reason for ignoring client retention efforts in this market. The results of this study counter this argument and introduce the possibility of designing client retention strategies focused on the high net worth market. High net worth clients should be involved in client satisfaction surveys and product cross-selling should be incorporated in client relationship management activities specifically created to achieve increased client penetration.

7.2 Demographic Differences: Gender

A significant difference was found for the Traditional Private Banking factor among males and females. In addition, testing for difference among the initial 28 variables, resulted in significant differences for the expected benefits of personal service from a private banker, convenience and investment opportunities where both males and females responded positively, but females more so. With regard to confidence to deal with one's own financial matters, males were more confident than females.

These findings require a general sensitivity or awareness towards gender difference within the private banking context and a greater understanding of where and why these differences exist. This will ultimately result in implementing whatever actions are required to align strategies to acknowledge these differences. In particular, the fact that females felt less confident (but not totally lacking in confidence) to deal with their financial matters than males, creates an opportunity for private banks to train staff to respond and communicate appropriately.

With increased product proliferation, marketing communication and product positioning have become more and more important as a point of competitive differentiation. With this in mind, marketing activities should target males and females differently by focusing on the points of distinction relevant to each gender market.

7.3 Demographic Differences: Age

The difference in consumer behaviour among different age groups with regard to specific expectations and attitudes implies the following:

- the marketing of cash investment and investment opportunities will be more successful among clients younger than 25 years and older than 46 years;
- care must be taken in selecting staff of exceptional quality to deal with clients younger than 25 and clients aged 46-55. Staff must be able to provide quality financial advice and have strong relationship building abilities. Low staff turnover is imperative; and
- an opportunity exists among clients younger than 25 and clients aged 46-55 years for private banks to add value to these clients with a view on building their confidence to deal with financial matters through information and knowledge sharing practices.

8. FURTHER RESEARCH

This study has revealed the following areas for further research.

8.1 Loyalty Programmes in Private Banking

Over the past two decades, the popularity of loyalty programmes as part of the promotional element of the marketing mix, has risen in South Africa. From the airline industry to medical aids and banking, companies have spent millions of rands on marketing to create and position their loyalty programmes.

Marketers saw the potential of loyalty programmes as a point of differentiation in the minds of consumers in what was largely a commodities driven environment. Loyalty programmes drove consumer spending, reduced consumer appetite for switching to other brands and built barriers for competitors to enter or target a particular market segment.

Loyalty programmes have now themselves become a commodity in many industries and their effectiveness in creating client loyalty is being questioned. The ability to remain distinctive from competitors requires ongoing enhancement, leading to diversified business units that fall outside the ambit of the core competencies of the organisations concerned and that require substantial investment without generating satisfactory returns.

The results of this research show that there is no significant difference in the consumer behaviour of private banking clients who are part of the loyalty programme and those who are not members. This finding, together with the challenges facing loyalty programmes, presents an opportunity to explore the impact of loyalty programmes on consumer behaviour in private banking, particularly in relation to spending, attrition and product usage.

Hypothesis 1:

H_0: $\mu_{\text{loyalty members}} - \mu_{\text{loyalty non-members}} = 0$

There is no difference in the spending of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

H_1: $\mu_{\text{loyalty members}} - \mu_{\text{loyalty non-members}} <> 0$

There is a difference in the spending of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

Hypothesis 2:

H_0: $\mu_{\text{loyalty members}} - \mu_{\text{loyalty non-members}} = 0$

There is no difference in the attrition of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

H_1: $\mu_{\text{loyalty members}} - \mu_{\text{loyalty non-members}} <> 0$

There is a difference in the attrition of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

Hypothesis 3:

H_0: μ loyalty members$^-$ μ loyalty non-members = 0

There is no difference in the product usage of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

H_1: μ loyalty members$^-$ μ loyalty non-members <> 0

There is a difference in the product usage of private banking clients who belong to the loyalty programme relative to private banking clients who do not belong to the programme.

8.2 Gender Implications in Private Banking

Driven by a liberal socio-economic environment in which society has a greater tolerance for career women and where lifestyle requires a dual income to support families, more female professionals have emerged in South Africa and worldwide, and this phenomenon is expected to continue.

The impact is two-pronged: Firstly, there are more females employable as private bankers today than ever before and, secondly, an ever increasing proportion of the private banking target market consists of females.

Within the context of banking, male clients have traditionally defined the requirements of products and services, distribution and marketing efforts. However, it is generally accepted that males and females have inherently different emotional, physical and intellectual needs. Although some retail banks in South Africa have recently started to acknowledge this difference by accommodating the needs of females in their product development and marketing communication approaches, this thinking has not yet manifested in South African private banks.

This research study has shown that a significant difference exists between male and females in relation to some aspects of consumer behaviour (personal service, confidence levels, convenience and investments). This presents an opportunity to further investigate the differences in gender with regard to service issues such as accuracy, speed, expectations of technology, expectations of a private banker (including communication and assistance in information sharing and decision making) and product requirements (including benefits, features, pricing and distribution channels).

Hypothesis 1:

H_0: $\mu_{male} - \mu_{female} = 0$

There is no difference in the service requirements of male private banking clients in relation to female private banking clients.

H_1: $\mu_{male} - \mu_{female} <> 0$

There is a difference in the service requirements of male private banking clients in relation to female private banking clients.

Hypothesis 2:

H_0: $\mu_{male} - \mu_{female} = 0$

There is no difference in the product requirements of male private banking clients in relation to female private banking clients.

H_1: $\mu_{male} - \mu_{female} <> 0$

There is a difference in the product requirements of male private banking clients in relation to female private banking clients.

8.3 Impact of the Family Life Cycle in Private Banking

The financial needs of economic households change as the structure of families changes. In the modern economy, families consist of no parent (for example, where AIDS orphans raise younger siblings, sometimes under supervision of their grandparents or only with the support of the broader community), single parent and the traditional two parent structures. Variations include divorced and extended family structures (for example, where relations form part of an economic household).

For all family structures, the economic requirement changes at every point of the family life cycle:

Married couples in their twenties and early thirties, often both professionals with dual incomes, have more disposable income and specific financial needs relating to the financing of homes and motor vehicles.

When parents have children, dual incomes often reduce to single incomes and the expenses relating to primary, secondary and tertiary education and childcare, shrinks disposable income.

As children leave home to study or work, disposable income increases and families become more focused on their financial well-being at retirement.

The results of this research indicate that there are significant differences in expectations and attitudes towards private banking among age groups. This finding presents an opportunity for further research to explore these differences among private banking clients who don't have children and those who do and to discover how these differences may affect product development, distribution and marketing activities of private banks.

Hypothesis 1:

H_0: $\mu_{children} - \mu_{no\ children} = 0$

There is no difference in the attitudes of private banking clients who have children in relation to private banking clients who do not have children.

H_1: $\mu_{children} - \mu_{no\ children} <> 0$

There is a difference in the attitudes of private banking clients who have children in relation to private banking clients who do not have children.

Hypothesis 2:

H_0: $\mu_{children} - \mu_{no\ children} = 0$

There is no difference in the expectations of private banking clients who have children in relation to private banking clients who do not have children.

H_1: $\mu_{children} - \mu_{no\ children} <> 0$

There is a difference in the expectations of private banking clients who have children in relation to private banking clients who do not have children.

8.4 Product Usage in Private Banking

This research found a significant difference in the basic product usage of high income and high net worth individuals. Basic private banking products can broadly be categorized into two groups: those that fall within the debt category (such as finance for motor vehicles, home loans and daily banking) and those that fall within the assets category (such as investments, cash deposits and foreign exchange).

Further research to explore whether a significant difference in product usage exists within each of these broad categories for high income and high net worth

individuals will assist the product development and marketing strategies of private banks.

Hypothesis 1:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the usage of debt products of high net worth individuals in relation to that of high income earning individuals.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the usage of debt products of high net worth individuals in relation to that of high income earning individuals.

Hypothesis 2:

H_0: $\mu_{\text{high net worth}} - \mu_{\text{high income}} = 0$

There is no difference in the usage of asset products of high net worth individuals in relation to that of high income earning individuals.

H_1: $\mu_{\text{high net worth}} - \mu_{\text{high income}} <> 0$

There is a difference in the usage of asset products of high net worth individuals in relation to that of high income earning individuals.

8.5 Word of Mouth Marketing in Private Banking

Marketing to high net worth and high income earning individuals has always presented marketers with a unique challenge - traditional mass marketing communication tools such as television and print advertising have never been an effective approach to reach this market for a number of reasons:

- expense and wastage - it is not cost effective to communicate via the mass media to reach a relatively small number of individuals frequently;
- clutter – fighting with the advertising voices of fast moving consumer goods and retail products with a private banking product category that is insignificant in comparison to the above; and
- non-vanilla product offering – for the most part, private banking products and services are not “off the shelf” offerings but are designed according to individual requirements, making it more difficult to standardise in a compelling way through standard advertising.

As a result, direct marketing and client entertainment, including sponsorships, have become the cornerstones of marketing communication activities. However, with direct marketing response rates being relatively low and client entertainment only reaching those clients who have the time and preference for social gatherings, the cost effectiveness of these initiatives is constantly questioned.

This research is the result of information gathered from 145 respondents who were contacted according to the sample that was drawn, as well as 28 respondents who, through word of mouth, heard about the research from friends and colleagues and submitted completed questionnaires to the researcher, accounting for 16% of respondents. This demonstrates the power of word of mouth among these individuals and presents an opportunity to explore the effectiveness of word of mouth as a marketing tool in relation to traditional communication tools such as direct marketing and advertising.

Hypothesis 1:

H_0: $\mu_{\text{word of mouth}} - \mu_{\text{direct marketing}} = 0$

There is no difference in the effectiveness of word of mouth marketing among private banking clients in relation to that of direct marketing initiatives.

H_1: $\mu_{\text{word of mouth}} - \mu_{\text{direct marketing}} <> 0$

There is a difference in the effectiveness of word of mouth marketing among private banking clients in relation to that of direct marketing initiatives.

Hypothesis 2:

H_0: $\mu_{\text{word of mouth}} - \mu_{\text{direct marketing}} = 0$

There is no difference in the effectiveness of word of mouth marketing among private banking clients in relation to that of advertising initiatives.

H_1: $\mu_{\text{word of mouth}} - \mu_{\text{direct marketing}} <> 0$

There is a difference in the effectiveness of word of mouth marketing among private banking clients in relation to that of advertising initiatives.

REFERENCES

Abratt, R. & Russell, J. (1999): Relationship Marketing in Private Banking in South Africa, *The International Journal of Bank Marketing,* 17(1), 5-19.

Beckett, A., Hewer, P. & Howcroft, B. (2000): An exposition of consumer behaviour in the financial service industry, *The International Journal of Educational Management,* 18(1), 15-26.

Bendixen, M., Abratt, R. & Myres, H. (2001): Knowledge Products: Their Conceptualisation and Properties, *Management Dynamics: Contemporary Research,* 10(3), Winter 2001, 1-17.

Bendixen, M., Spence, J. Myres, H. and Abratt, R. (1997): The 4P-4R Framework: The Marketing Mix of Knowledge Products, *Marketing in Transition: Responses to Drastic Change, ISMB-CBIM Joint Conference.* January, Atlanta. The Georgia State University.

Bendixen,M. & Sandler,M. (1995): Converting Verbal Scales to Interval Scales Using Correspondence Analysis, *Management Dynamics: Contemporary Research*, 4(1), 32-50.

Cooper,D.R. & Schindler P.S. (1998): *Business Research Methods,* sixth edition, Singapore: Irwin/McGraw-Hill.

Customer Watch (2002): Segmentation Architecture, *Marketing Management,* 11(2), 6.

Dibb, S. (1998): Market Segmentation: Strategies for Success, *Marketing Intelligence & Planning,* 16(7), 394-406.

Gleason, D. (ed) (2002): Private Banking Survey, *Without Prejudice,* 2(4), 18-23.

Green, P.E. (1977): A New Approach in Market Segmentation, *Business Horizons,* 20(1), 61-74.

Grönroos, C. (1994): From Marketing Mix to Relationship Marketing: Towards a Paradigm Shift in Marketing, *Management Decision,* 32(2), 4-20.

Grönroos, C. (1996): Relationship Marketing: Strategic and Tactical Implications, *Management Decision,* 34(3), 5-14.

Gummesson, E. (1997): Relationship Marketing AS a Paradigm Shift: Some Conclusions fro the 30R Approach, *Marketing Management,* 6(3), Fall97, 4-21.

Harrison, T. (1994): Mapping Customer Segments for Personal Financial Services, *International Journal of Bank Marketing,* 12(8), 17-25.

Kara, A. & Kaynak, E. (1997): Markets of a Single Customer: Exploiting Conceptual Developments in Market Segmentation, *European Journal of Marketing,* 31(11/12), 873-895.

Kotler, P. (1988): *Marketing Management,* The Millenium Edition, New Jersey: Prentice-Hall International.

Leedy,P.D. & Ormrod, J.E. (2001): *Practical Research: Planning and Design*, New Jersey: Merrill Prentice Hall.

Machauer, A. & Morgner, S. (2001): Segmentation of Bank Customers by Expected Benefits and Attitudes, *International Journal of Bank Marketing,* 19(1), 6-18.

Marcus, C. (1998): A Practical yet Meaningful Approach to Customer Segmentation, *Journal of Consumer Marketing,* 15(5), 494-515.

McDougall, G.H.G. & Levesqu, T.J. (1994): Benefit Segmentation using Service Quality Dimensions, *The International Journal of Bank Marketing,* 12(2), 15-23.

Minhas, R.S. & Jacobs, E.M. (1996): Benefit Segmentation by Factor Analysis: An Improved Method of Targeting Customers for Financial Services, *International Journal of Bank Marketing,* 14(3), 3-13.

PricewaterhouseCoopers (2001): European Private Banking/Wealth Management Survey 2000/2001*, PricewaterhouseCoopers,*1-23.

Ravald, A. & Grönroos, C. (1996): The Value Concept and Relationship Marketing, *European Journal of Marketing,* 30(2), 19-30.

Ryan, C. (2005): South Africa's Millionaire Class is Just Getting Started, *Without Prejudice*, 5(6), 18-22.

Schiffman, L.G. & Kanuk, L.L. (1978): *Consumer Behaviour,* fourth edition, New Jersey: Prentice-Hall International.

Shostack, G. (1977): Breaking Free from Product Marketing, *Journal of Marketing,* 41(2), 73-80.

Wind, Y. (1978): Issues and Advances in Segmentation Research, *Journal of Marketing Research,* 15(3), 317-388.

Wirtz, J. & Bateson, J.E.G. (1999): Introducing Uncertain Performance Expectations in Satisfaction Models for Service, *International Journal of Service Industry Management,* 10(1), 82-99.

APPENDIX A

Private Banking Research Questionnaire

(Y)

Section 1: Personal Details

Please fill in your details below and mark the relevant boxes with an X.

Age	<25		25-35		36-45		46-55		>56	
Male					Female					
Name and surname					Private Bank account number					

Section 2: Benefits

What benefits do you expect from dealing with your private bank?

Consider the following statements and rate each of them accordingly.

	Benefit statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1)	I expect personal service through a dedicated private banker from my private bank					
2)	I expect convenience through the use of information technology from my private bank					
3)	I expect investment opportunities that achieve competitive returns from my private bank					
4)	I do not expect transactional banking facilities such as a credit card, current account or petrol card from my private bank					
5)	I expect cash investment opportunities such as call deposits, fixed deposits and money market fund investment opportunities that achieve~~s~~ competitive returns					
6)	I would like access to an extensive range of private banking products and services that includes investment management, lending, fiduciary and transactional banking facilities					
7)	I would like access to a limited range of private banking products and services, encompassing only investment management or lending or fiduciary or transactional banking facilities					
8)	I expect my private bank to offer me financial advice					

Section 3: Attitude

How do you feel about your private bank?

Consider the following statements and rate each of them accordingly.

	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
9)	In my opinion, quality service from my private bank is more important than the best lending rate in the market					
10)	In my opinion, information to make my own financial decisions is more important than a private banker that makes decisions on my behalf					
11)	In my opinion, investment management solutions that recognise my risk profile is more important than ad hoc alternative investment products					
12)	In my opinion, it is more important to trust my private banker than it is to trust my private bank					
13)	In my opinion, my relationship with my private banker is more important than my relationship with my private bank					
14)	In my opinion, the use of technology to provide me with greater convenience and control, is more important than the relationship with my private banker					
15)	In my opinion, a safe and secure environment in which to conduct my financial matters (for example daily transactional banking), is more important than convenience and control					

Section 4: Perceptions

How would you rate the following statements in relation to your perception of private banking products and services?

	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
16)	I do not have a high level of knowledge and understanding of private banking products					
17)	I am confident in my ability to deal with my financial matters					
18)	I do not enjoy being actively involved in managing my financial affairs					
19)	I find it difficult to evaluate the outcome (performance) of private banking products and services					
20)	I ignore the recommendations and opinions of friends when I make decisions regarding private banking products and services					
21)	A long–term relationship with my private banker is important in fulfilling my expectations of private banking products and services					
22)	I believe that private banking products and services have a higher risk associated with them than retail banking products and services					
23)	Private banking products and services need to achieve their intended performance					

Section 5: Motivations

What drives you to engage a private bank? Consider the following statements in relation to your motivations for using a private bank.

	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
24)	I am driven to create wealth for myself					
25)	I am driven to maintain my current wealth					
26)	I am driven to preserve my wealth for my family in generations to come					

Section 6: Product behaviour

Are your product and service requirements adequately provided for?
Consider the statements below in relation to your product usage.

	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
27)	I use foundation products such as daily transactional banking and cash investments					
28)	I use complex products such as alternative investment products and structured and specialized lending					

Thank you for taking the time to complete this questionnaire.

oOo

APPENDIX B

Factor Analysis Report for Four Factors after Varimax Rotation

Descriptive Statistics Section

Variables	Count	Mean	Standard Deviation	Communality
DediPBQ1	159	1.307331	0.452939	0.305962
ConvITQ2	159	1.151847	0.3501477	0.164783
InvestQ3	159	1.513991	0.5605943	0.463429
TrnsctQ4	159	4.076857	1.171261	0.181742
CshinvQ5	159	1.561636	0.623701	0.322304
Ex10svQ6	159	1.677736	0.5572181	0.271108
Ltdp_sQ7	159	2.830502	0.9857675	0.151272
FinadvQ8	159	1.781095	0.7704878	0.339513
QualSQ9	159	2.198323	0.8121842	0.175907
InfoQ10	159	1.791599	0.6624467	0.207340
AllnvQ11	159	1.882666	0.6228966	0.167261
TrustQ12	159	2.550485	1.030497	0.649114
RelatQ13	159	2.437834	0.9007006	0.577651
ITvsRQ14	159	2.287291	0.8463891	0.376788
SSQ15	159	2.17648	0.7493802	0.035000
KnowQ16	159	2.56191	0.8573709	0.364077
ConfQ17	159	1.863138	0.5515033	0.384923
ActivQ18	159	3.43214	1.098729	0.366069
EvalQ19	159	2.677076	0.9647526	0.424713
IgnorQ20	159	2.541696	0.7373847	0.047661
LtRQ21	159	1.789668	0.6176187	0.300994
RiskQ22	159	3.315787	0.990531	0.240953
PrfrmQ23	159	1.598559	0.5847235	0.250922
CrtWQ24	159	1.509531	0.6390697	0.350118
MtnWQ25	159	1.69678	0.7915417	0.339620
PrsvWQ26	159	1.8011	0.8788963	0.262110
BasicQ27	159	1.669815	0.6474599	0.181730
CmplxQ28	159	2.70393	0.8969527	0.109190

Correlation Section

Variables	DediPBQ1	ConvITQ2	InvestQ3	TrnsctQ4	CshinvQ5
DediPBQ1	1.000000	0.306181	0.125014	-0.150722	0.153941
ConvITQ2	0.306181	1.000000	0.194149	-0.081777	0.139564
InvestQ3	0.125014	0.194149	1.000000	0.041240	0.537659
TrnsctQ4	-0.150722	-0.081777	0.041240	1.000000	0.025706
CshinvQ5	0.153941	0.139564	0.537659	0.025706	1.000000
Ex10svQ6	0.273646	0.193189	0.289965	0.068228	0.340099
Ltdp_sQ7	-0.154838	-0.096665	-0.020305	0.130857	-0.001612
FinadvQ8	0.220555	0.139943	0.297596	-0.027496	0.162625
QualSQ9	0.039672	-0.075359	-0.032092	0.001536	0.087921
InfoQ10	-0.019706	0.046491	-0.215733	0.043124	-0.094223
AllnvQ11	0.091320	0.028238	0.182015	-0.148564	0.075150
TrustQ12	0.100109	-0.022204	0.072995	0.012438	0.238294
RelatQ13	0.189668	0.008653	0.009748	0.093269	0.209385
ItvsRQ14	-0.308757	0.116556	-0.004559	0.155586	-0.066262
SSQ15	-0.044163	-0.019484	0.057215	0.033034	0.055795
KnowQ16	-0.101877	-0.154639	0.068233	0.041122	0.093547
ConfQ17	-0.023235	0.120397	-0.225541	-0.085032	-0.152788
ActivQ18	-0.134460	-0.146871	0.028894	0.099727	0.089307
EvalQ19	-0.065331	-0.160236	0.132936	0.051420	0.198475
IgnorQ20	0.003300	-0.056479	-0.061537	0.054049	-0.053823
LtRQ21	0.303381	0.050058	0.055811	-0.005941	0.132318
RiskQ22	-0.098698	-0.132663	0.081172	0.185199	0.068355
PrfrmQ23	0.115903	0.183675	0.114996	-0.098671	0.058597
CrtWQ24	0.080765	0.102853	0.088466	0.038482	0.100458
MtnWQ25	0.176486	0.180639	0.313755	-0.144513	0.149572
PrsvWQ26	0.154768	0.136528	0.159198	-0.186422	0.138701
BasicQ27	0.151856	0.122786	-0.057356	-0.257082	0.147636
CmplxQ28	0.008489	-0.007250	0.120157	0.107489	-0.012115

Variables	Ex10svQ6	Ltdp_sQ7	FinadvQ8	QualSQ9	InfoQ10
DediPBQ1	0.273646	-0.154838	0.220555	0.039672	-0.019706
ConvITQ2	0.193189	-0.096665	0.139943	-0.075359	0.046491
InvestQ3	0.289965	-0.020305	0.297596	-0.032092	-0.215733
TrnsctQ4	0.068228	0.130857	-0.027496	0.001536	0.043124
CshinvQ5	0.340099	-0.001612	0.162625	0.087921	-0.094223
Ex10svQ6	1.000000	-0.271915	0.224369	-0.084416	-0.104310
Ltdp_sQ7	-0.271915	1.000000	-0.083569	0.054933	0.087043
FinadvQ8	0.224369	-0.083569	1.000000	0.057126	-0.204567
QualSQ9	-0.084416	0.054933	0.057126	1.000000	-0.072690
InfoQ10	-0.104310	0.087043	-0.204567	-0.072690	1.000000
AllnvQ11	0.143327	-0.057651	0.350495	-0.066958	0.008051
TrustQ12	0.126609	0.037093	0.113276	0.231850	-0.198211
RelatQ13	0.055771	0.025514	0.019627	0.142347	-0.078295
ItvsRQ14	-0.075429	0.127038	-0.135093	-0.192257	0.221795
SSQ15	-0.054550	0.151959	0.003120	-0.084597	-0.014532
KnowQ16	0.016562	0.044606	0.280355	0.156998	-0.124249
ConfQ17	-0.052936	-0.139296	-0.264060	-0.074770	0.280171
ActivQ18	0.086421	0.153898	0.094688	0.125675	-0.231566
EvalQ19	0.132329	0.130992	0.078988	0.231769	-0.186011
IgnorQ20	0.029873	0.063829	-0.060400	0.109740	-0.001683
LtRQ21	0.139701	-0.121960	0.193638	0.125360	-0.108909
RiskQ22	0.141896	0.132076	0.121176	0.208893	-0.259398
PrfrmQ23	0.131038	-0.186358	0.062224	-0.111049	0.294166
CrtWQ24	0.206777	-0.090391	0.031045	-0.141052	0.184419
MtnWQ25	0.131936	-0.120897	0.248277	-0.068850	-0.043142
PrsvWQ26	0.244100	-0.084472	0.196689	-0.059577	-0.138988
BasicQ27	0.028232	-0.153584	-0.071733	0.016227	0.047447
CmplxQ28	0.149256	-0.033839	0.044373	-0.305000	0.004803

Variables	AllnvQ11	TrustQ12	RelatQ13	ITvsRQ14	SSQ15
DediPBQ1	0.091320	0.100109	0.189668	-0.308757	-0.044163
ConvITQ2	0.028238	-0.022204	0.008653	0.116556	-0.019484
InvestQ3	0.182015	0.072995	0.009748	-0.004559	0.057215
TrnsctQ4	-0.148564	0.012438	0.093269	0.155586	0.033034
CshinvQ5	0.075150	0.238294	0.209385	-0.066262	0.055795
Ex10svQ6	0.143327	0.126609	0.055771	-0.075429	-0.054550
Ltdp_sQ7	-0.057651	0.037093	0.025514	0.127038	0.151959
FinadvQ8	0.350495	0.113276	0.019627	-0.135093	0.003120
QualSQ9	-0.066958	0.231850	0.142347	-0.192257	-0.084597
InfoQ10	0.008051	-0.198211	-0.078295	0.221795	-0.014532
AllnvQ11	1.000000	0.109659	-0.055161	-0.124458	0.010835
TrustQ12	0.109659	1.000000	0.645605	-0.046815	-0.047018
RelatQ13	-0.055161	0.645605	1.000000	-0.015157	0.086635
ItvsRQ14	-0.124458	-0.046815	-0.015157	1.000000	0.131411
SSQ15	0.010835	-0.047018	0.086635	0.131411	1.000000
KnowQ16	0.186196	0.233487	0.262282	-0.079980	-0.083875
ConfQ17	-0.139228	-0.090978	-0.080602	0.114430	-0.048254
ActivQ18	-0.031185	0.198962	0.205543	-0.063620	0.002438
EvalQ19	0.034155	0.358759	0.295319	-0.135365	-0.036176
IgnorQ20	0.047472	0.185743	0.067066	0.062758	-0.098839
LtRQ21	-0.010961	0.358822	0.327435	-0.309420	-0.041471
RiskQ22	-0.006603	0.130710	0.041925	-0.040553	0.083035
PrfrmQ23	0.174534	-0.145607	-0.136747	0.047049	-0.046729
CrtWQ24	-0.000991	-0.007522	-0.040920	0.200227	-0.038906
MtnWQ25	0.262393	0.071081	-0.041475	-0.058757	0.040726
PrsvWQ26	0.215691	0.199522	0.038405	-0.135799	0.041567
BasicQ27	-0.039816	0.174348	0.116893	-0.060435	0.050918
CmplxQ28	0.007814	-0.052433	-0.089214	0.047187	0.087385

Variables	KnowQ16	ConfQ17	ActivQ18	EvalQ19	IgnorQ20
DediPBQ1	-0.101877	-0.023235	-0.134460	-0.065331	0.003300
ConvITQ2	-0.154639	0.120397	-0.146871	-0.160236	-0.056479
InvestQ3	0.068233	-0.225541	0.028894	0.132936	-0.061537
TrnsctQ4	0.041122	-0.085032	0.099727	0.051420	0.054049
CshinvQ5	0.093547	-0.152788	0.089307	0.198475	-0.053823
Ex10svQ6	0.016562	-0.052936	0.086421	0.132329	0.029873
Ltdp_sQ7	0.044606	-0.139296	0.153898	0.130992	0.063829
FinadvQ8	0.280355	-0.264060	0.094688	0.078988	-0.060400
QualSQ9	0.156998	-0.074770	0.125675	0.231769	0.109740
InfoQ10	-0.124249	0.280171	-0.231566	-0.186011	-0.001683
AllnvQ11	0.186196	-0.139228	-0.031185	0.034155	0.047472
TrustQ12	0.233487	-0.090978	0.198962	0.358759	0.185743
RelatQ13	0.262282	-0.080602	0.205543	0.295319	0.067066
ITvsRQ14	-0.079980	0.114430	-0.063620	-0.135365	0.062758
SSQ15	-0.083875	-0.048254	0.002438	-0.036176	-0.098839
KnowQ16	1.000000	-0.385222	0.379452	0.477166	-0.017874
ConfQ17	-0.385222	1.000000	-0.283675	-0.357040	0.200202
ActivQ18	0.379452	-0.283675	1.000000	0.426582	-0.091929
EvalQ19	0.477166	-0.357040	0.426582	1.000000	0.051093
IgnorQ20	-0.017874	0.200202	-0.091929	0.051093	1.000000
LtRQ21	0.109660	-0.110708	-0.009520	0.164667	0.002345
RiskQ22	0.216788	-0.271888	0.276014	0.281845	-0.078542
PrfrmQ23	-0.122159	0.151503	-0.239288	-0.168591	-0.043382
CrtWQ24	-0.251770	0.171212	-0.278025	-0.074744	-0.037861
MtnWQ25	0.080831	-0.013996	-0.191810	-0.008343	-0.077621
PrsvWQ26	0.006135	0.052157	0.017399	0.062526	0.007696
BasicQ27	-0.063600	0.115132	-0.143491	0.008920	-0.076598
CmplxQ28	-0.203557	0.057189	-0.034062	-0.150894	-0.036853

Variables	LtRQ21	RiskQ22	PrfrmQ23	CrtWQ24	MtnWQ25
DediPBQ1	0.303381	-0.098698	0.115903	0.080765	0.176486
ConvITQ2	0.050058	-0.132663	0.183675	0.102853	0.180639
InvestQ3	0.055811	0.081172	0.114996	0.088466	0.313755
TrnsctQ4	-0.005941	0.185199	-0.098671	0.038482	-0.144513
CshinvQ5	0.132318	0.068355	0.058597	0.100458	0.149572
Ex10svQ6	0.139701	0.141896	0.131038	0.206777	0.131936
Ltdp_sQ7	-0.121960	0.132076	-0.186358	-0.090391	-0.120897
FinadvQ8	0.193638	0.121176	0.062224	0.031045	0.248277
QualSQ9	0.125360	0.208893	-0.111049	-0.141052	-0.068850
InfoQ10	-0.108909	-0.259398	0.294166	0.184419	-0.043142
AllnvQ11	-0.010961	-0.006603	0.174534	-0.000991	0.262393
TrustQ12	0.358822	0.130710	-0.145607	-0.007522	0.071081
RelatQ13	0.327435	0.041925	-0.136747	-0.040920	-0.041475
ItvsRQ14	-0.309420	-0.040553	0.047049	0.200227	-0.058757
SSQ15	-0.041471	0.083035	-0.046729	-0.038906	0.040726
KnowQ16	0.109660	0.216788	-0.122159	-0.251770	0.080831
ConfQ17	-0.110708	-0.271888	0.151503	0.171212	-0.013996
ActivQ18	-0.009520	0.276014	-0.239288	-0.278025	-0.191810
EvalQ19	0.164667	0.281845	-0.168591	-0.074744	-0.008343
IgnorQ20	0.002345	-0.078542	-0.043382	-0.037861	-0.077621
LtRQ21	1.000000	0.097882	0.019697	0.062621	0.138059
RiskQ22	0.097882	1.000000	-0.264706	-0.098290	-0.021986
PrfrmQ23	0.019697	-0.264706	1.000000	0.350713	0.118450
CrtWQ24	0.062621	-0.098290	0.350713	1.000000	0.321924
MtnWQ25	0.138059	-0.021986	0.118450	0.321924	1.000000
PrsvWQ26	0.228544	0.123696	0.065912	0.312458	0.471628
BasicQ27	0.088591	-0.121782	0.200807	0.139126	0.268989
CmplxQ28	-0.047843	-0.160393	0.124245	0.144886	0.048802

Variables	PrsvWQ26	BasicQ27	CmplxQ28
DediPBQ1	0.154768	0.151856	0.008489
ConvITQ2	0.136528	0.122786	-0.007250
InvestQ3	0.159198	-0.057356	0.120157
TrnsctQ4	-0.186422	-0.257082	0.107489
CshinvQ5	0.138701	0.147636	-0.012115
Ex10svQ6	0.244100	0.028232	0.149256
Ltdp_sQ7	-0.084472	-0.153584	-0.033839
FinadvQ8	0.196689	-0.071733	0.044373
QualSQ9	-0.059577	0.016227	-0.305000
InfoQ10	-0.138988	0.047447	0.004803
AllnvQ11	0.215691	-0.039816	0.007814
TrustQ12	0.199522	0.174348	-0.052433
RelatQ13	0.038405	0.116893	-0.089214
ITvsRQ14	-0.135799	-0.060435	0.047187
SSQ15	0.041567	0.050918	0.087385
KnowQ16	0.006135	-0.063600	-0.203557
ConfQ17	0.052157	0.115132	0.057189
ActivQ18	0.017399	-0.143491	-0.034062
EvalQ19	0.062526	0.008920	-0.150894
IgnorQ20	0.007696	-0.076598	-0.036853
LtRQ21	0.228544	0.088591	-0.047843
RiskQ22	0.123696	-0.121782	-0.160393
PrfrmQ23	0.065912	0.200807	0.124245
CrtWQ24	0.312458	0.139126	0.144886
MtnWQ25	0.471628	0.268989	0.048802
PrsvWQ26	1.000000	0.110700	0.014899
BasicQ27	0.110700	1.000000	0.006363
CmplxQ28	0.014899	0.006363	1.000000

Phi=0.156885 Log(Det|R|)=-7.082678 Bartlett Test=1047.06 DF=378

Prob=0.000000

Bar Chart of Absolute Correlation Section

Variables	DediPBQ1	ConvITQ2	InvestQ3	TrnsctQ4	CshinvQ5
DediPBQ1		|||||||	|||	||||	||||
ConvITQ2	|||||||		||||	||	|||
InvestQ3	|||	||||			||||||||||
TrnsctQ4	||||	||				
CshinvQ5	||||	|||	||||||||||		
Ex10svQ6	||||||	||||	||||||	||	|||||||
Ltdp_sQ7	||||	||		|||	
FinadvQ8	|||||	|||	||||||		||||
QualSQ9			||				||
InfoQ10				|||||		||
AllnvQ11	||		||||	|||	||
TrustQ12	|||		||		|||||
RelatQ13	||||				||	|||||
ITvsRQ14	|||||||	|||		||||	||
SSQ15				||		||
KnowQ16	|||	||||	||		||
ConfQ17			|||	|||||	||	||||
ActivQ18	|||	|||		||	||
EvalQ19	||	||||	|||	||	||||
IgnorQ20			||	||	||	||
LtRQ21	|||||||	||	||		|||
RiskQ22	||	|||	||	||||	||
PrfrmQ23	|||	||||	|||	||	||
CrtWQ24	||	|||	||		|||
MtnWQ25	||||	||||	|||||||	|||	|||
PrsvWQ26	||||	|||	||||	||||	|||
BasicQ27	||||	|||	||	||||||	|||
CmplxQ28				|||	|||		

Variables	Ex10svQ6	Ltdp_sQ7	FinadvQ8	QualSQ9	InfoQ10
DediPBQ1	||||||	||||	|||||	|	|
ConvITQ2	||||	||	|||	||	|
InvestQ3	||||||	|	||||||	|	|||||
TrnsctQ4	||	|||	|	|	|
CshinvQ5	|||||||	|	||||	||	||
Ex10svQ6		||||||	|||||	||	|||
Ltdp_sQ7	||||||		||	||	||
FinadvQ8	|||||	||		||	|||||
QualSQ9	||	||	||		||
InfoQ10	|||	||	|||||	||	
AllnvQ11	|||	||	|||||||	||	|
TrustQ12	|||	|	|||	|||||	||||
RelatQ13	||	|	|	|||	||
ItvsRQ14	||	|||	|||	||||	|||||
SSQ15	||	||||	|	||	|
KnowQ16	|	|	|||||	||||	|||
ConfQ17	||	|||	|||||	||	|||||
ActivQ18	||	||||	||	|||	|||||
EvalQ19	|||	|||	||	|||||	||||
IgnorQ20	|	||	||	|||	|
LtRQ21	|||	|||	||||	|||	|||
RiskQ22	|||	|||	|||	|||||	|||||
PrfrmQ23	|||	||||	||	|||	|||||
CrtWQ24	|||||	||	|	|||	||||
MtnWQ25	|||	|||	|||||	||	|
PrsvWQ26	|||||	||	||||	||	|||
BasicQ27	|	||||	||	|	|
CmplxQ28	|||	|	|	||||||	|

Variables	AllnvQ11	TrustQ12	RelatQ13	ITvsRQ14	SSQ15
DediPBQ1	||	|||	||||	||||||	|
ConvITQ2	|	|	|	|||	|
InvestQ3	||||	||	|	|	||
TrnsctQ4	|||	|	||	||||	|
CshinvQ5	||	|||||	|||||	||	||
Ex10svQ6	|||	|||	||	||	||
Ltdp_sQ7	||	|	|	|||	||||
FinadvQ8	||||||||	|||	|	|||	|
QualSQ9	||	|||||	|||	||||	||
InfoQ10	|	||||	||	|||||	|
AllnvQ11		|||	||	|||	|
TrustQ12	|||		|||||||||||	|	|
RelatQ13	||	|||||||||||		|	||
ITvsRQ14	|||	|	|		|||
SSQ15	|	|	||	|||	
KnowQ16	||||	|||||	|||||	||	||
ConfQ17	|||	||	||	|||	|
ActivQ18	|	||||	|||||	||	|
EvalQ19	|	|||||||	|||||	|||	|
IgnorQ20	|	||||	||	||	||
LtRQ21	|	|||||||	||||||	||||||	|
RiskQ22	|	|||	|	|	||
PrfrmQ23	||||	|||	|||	|	|
CrtWQ24	|	|	|	|||||	|
MtnWQ25	|||||	||	|	||	|
PrsvWQ26	|||||	||||	|	|||	|
BasicQ27	|	||||	|||	||	||
CmplxQ28	|	||	||	|	||

Variables	KnowQ16	ConfQ17	ActivQ18	EvalQ19	IgnorQ20
DediPBQ1	|||		|||	||	
ConvITQ2	||||	|||	|||	||||	||
InvestQ3	||	|||||	|||	||
TrnsctQ4			||	||	||	||
CshinvQ5	||	||||	||	||||	||
Ex10svQ6			||	||	|||		
Ltdp_sQ7			|||	||||	|||	||
FinadvQ8	||||||	||||||	||	||	||
QualSQ9	||||	||	|||	|||||	|||
InfoQ10	|||	||||||	|||||	||||	
AllnvQ11	||||	|||					
TrustQ12	|||||	||	||||	||||||||	||||
RelatQ13	||||||	||	|||||	||||||	||
ITvsRQ14	||	|||	||	|||	||
SSQ15	||						||
KnowQ16			||||||||	|||||||	|||||||||	
ConfQ17	|||||||||		||||||	||||||||	|||||
ActivQ18	|||||||||	||||||		|||||||||	||
EvalQ19	||||||||||	||||||||	|||||||||		||
IgnorQ20			|||||	||	||	
LtRQ21	|||	|||			||||	
RiskQ22	|||||	||||||	||||||	||||||	||
PrfrmQ23	|||	||||	|||||	||||	
CrtWQ24	||||||	||||	||||||	||	
MtnWQ25	||			||||		||
PrsvWQ26			||			||	
BasicQ27	||	|||	|||		||
CmplxQ28	|||||	||			||||	

Variables	LtRQ21	RiskQ22	PrfrmQ23	CrtWQ24	MtnWQ25
DediPBQ1	||||||	||	|||	||	||||
ConvITQ2	||	|||	||||	|||	||||
InvestQ3	||	||	|||	||	||||||
TrnsctQ4	|	||||	||	|	|||
CshinvQ5	|||	||	||	|||	|||
Ex10svQ6	|||	|||	|||	|||||	|||
Ltdp_sQ7	|||	|||	||||	||	|||
FinadvQ8	||||	|||	||	|	|||||
QualSQ9	|||	|||||	|||	|||	||
InfoQ10	|||	||||||	||||||	||||	|
AllnvQ11	|	|	||||	|	||||||
TrustQ12	|||||||	|||	|||	|	||
RelatQ13	||||||	|	|||	|	|
ITvsRQ14	||||||	|	|	|||||	||
SSQ15	|	||	|	|	|
KnowQ16	|||	|||||	|||	||||||	||
ConfQ17	|||	||||||	||||	||||	|
ActivQ18	|	||||||	|||||	||||||	||||
EvalQ19	||||	||||||	||||	||	|
IgnorQ20	|	||	|	|	||
LtRQ21		||	|	||	|||
RiskQ22	||		|||||	||	|
PrfrmQ23	|	|||||		|||||||	|||
CrtWQ24	||	||	|||||||		||||||
MtnWQ25	|||	|	|||	||||||	
PrsvWQ26	|||||	|||	||	||||||	||||||||
BasicQ27	||	|||	|||||	|||	||||||
CmplxQ28	|	||||	|||	|||	|

Variables	PrsvWQ26	BasicQ27	CmplxQ28
DediPBQ1	||||	||||	|
ConvITQ2	|||	|||	|
InvestQ3	||||	||	|||
TrnsctQ4	||||	|||||	|||
CshinvQ5	|||	|||	|
Ex10svQ6	|||||	|	|||
Ltdp_sQ7	||	||||	|
FinadvQ8	||||	||	|
QualSQ9	||	|	||||||
InfoQ10	|||	|	|
AllnvQ11	|||||	|	|
TrustQ12	||||	||||	||
RelatQ13	|	|||	||
ITvsRQ14	|||	||	|
SSQ15	|	||	||
KnowQ16	|	||	|||||
ConfQ17	||	|||	||
ActivQ18	|	|||	|
EvalQ19	||	|	||||
IgnorQ20	|	||	|
LtRQ21	|||||	||	|
RiskQ22	|||	|||	||||
PrfrmQ23	||	|||||	|||
CrtWQ24	||||||	|||	|||
MtnWQ25	||||||||	|||||	|
PrsvWQ26		|||	|
BasicQ27	|||		|
CmplxQ28	|	|	

Phi=0.156885 Log(Det|R|)=-7.082678 Bartlett Test=1047.06 DF=378

Prob=0.000000

Eigenvalues after Varimax Rotation

		Individual	Cumulative	
No.	Eigenvalue	Percent	Percent	Scree Plot
1	2.712102	33.05	33.05	|||||||
2	2.477874	30.19	63.24	|||||||
3	1.645582	20.05	83.29	|||||
4	1.176694	14.34	97.62	|||
5	0.692876	8.44	106.07	||
6	0.552447	6.73	112.80	||
7	0.489300	5.96	118.76	||
8	0.436075	5.31	124.07	||
9	0.392135	4.78	128.85		
10	0.345583	4.21	133.06		
11	0.240267	2.93	135.99		
12	0.144869	1.77	137.75		
13	0.059098	0.72	138.47		
14	0.025542	0.31	138.79		
15	-0.001529	-0.02	138.77		
16	-0.042747	-0.52	138.25		
17	-0.087876	-1.07	137.18		
18	-0.091204	-1.11	136.06		
19	-0.146823	-1.79	134.28		
20	-0.210603	-2.57	131.71		
21	-0.225681	-2.75	128.96		
22	-0.236060	-2.88	126.08		
23	-0.296472	-3.61	122.47		
24	-0.312040	-3.80	118.67		
25	-0.352970	-4.30	114.37		
26	-0.357491	-4.36	110.01		
27	-0.397187	-4.84	105.17		
28	-0.424557	-5.17	100.00	||

Eigenvectors after Varimax Rotation

	Factors			
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**
DediPBQ1	0.098804	-0.277845	-0.156586	0.213373
ConvITQ2	-0.024694	-0.250637	-0.012435	-0.052398
InvestQ3	0.196082	-0.234676	0.337036	-0.225259
TrnsctQ4	0.022604	0.138748	0.094118	-0.342561
CshinvQ5	0.226655	-0.187486	0.072248	-0.254739
Ex10svQ6	0.158996	-0.250852	0.107576	-0.128494
Ltdp_sQ7	0.018457	0.204083	0.060254	-0.196731
FinadvQ8	0.224476	-0.179255	0.245250	0.141714
QualSQ9	0.161268	0.117339	-0.169119	0.145926
InfoQ10	-0.228594	-0.038810	-0.122894	-0.142577
AllnvQ11	0.107507	-0.165867	0.174758	0.141646
TrustQ12	0.341917	-0.023497	-0.420583	-0.215365
RelatQ13	0.279508	0.029371	-0.443517	-0.260667
ITvsRQ14	-0.163707	0.056919	0.063946	-0.524487
SSQ15	-0.003191	0.009563	0.073977	-0.164206
KnowQ16	0.307194	0.144151	0.093375	0.075712
ConfQ17	-0.274847	-0.107636	-0.295609	-0.057809
ActivQ18	0.256562	0.233983	0.116489	-0.060386
EvalQ19	0.343920	0.138729	-0.011642	-0.085503
IgnorQ20	-0.003744	0.033889	-0.175163	-0.059798
LtRQ21	0.221735	-0.139059	-0.247516	0.128457
RiskQ22	0.222809	0.140892	0.160556	-0.037515
PrfrmQ23	-0.127271	-0.279296	0.006837	-0.043308
CrtWQ24	-0.087039	-0.305305	-0.033958	-0.293803
MtnWQ25	0.091382	-0.344606	0.087382	0.033802
PrsvWQ26	0.140209	-0.280286	0.001249	0.030971
BasicQ27	0.004535	-0.193726	-0.251715	0.036500
CmplxQ28	-0.083558	-0.116235	0.123165	-0.179548

Bar Chart of Absolute Eigenvectors after Varimax Rotation

	Factors			
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**
DediPBQ1	||	||||||	||||	|||||
ConvITQ2	|	||||||	|	||
InvestQ3	||||	|||||	||||||	|||||
TrnsctQ4	|	|||	||	||||||
CshinvQ5	|||||	||||	||	||||||
Ex10svQ6	||||	||||||	|||	|||
Ltdp_sQ7	|	|||||	||	||||
FinadvQ8	|||||	||||	|||||	|||
QualSQ9	||||	|||	||||	|||
InfoQ10	|||||	|	|||	|||
AllnvQ11	|||	||||	||||	|||
TrustQ12	||||||	|	|||||||	|||||
RelatQ13	||||||	|	|||||||	||||||
ITvsRQ14	|||||	||	||	|||||||||
SSQ15	|	|	||	||||
KnowQ16	||||||	|||	||	||
ConfQ17	||||||	|||	||||||	||
ActivQ18	||||||	|||||	|||	||
EvalQ19	||||||	|||	|	||
IgnorQ20	|	|	||||	||
LtRQ21	|||||	|||	|||||	|||
RiskQ22	|||||	|||	||||	|
PrfrmQ23	|||	||||||	|	|
CrtWQ24	||	||||||	|	||||||
MtnWQ25	||	||||||	||	|
PrsvWQ26	|||	||||||	|	|
BasicQ27	|	||||	||||||	|
CmplxQ28	||	|||	|||	||||

Factor Loadings after Varimax Rotation

	Factors			
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**
DediPBQ1	-0.122935	-0.339686	-0.163413	0.385693
ConvlTQ2	-0.256975	-0.308787	-0.021355	0.054234
InvestQ3	0.159109	-0.628372	0.081227	-0.191480
TrnsctQ4	0.126253	0.065875	-0.041840	-0.399640
CshinvQ5	0.135624	-0.493614	-0.204273	-0.136117
Ex10svQ6	0.024720	-0.514047	-0.076195	-0.021149
Ltdp_sQ7	0.186599	0.191957	-0.017232	-0.281618
FinadvQ8	0.269758	-0.480167	0.102153	0.160463
QualSQ9	0.277435	0.115208	-0.231373	0.179250
InfoQ10	-0.412300	0.153700	0.008823	-0.116822
AllnvQ11	0.095767	-0.343000	0.126291	0.156496
TrustQ12	0.250412	-0.174195	-0.744929	0.033836
RelatQ13	0.194025	-0.055396	-0.731983	-0.033731
ITvsRQ14	-0.236314	0.087680	0.007219	-0.559646
SSQ15	0.004602	-0.042199	0.016127	-0.181489
KnowQ16	0.585180	-0.079655	-0.117330	0.039117
ConfQ17	-0.583883	0.183047	-0.093548	0.041789
ActivQ18	0.578207	0.044067	-0.099780	-0.140881
EvalQ19	0.564459	-0.102652	-0.303085	-0.060835
IgnorQ20	-0.052420	0.104595	-0.184213	-0.006225
LtRQ21	0.112044	-0.236660	-0.370125	0.308932
RiskQ22	0.474694	-0.062828	-0.027172	-0.104560
PrfrmQ23	-0.411407	-0.270699	0.078931	0.046453
CrtWQ24	-0.435107	-0.363461	-0.080235	-0.149193
MtnWQ25	-0.126600	-0.546001	0.010108	0.159288
PrsvWQ26	-0.039318	-0.468409	-0.108643	0.171331
BasicQ27	-0.245103	-0.149905	-0.239538	0.204462
CmplxQ28	-0.193915	-0.163127	0.115186	-0.178070

Bar Chart of Absolute Factor Loadings after Varimax Rotation

	Factors			
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**
DediPBQ1	|||	|||||||	||||								
ConvITQ2	||||||	|||||||		||
InvestQ3	||||	||||||||||||	||	||||
TrnsctQ4	|||	||			|||||||
CshinvQ5	|||	|||||||||	|||||	|||
Ex10svQ6			||||||||||	||	
Ltdp_sQ7	||||	||||			||||||
FinadvQ8	||||||	|||||||||	|||	||||
QualSQ9	||||||	|||	|||||	||||
InfoQ10	||||||||	||||			|||
AllnvQ11	||	|||||||	|||	||||
TrustQ12	||||||	||||	||||||||||||||	
RelatQ13	||||	||	||||||||||||||	
ITvsRQ14	|||||	||			||||||||||||
SSQ15									||||
KnowQ16	||||||||||	||	|||	
ConfQ17	||||||||||	||||	||	
ActivQ18	||||||||||			||	|||
EvalQ19	||||||||||	|||	|||||||	||
IgnorQ20	||	|||	||||	
LtRQ21	|||	|||||	||||||||	|||||||
RiskQ22	|||||||||	||		|||
PrfrmQ23	||||||||	||||||	||	
CrtWQ24	||||||||	|||||||	||	|||
MtnWQ25	|||	||||||||||			||||
PrsvWQ26			|||||||||	|||	||||
BasicQ27	|||||	|||	|||||	|||||
CmplxQ28	||||	||||	|||	||||

Communalities after Varimax Rotation

	Factors				
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**	**Communality**
DediPBQ1	0.015113	0.115387	0.026704	0.148759	0.305962
ConvITQ2	0.066036	0.095349	0.000456	0.002941	0.164783
InvestQ3	0.025316	0.394851	0.006598	0.036665	0.463429
TrnsctQ4	0.015940	0.004339	0.001751	0.159712	0.181742
CshinvQ5	0.018394	0.243655	0.041727	0.018528	0.322304
Ex10svQ6	0.000611	0.264244	0.005806	0.000447	0.271108
Ltdp_sQ7	0.034819	0.036848	0.000297	0.079309	0.151272
FinadvQ8	0.072770	0.230560	0.010435	0.025748	0.339513
QualSQ9	0.076970	0.013273	0.053533	0.032131	0.175907
InfoQ10	0.169991	0.023624	0.000078	0.013647	0.207340
AllnvQ11	0.009171	0.117649	0.015949	0.024491	0.167261
TrustQ12	0.062706	0.030344	0.554919	0.001145	0.649114
RelatQ13	0.037646	0.003069	0.535799	0.001138	0.577651
ITvsRQ14	0.055844	0.007688	0.000052	0.313203	0.376788
SSQ15	0.000021	0.001781	0.000260	0.032938	0.035000
KnowQ16	0.342435	0.006345	0.013766	0.001530	0.364077
ConfQ17	0.340919	0.033506	0.008751	0.001746	0.384923
ActivQ18	0.334324	0.001942	0.009956	0.019847	0.366069
EvalQ19	0.318614	0.010537	0.091861	0.003701	0.424713
IgnorQ20	0.002748	0.010940	0.033935	0.000039	0.047661
LtRQ21	0.012554	0.056008	0.136992	0.095439	0.300994
RiskQ22	0.225335	0.003947	0.000738	0.010933	0.240953
PrfrmQ23	0.169256	0.073278	0.006230	0.002158	0.250922
CrtWQ24	0.189318	0.132104	0.006438	0.022258	0.350118
MtnWQ25	0.016028	0.298118	0.000102	0.025373	0.339620
PrsvWQ26	0.001546	0.219407	0.011803	0.029354	0.262110
BasicQ27	0.060075	0.022471	0.057378	0.041805	0.181730
CmplxQ28	0.037603	0.026610	0.013268	0.031709	0.109190

Bar Chart of Communalities after Varimax Rotation

	Factors				
Variables	**Factor1**	**Factor2**	**Factor3**	**Factor4**	**Communality**
DediPBQ1	|	|||	|	|||	||||||
ConvITQ2	||	||	|	|	||||
InvestQ3	|	|||||||	|	|	||||||||
TrnsctQ4	|	|	|	||||	||||
CshinvQ5	|	|||||	|	|	||||||
Ex10svQ6	|	||||||	|	|	|||||
Ltdp_sQ7	|	|	|	||	||||
FinadvQ8	||	|||||	|	|	||||||
QualSQ9	||	|	||	|	||||
InfoQ10	||||	|	|	|	|||||
AllnvQ11	|	|||	|	|	||||
TrustQ12	||	|	|||||||||	|	||||||||||
RelatQ13	|	|	|||||||||	|	||||||||||
ITvsRQ14	||	|	|	||||||	||||||
SSQ15	|	|	|	|	|
KnowQ16	||||||	|	|	|	||||||
ConfQ17	||||||	|	|	|	||||||
ActivQ18	||||||	|	|	|	||||||
EvalQ19	||||||	|	||	|	|||||||
IgnorQ20	|	|	|	|	|
LtRQ21	|	||	|||	||	||||||
RiskQ22	|||||	|	|	|	|||||
PrfrmQ23	||||	||	|	|	|||||
CrtWQ24	||||	|||	|	|	||||||
MtnWQ25	|	|||||	|	|	||||||
PrsvWQ26	|	|||||	|	|	|||||
BasicQ27	||	|	||	|	||||
CmplxQ28	|	|	|	|	|||

Factor Structure Summary after Varimax Rotation

Factor1	Factor2	Factor3	Factor4
KnowQ16	InvestQ3	TrustQ12	ITvsRQ14
ConfQ17	MtnWQ25	RelatQ13	
ActivQ18	Ex10svQ6		
EvalQ19	CshinvQ5		
RiskQ22	FinadvQ8		
CrtWQ24	PrsvWQ26		
InfoQ10			
PrfrmQ23			

Factor Score after Varimax Rotation

Row	Factor1	Factor2	Factor3	Factor4
1	-0.8609	-0.3962	0.9274	0.1474
2	-0.9909	-0.0309	-0.1713	1.3837
3	0.4132	-1.2454	-1.4825	-0.3147
4	-1.5637	0.5971	-0.2794	-0.0496
5	-0.2972	0.5660	0.4512	1.8209
6	0.5662	0.1163	0.4605	-0.6833
7	-0.6166	-0.7589	-0.9623	0.5533
8	2.6609	1.3090	1.2230	-0.6782
9	-0.6680	0.9227	-1.1036	1.3790
10	0.4817	2.0286	1.5572	1.5312
11	-0.4790	0.6267	0.2964	-1.5679
12	0.1936	0.7398	-3.5231	-3.3103
13	0.9945	-1.0969	-0.6598	3.1068
14	-0.1736	-0.1017	-3.4059	-3.9561
15	-0.4568	1.6004	0.2627	-1.1976
16	-1.2975	1.3415	-0.4432	-0.4065
17	-0.5437	-1.1162	-0.3142	0.2533
18	0.8174	-2.6423	0.9134	0.8612
19	0.0749	-1.6404	0.5179	-1.2203
20	-0.8926	0.7214	-0.0022	-0.4468
21				
22	-0.1566	-0.5085	-0.2976	0.0287
23	-1.1969	-1.2353	-0.6597	-0.4450
24	0.8470	-1.1646	-1.7038	0.8357
25				
26	-0.3115	-0.5612	0.0807	-0.7661
27	0.2284	0.2703	-0.7768	-0.4392
28	-0.4379	-0.0577	-0.6226	1.3696
29	-3.4845	-2.2255	0.1684	-4.1871
30	-1.3981	0.3964	-0.0795	-0.4096
31	-0.0533	1.9638	-0.2492	-0.8402
32	0.7879	1.0766	1.3323	1.7202
33	-0.6432	-1.9900	-0.6519	-0.2684

Row	Factor1	Factor2	Factor3	Factor4
34	1.3872	1.0786	-0.0587	-0.7396
35	-1.1302	1.0310	0.6102	0.4049
36	-1.5375	-0.7911	-0.2636	0.1767
37	-0.9105	-2.3613	1.7195	-2.0119
38				
39	1.1362	0.8473	1.2236	-1.9417
40	1.4151	-1.9299	1.7524	-0.8966
41	-0.2472	0.5834	0.0184	1.1008
42	-1.8552	0.1439	-0.5951	1.6374
43	1.3150	-2.0884	4.4135	2.7195
44	-1.1336	-3.0692	-2.7497	-1.2410
45	0.5649	1.3945	-0.1737	0.6242
46	1.1942	-1.6531	0.7412	-1.5945
47	0.4276	-0.4154	0.6745	-0.2339
48	0.1343	-0.4907	0.3356	0.3021
49	0.5614	-0.6005	1.8774	-1.4292
50	0.4421	-1.8437	-1.0402	-1.0062
51	1.5716	0.1461	0.2519	1.0992
52	2.9672	-0.5457	0.6539	-0.6543
53	1.8667	-0.2390	-2.5505	-0.0903
54	0.4827	0.9572	0.5247	0.2137
55	0.7684	2.5957	-3.6610	0.5537
56	-2.0721	-0.4005	-1.5152	0.6795
57				
58	3.2207	-0.9686	1.0449	-0.1297
59	0.9350	0.1504	0.7017	-0.0414
60	-0.4522	-1.6520	0.2480	1.1738
61	-0.6335	0.8272	-0.1612	-1.4693
62	-0.6529	-0.6560	-0.4092	0.4993
63	1.4376	0.2593	-0.0502	0.8764
64	-0.1224	0.0993	1.8557	-1.8058
65	2.4400	-0.5370	-0.0218	3.0069
66	-0.4269	-1.1880	0.0548	1.1367

Rows	Factor1	Factor2	Factor3	Factor4
67	-0.5633	0.8092	-0.0163	1.2184
68	0.1493	1.1172	-0.6068	0.4042
69	2.3779	-0.2332	-4.0585	-0.3239
70	-0.6207	0.7073	0.1744	-0.2053
71	-0.8373	-0.0550	0.1640	1.1198
72	-0.5743	1.0352	-0.1881	-0.5319
73	0.8078	0.3764	-0.8470	1.5783
74	0.4485	-0.6390	2.0705	-1.2417
75	-0.4271	-1.1024	-0.1018	1.3124
76	-0.0547	1.5137	0.2481	0.5349
77	-0.5530	0.7225	-3.1314	0.7009
78	0.0083	0.6215	1.2329	1.0851
79	1.8770	0.8548	-0.0409	-0.6016
80	0.6900	-1.9629	0.7986	1.2958
81	-0.1969	0.4337	0.3524	-0.8927
82	1.0532	-0.8403	1.6478	-1.5936
83	-0.1793	-0.2963	-0.7346	1.0986
84	-0.4888	-0.6850	0.0912	1.0869
85	-0.5163	1.9829	1.6936	-1.3990
86	2.7670	0.6132	-3.1253	-0.6117
87	0.8166	-0.1977	0.2763	0.6693
88	-0.9158	-0.4907	-0.7718	-0.0771
89	0.6766	2.0772	-0.6063	-0.8859
90				
91	0.0412	-1.1348	-1.4421	-0.4476
92	-1.1614	-1.0991	0.6365	2.0659
93				
94	0.8255	1.2851	0.2275	-0.6133
95	0.2393	0.6411	0.3881	-0.6257
96	1.4361	-0.2307	0.9960	0.3531
97	-1.3089	-0.8798	-0.0884	0.1658
98	-2.0123	0.6318	-0.3080	1.3321
99	-1.3527	-2.5444	0.5428	-0.6039
100				

Rows	Factor1	Factor2	Factor3	Factor4
101	2.7497	-0.9063	-0.3866	1.6454
102	0.0266	1.1332	0.1483	-0.3620
103				
104	0.1816	0.2648	-0.9554	-0.2381
105	-0.8274	0.5255	-0.7171	-0.0210
106	0.6863	0.5698	0.7959	1.6653
107	-2.1061	-0.4784	-0.1035	-3.6545
108	-1.3339	0.3936	0.8353	1.1602
109	0.5851	1.8729	1.3934	0.1574
110	0.8639	-0.7246	-0.5202	-0.4219
111				
112				
113	1.0025	0.0320	0.5866	-1.7871
114	-0.0271	0.7175	-1.3838	2.0481
115	-0.2033	0.1988	1.0886	-2.1413
116	1.6359	-0.5546	0.9334	-1.8720
117	1.3329	-1.4617	1.8634	-0.1744
118	0.0753	-1.4276	-0.1113	-1.4163
119	0.5467	1.4123	0.5560	-0.3577
120	-0.2198	1.5996	-0.9129	0.5910
121	-0.0156	0.5473	0.2805	-0.0493
122				
123	-1.5303	-0.4200	0.7053	1.3045
124	-1.3035	1.2851	0.6106	-0.4567
125	0.2997	-1.8025	-1.4177	0.3873
126				
127	-1.9968	0.6706	-0.4877	0.8220
128	-0.1244	-0.8800	-1.6035	-2.6021
129	-0.0554	0.6089	0.5159	1.5188
130	-1.3988	0.2751	-1.1590	2.1468
131	-1.0959	-1.0075	-0.1626	0.6764
132	-0.4710	0.6938	0.1848	0.3119
133	0.3612	-0.1261	-0.3646	-1.0397

Rows	Factor1	Factor2	Factor3	Factor4
134	-0.2316	0.3901	0.0654	-0.8569
135	-1.2245	-1.7260	0.4899	-0.0116
136	0.6534	-0.5134	-1.4024	1.2787
137	-0.3803	1.6556	0.3555	1.2908
138	-1.2718	-0.9830	-0.2999	0.6410
139	0.1815	0.3728	-1.0683	0.0227
140	-0.0911	-0.4528	-0.2107	-0.4985
141	-0.4413	0.8889	0.2551	-0.9656
142	-0.3445	-0.0468	-0.2571	2.5895
143	0.4227	-0.2988	0.0225	0.8980
144	0.7557	-0.1609	-0.7967	1.2037
145	-0.7507	0.1046	-0.8022	2.0903
146	-0.7244	-1.0096	-0.9114	0.0020
147	-1.2143	1.3095	-0.3014	0.3871
148	0.7250	1.6848	-0.1910	-0.6856
149	-0.8831	1.1447	1.5011	0.1240
150	-1.1760	-0.0538	-0.7173	0.4788
151	-1.4818	-0.6937	-0.0051	1.0456
152	0.7250	1.6848	-0.1910	-0.6856
153	2.1674	-0.2991	-0.3836	-1.9272
154	-0.9559	-1.4635	1.3857	-0.2253
155	-0.9203	1.7982	0.9252	0.7614
156	-0.6186	1.6182	0.5654	-0.8901
157	1.8205	0.1765	1.2938	0.2549
158	-1.4329	2.1508	-0.0957	-1.1792
159	1.0657	-1.7073	0.9579	-0.6919
160	-1.5925	-0.7009	-0.4261	-1.4361
161	0.5899	-1.2508	1.3077	-0.7473
162	1.0333	-0.5724	0.0158	0.4580
163	-0.0454	1.9312	1.6841	1.1779
164				
165	-1.3885	-0.3189	0.3634	-1.9938
166	0.4391	0.8343	0.3227	2.1787

Rows	Factor1	Factor2	Factor3	Factor4
167	-0.1925	1.9157	-0.4058	-0.0836
168	-0.3147	0.6634	0.3395	-0.4060
169	-0.5960	0.6575	1.1866	0.1164
170	0.0442	-1.2159	0.6755	0.8966
171				
172	1.0925	0.1558	1.1708	-1.1761
173	1.8301	0.0991	1.6420	-1.3671

APPENDIX C

Key to the Descriptors of the Questions

Descriptor	Question
Personal service from private banker (Q1)	DediPBQ1
Convenience through information technology (Q2)	ConvITQ2
Investments with competitive returns (Q3)	InvestQ3
Transactional banking facilities (Q4)	TrnsctQ4
Cash investments with competitive returns (Q5)	CshinvQ5
Extensive products and services (Q6)	Ex10vsQ6
Limited products and services (Q7)	LtdpsQ7
Financial advice (Q8)	FinadvQ8
Quality service vs lending rates (Q9)	QualSQ9
Importance of information to make decisions (Q10)	InfoQ10
Investment management vs adhoc alternative investment products (Q11)	AllnvQ11
Trusting private banker vs private bank (Q12)	TrustQ12
Relationship with private banker vs private bank (Q13)	RelatQ13
Technology vs personal relationships (Q14)	ItvsRQ14
Convenience and control vs safety (Q15)	SSQ15
Low level of knowledge and understanding (Q16)	KnowQ16
Confident in financial matters (Q17)	ConfQ17
Low enjoyment in being active with financial affairs (Q18)	ActivQ18
Difficult to evaluate product performance (Q19)	EvalQ19
Opinions of family and friends (Q20)	IgnorQ20
Long term relationship with private banker (Q21)	LtRQ21
High product risk (Q22)	RiskQ22
Products must perform as intended (Q23)	PrfrmQ23
Wealth creation (Q24)	CrtWQ24
Wealth management (Q25)	MtnW25
Wealth preservation (Q26)	PrsvWQ26
Basic products (Q27)	BasicQ27
Complex products (Q28)	CmplxQ28

APPENDIX D

Two Sample T-test Report for Significant Difference Among High Income Earning and High Net Worth Individuals

Variable **Factor 1**

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Profile=1	87	0.1064562	1.176016	0.1260821	-0.1441867	0.3570992
Profile=2	72	-0.1286346	1.061685	0.1251207	-0.3781182	0.1208491

Note: T-alpha (Profile=1) = 1.9879, T-alpha (Profile=2) = 1.9939

Confidence - Limits of Difference Section

Variance		Mean	Standard	Standard	95% LCL	95% UCL
Assumption	**DF**	**Difference**	**Deviation**	**Error**	**of Mean**	**of Mean**
Equal	157	0.2350908	1.125751	0.1793556	-0.1191705	0.5893521
Unequal	155.79	0.2350908	1.584357	0.1776285	-0.1157804	0.5859621

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9753

Equal-Variance T-Test Section

Alternative		Prob	Decision	Power	Power
Hypothesis	**T-Value**	**Level**	**(5%)**	**(Alpha=.05)**	**(Alpha=.01)**
Difference <> 0	1.3108	0.191856	Accept Ho	0.256070	0.100524
Difference < 0	1.3108	0.904072	Accept Ho	0.001589	0.000144
Difference > 0	1.3108	0.095928	Accept Ho	0.367022	0.152242

Difference: (Profile=1)-(Profile=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	1.3235	0.187609	Accept Ho	0.260115	0.102741
Difference < 0	1.3235	0.906195	Accept Ho	0.001525	0.000137
Difference > 0	1.3235	0.093805	Accept Ho	0.371794	0.155216

Difference: (Profile=1)-(Profile=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Profile=1)	1.2823	0.199753	Cannot reject normality
Kurtosis Normality (Profile=1)	1.4623	0.143666	Cannot reject normality
Omnibus Normality (Profile=1)	3.7824	0.150889	Cannot reject normality
Skewness Normality (Profile=2)	1.1049	0.269192	Cannot reject normality
Kurtosis Normality (Profile=2)	-0.4224	0.672733	Cannot reject normality
Omnibus Normality (Profile=2)	1.3993	0.496764	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.2270	0.369011	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1916	0.662227	Cannot reject equal variances

Median Statistics

Variable	Count	Median	95% LCL of Mean	95% UCL of Mean
Profile=1	87	-5.465027E-02	-0.4271179	0.4132209
Profile=2	72	-0.1077212	-0.4413333	0.1815152

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Profile=1	3475	7303	6960	288.998
Profile=2	2789	5417	5760	288.998

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			-1.1869	0.235283	Accept Ho	-1.1851	0.235966	Accept Ho
Diff<0			-1.1869	0.882358	Accept Ho	-1.1886	0.882699	Accept Ho
Diff>0			-1.1869	0.117642	Accept Ho	-1.1851	0.117983	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.144157	0.2167	.050	Accept Ho	0.3441
D(1)<D(2)	0.013410	0.2167	.025	Accept Ho	
D(1)>D(2)	0.144157	0.2167	.025	Accept Ho	

Variable Factor 2

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Profile=1	87	-0.1112987	1.184761	0.1270197	-0.3638055	0.141208
Profile=2	72	0.134486	1.068074	0.1258738	-0.1164992	0.3854712

Note: T-alpha (Profile=1) = 1.9879, T-alpha (Profile=2) = 1.9939

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.2457847	1.133481	0.1805871	-0.6024784	0.110909
Unequal	155.82	-0.2457847	1.59513	0.1788245	-0.5990177	0.1074482

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9753

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.3610	0.175454	Accept Ho	0.272304	0.109556
Difference < 0	-1.3610	0.087727	Accept Ho	0.386027	0.164280
Difference > 0	-1.3610	0.912273	Accept Ho	0.001350	0.000119

Difference: (Profile=1)-(Profile=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.3744	0.171277	Accept Ho	0.276702	0.112041
Difference < 0	-1.3744	0.085638	Accept Ho	0.391130	0.167571
Difference > 0	-1.3744	0.914362	Accept Ho	0.001292	0.000113

Difference: (Profile=1)-(Profile=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Profile=1)	-0.6531	0.513671	Cannot reject normality
Kurtosis Normality (Profile=1)	-0.6541	0.513050	Cannot reject normality
Omnibus Normality (Profile=1)	0.8544	0.652326	Cannot reject normality
Skewness Normality (Profile=2)	-0.4223	0.672776	Cannot reject normality
Kurtosis Normality (Profile=2)	-1.2007	0.229871	Cannot reject normality
Omnibus Normality (Profile=2)	1.6200	0.444852	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.2304	0.362468	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.8225	0.365840	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	Count	Median	of Mean	of Mean
Profile=1	87	-0.0577024	-0.4907385	0.2702571
Profile=2	72	0.1661278	-0.2307192	0.5473165

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Profile=1	2796	6624	6960	288.998
Profile=2	3468	6096	5760	288.998

Number Sets of Ties = 1, Multiplicity Factor = 6

Exact Probabi	Approximati	Approxim						
	Without Corr	With Corr						
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			1.1626	0.244977	Accept Ho	1.1609	0.245680	Accept Ho
Diff<0			1.1626	0.122488	Accept Ho	1.1609	0.122840	Accept Ho
Diff>0			1.1626	0.877512	Accept Ho	1.1644	0.877862	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.116379	0.2167	.050	Accept Ho	0.6076
D(1)<D(2)	0.116379	0.2167	.025	Accept Ho	
D(1)>D(2)	0.043582	0.2167	.025	Accept Ho	

Variable Factor 3

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Profile=1	87	-0.1152847	1.381399	0.1481016	-0.4097009	0.1791314
Profile=2	72	0.1393024	0.8193472	0.096561	-5.323478E-02	0.3318395

Note: T-alpha (Profile=1) = 1.9879, T-alpha (Profile=2) = 1.9939

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.2545871	1.161416	0.1850378	-0.6200717	0.1108975
Unequal	143.29	-0.2545871	1.606112	0.1767996	-0.6040594	9.488521E-02

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9767

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.3759	0.170823	Accept Ho	0.277193	0.112329
Difference < 0	-1.3759	0.085411	Accept Ho	0.391690	0.167946
Difference > 0	-1.3759	0.914589	Accept Ho	0.001286	0.000112

Difference: (Profile=1)-(Profile=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.4400	0.152056	Accept Ho	0.298532	0.124597
Difference < 0	-1.4400	0.076028	Accept Ho	0.416179	0.184077
Difference > 0	-1.4400	0.923972	Accept Ho	0.001042	0.000087

Difference: (Profile=1)-(Profile=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Profile=1)	-2.0346	0.041889	Reject normality
Kurtosis Normality (Profile=1)	2.5380	0.011147	Reject normality
Omnibus Normality (Profile=1)	10.5813	0.005038	Reject normality
Skewness Normality (Profile=2)	-0.0026	0.997918	Cannot reject normality
Kurtosis Normality (Profile=2)	-1.1391	0.254667	Cannot reject normality
Omnibus Normality (Profile=2)	1.2975	0.522692	Cannot reject normality
Variance-Ratio Equal-Variance Test	2.8425	0.000007	Reject equal variances
Modified-Levene Equal-Variance Test	4.7710	0.030426	Reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	Count	Median	of Mean	of Mean
Profile=1	87	-1.628176E-02	-0.188146	0.2479868
Profile=2	72	0.1068606	-0.1625734	0.3634393

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Profile=1	2873	6701	6960	288.998
Profile=2	3391	6019	5760	288.998

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			0.8962	0.370146	Accept Ho	0.8945	0.371071	Accept Ho
Diff<0			0.8962	0.185073	Accept Ho	0.8945	0.185535	Accept Ho
Diff>0			0.8962	0.814927	Accept Ho	0.8979	0.815389	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative Hypothesis	Dmn Criterion Value	Reject Ho if Greater Than	Test Alpha Level	Decision (Test Alpha)	Prob Level
D(1)<>D(2)	0.124042	0.2167	.050	Accept Ho	0.5270
D(1)<D(2)	0.124042	0.2167	.025	Accept Ho	
D(1)>D(2)	0.066571	0.2167	.025	Accept Ho	

Variable Factor 4

Descriptive Statistics Section

Variable	Count	Mean	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Profile=1	87	9.433929E-04	1.340043	0.1436677	-0.2846586	0.2865454
Profile=2	72	-1.139933E-03	1.217947	0.1435364	-0.2873434	0.2850636

Note: T-alpha (Profile=1) = 1.9879, T-alpha (Profile=2) = 1.9939

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	2.083326E-03	1.286264	0.2049287	-0.4026897	0.4068563
Unequal	155.59	2.083326E-03	1.810832	0.203084	-0.3990742	0.4032408

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9753

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.0102	0.991902	Accept Ho	0.050012	0.010004
Difference < 0	0.0102	0.504049	Accept Ho	0.048965	0.009735
Difference > 0	0.0102	0.495951	Accept Ho	0.051053	0.010272

Difference: (Profile=1)-(Profile=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.0103	0.991828	Accept Ho	0.050012	0.010004
Difference < 0	0.0103	0.504086	Accept Ho	0.048955	0.009732
Difference > 0	0.0103	0.495914	Accept Ho	0.051062	0.010274

Difference: (Profile=1)-(Profile=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Profile=1)	-1.7263	0.084296	Cannot reject normality
Kurtosis Normality (Profile=1)	1.7759	0.075752	Cannot reject normality
Omnibus Normality (Profile=1)	6.1338	0.046564	Reject normality
Skewness Normality (Profile=2)	-1.0000	0.317287	Cannot reject normality
Kurtosis Normality (Profile=2)	0.6302	0.528545	Cannot reject normality
Omnibus Normality (Profile=2)	1.3973	0.497260	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.2105	0.401345	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.4951	0.482719	Cannot reject equal variances

Median Statistics

Variable	Count	Median	95% LCL of Mean	95% UCL of Mean
Profile=1	87	-4.959862E-02	-0.4095502	0.4048839
Profile=2	72	-4.793896E-03	-0.3620293	0.3531382

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Profile=1	3147	6975	6960	288.998
Profile=2	3117	5745	5760	288.998

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati	Approximati					
		Without Cor	Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			-0.0519	0.958606	Accept Ho	-0.0502	0.959984	Accept Ho
Diff<0			-0.0519	0.520697	Accept Ho	-0.0536	0.521386	Accept Ho
Diff>0			-0.0519	0.479303	Accept Ho	-0.0502	0.479992	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.071360	0.2167	.050	Accept Ho	0.9758
D(1)<D(2)	0.047414	0.2167	.025	Accept Ho	
D(1)>D(2)	0.071360	0.2167	.025	Accept Ho	

APPENDIX E

Two Sample T-test Report for Significant Difference Among Original Sample and Non-original Sample of Respondents

Variable **Factor 1**

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Sample=1	134	-1.168573E-02	1.131017	9.770501E-02	-0.2049425	0.181571
Sample=2	25	6.263554E-02	1.134604	0.2269208	-0.4057059	0.530977

Note: T-alpha (Sample=1) = 1.9780, T-alpha (Sample=2) = 2.0639

Confidence - Limits of Difference Section

Variance		Mean	Standard	Standard	95% LCL	95% UCL
Assumption	**DF**	**Difference**	**Deviation**	**Error**	**of Mean**	**of Mean**
Equal	157	-7.432127E-02	1.131566	0.2465223	-0.5612494	0.4126069
Unequal	33.52	-7.432127E-02	1.602038	0.2470613	-0.5766777	0.4280352

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0333

Equal-Variance T-Test Section

Alternative		Prob	Decision	Power	Power
Hypothesis	**T-Value**	**Level**	**(5%)**	**(Alpha=.05)**	**(Alpha=.01)**
Difference <> 0	-0.3015	0.763448	Accept Ho	0.060348	0.013403
Difference < 0	-0.3015	0.381724	Accept Ho	0.089366	0.021308
Difference > 0	-0.3015	0.618276	Accept Ho	0.025885	0.004329

Difference: (Sample=1)-(Sample=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.3008	0.765409	Accept Ho	0.059844	0.013129
Difference < 0	-0.3008	0.382705	Accept Ho	0.088498	0.020805
Difference > 0	-0.3008	0.617295	Accept Ho	0.026209	0.004456

Difference: (Sample=1)-(Sample=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Sample=1)	1.4948	0.134955	Cannot reject normality
Kurtosis Normality (Sample=1)	1.3151	0.188462	Cannot reject normality
Omnibus Normality (Sample=1)	3.9642	0.137782	Cannot reject normality
Skewness Normality (Sample=2)	1.2428	0.213929	Cannot reject normality
Kurtosis Normality (Sample=2)	-0.0442	0.964738	Cannot reject normality
Omnibus Normality (Sample=2)	1.5466	0.461490	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.0064	0.984007	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.0563	0.812820	Cannot reject equal variances

Median Statistics

Variable	Count	Median	95% LCL of Mean	95% UCL of Mean
Sample=1	134	-0.1067433	-0.3114893	0.1492706
Sample=2	25	-4.537795E-02	-0.6185914	0.6766382

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Sample=1	1642	10687	10720	211.3447
Sample=2	1708	2033	2000	211.3447

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Prob	Approximat	Approximat					
		Without Cor	With Correc					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			0.1561	0.875920	Accept Ho	0.1538	0.877785	Accept Ho
Diff<0			0.1561	0.437960	Accept Ho	0.1538	0.438893	Accept Ho
Diff>0			0.1561	0.562040	Accept Ho	0.1585	0.562972	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.091343	0.2963	.050	Accept Ho	0.9859
D(1)<D(2)	0.091343	0.2963	.025	Accept Ho	
D(1)>D(2)	0.085970	0.2963	.025	Accept Ho	

Variable Factor 2

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Sample=1	134	-0.0486691	1.10991	0.0958816	-0.2383192	0.140981
Sample=2	25	0.2608664	1.262087	0.2524175	-0.2600977	0.7818305

Note: T-alpha (Sample=1) = 1.9780, T-alpha (Sample=2) = 2.0639

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.3095355	1.134495	0.2471603	-0.7977239	0.1786529
Unequal	31.31	-0.3095355	1.680704	0.2700146	-0.8600144	0.2409434

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0387

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.2524	0.212298	Accept Ho	0.237903	0.090738
Difference < 0	-1.2524	0.106149	Accept Ho	0.345358	0.139017
Difference > 0	-1.2524	0.893851	Accept Ho	0.001915	0.000180

Difference: (Sample=1)-(Sample=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.1464	0.260330	Accept Ho	0.199131	0.068382
Difference < 0	-1.1464	0.130165	Accept Ho	0.300403	0.109576
Difference > 0	-1.1464	0.869835	Accept Ho	0.002829	0.000307

Difference: (Sample=1)-(Sample=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Sample=1)	-1.4313	0.152333	Cannot reject normality
Kurtosis Normality (Sample=1)	-0.5845	0.558913	Cannot reject normality
Omnibus Normality (Sample=1)	2.3903	0.302656	Cannot reject normality
Skewness Normality (Sample=2)	0.3444	0.730569	Cannot reject normality
Kurtosis Normality (Sample=2)	-2.3849	0.017082	Reject normality
Omnibus Normality (Sample=2)	5.8065	0.054844	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.2930	0.416800	Cannot reject equal variances
Modified-Levene Equal-Variance Test	1.2402	0.267138	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Sample=1	134	5.67753E-04	-0.2963058	0.2750682
Sample=2	25	0.1557846	-0.5724081	0.8342965

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Sample=1	1487	10532	10720	211.3447
Sample=2	1863	2188	2000	211.3447

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Probab	Approxi Without Correcti	Approxi With Correcti					
Alternativ	Prob	Decisior		Prob	Decision		Prob	Decision
Hypothes	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			0.8895	0.373712	Accept Ho	0.8872	0.374984	Accept Ho
Diff<0			0.8895	0.186856	Accept Ho	0.8872	0.187492	Accept Ho
Diff>0			0.8895	0.813144	Accept Ho	0.8919	0.813779	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.227761	0.2963	.050	Accept Ho	0.1891
D(1)<D(2)	0.227761	0.2963	.025	Accept Ho	
D(1)>D(2)	0.068358	0.2963	.025	Accept Ho	

Variable Factor 3

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Sample=1	134	-7.141604E-02	1.165328	0.100669	-0.2705354	0.1277033
Sample=2	25	0.3827899	1.106222	0.2212444	-7.383604E-02	0.8394159

Note: T-alpha (Sample=1) = 1.9780, T-alpha (Sample=2) = 2.0639

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.454206	1.156488	0.2519517	-0.9518583	4.344634E-02
Unequal	34.70	-0.454206	1.606772	0.2430706	-0.9478191	3.940715E-02

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0307

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.8028	0.073345	Accept Ho	0.433284	0.214163
Difference < 0	-1.8028	0.036673	Reject Ho	0.559665	0.294904
Difference > 0	-1.8028	0.963327	Accept Ho	0.000291	0.000019

Difference: (Sample=1)-(Sample=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.8686	0.070138	Accept Ho	0.443179	0.213151
Difference < 0	-1.8686	0.035069	Reject Ho	0.574227	0.297992
Difference > 0	-1.8686	0.964931	Accept Ho	0.000253	0.000019

Difference: (Sample=1)-(Sample=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Sample=1)	-2.4394	0.014711	Reject normality
Kurtosis Normality (Sample=1)	3.7647	0.000167	Reject normality
Omnibus Normality (Sample=1)	20.1237	0.000043	Reject normality
Skewness Normality (Sample=2)	-2.8013	0.005090	Reject normality
Kurtosis Normality (Sample=2)	2.2718	0.023096	Reject normality
Omnibus Normality (Sample=2)	13.0086	0.001497	Reject normality
Variance-Ratio Equal-Variance Test	1.1097	0.741799	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.0002	0.989906	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Sample=1	134	-3.130822E-02	-0.173731	0.1640168
Sample=2	25	0.5653852	1.583941E-02	1.170821

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Sample=1	1173	10218	10720	211.3447
Sample=2	2177	2502	2000	211.3447

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			2.3753	0.017536	Reject Ho	2.3729	0.017649	Reject Ho
Diff<0			2.3753	0.008768	Reject Ho	2.3729	0.008825	Reject Ho
Diff>0			2.3753	0.991232	Accept Ho	2.3776	0.991288	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.336716	0.2963	.050	Reject Ho	0.0124
D(1)<D(2)	0.336716	0.2963	.025	Reject Ho	
D(1)>D(2)	0.052239	0.2963	.025	Accept Ho	

Variable Factor 4

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Sample=1	134	3.760355E-02	1.317854	0.1138453	-0.187578	0.2627851
Sample=2	25	-0.2015551	1.071628	0.2143257	-0.6439015	0.2407914

Note: T-alpha (Sample=1) = 1.9780, T-alpha (Sample=2) = 2.0639

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	0.2391586	1.283277	0.2795739	-0.3130528	0.79137
Unequal	38.90	0.2391586	1.698566	0.2426855	-0.2517614	0.7300786

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0229

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.8554	0.393611	Accept Ho	0.136029	0.042181
Difference < 0	0.8554	0.803194	Accept Ho	0.006269	0.000751
Difference > 0	0.8554	0.196806	Accept Ho	0.213861	0.069670

Difference: (Sample=1)-(Sample=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.9855	0.330485	Accept Ho	0.160717	0.051597
Difference < 0	0.9855	0.834757	Accept Ho	0.004482	0.000522
Difference > 0	0.9855	0.165243	Accept Ho	0.249362	0.084612

Difference: (Sample=1)-(Sample=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Sample=1)	-2.3516	0.018691	Reject normality
Kurtosis Normality (Sample=1)	1.7817	0.074798	Cannot reject normality
Omnibus Normality (Sample=1)	8.7046	0.012877	Reject normality
Skewness Normality (Sample=2)	1.3995	0.161654	Cannot reject normality
Kurtosis Normality (Sample=2)	0.2400	0.810295	Cannot reject normality
Omnibus Normality (Sample=2)	2.0163	0.364891	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.5123	0.193039	Cannot reject equal variances
Modified-Levene Equal-Variance Test	1.0549	0.305959	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Sample=1	134	2.570317E-02	-0.2338732	0.3870906
Sample=2	25	-0.4059844	-0.8859341	0.2549197

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Sample=1	1955	11000	10720	211.3447
Sample=2	1395	1720	2000	211.3447

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			-1.3248	0.185221	Accept Ho	-1.3225	0.186007	Accept Ho
Diff<0			-1.3248	0.907389	Accept Ho	-1.3272	0.907781	Accept Ho
Diff>0			-1.3248	0.092611	Accept Ho	-1.3225	0.093004	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.192239	0.2963	.050	Accept Ho	0.3650
D(1)<D(2)	0.079403	0.2963	.025	Accept Ho	
D(1)>D(2)	0.192239	0.2963	.025	Accept Ho	

APPENDIX F

Two Sample T-test Report for Significant Difference Among Registered and Non-registered Respondents

Variable **Factor 1**

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Regist=1	143	6.199973E-04	1.133642	9.479989E-02	-0.1867815	0.1880215
Regist=2	16	-5.541226E-03	1.115194	0.2787984	-0.5997859	0.5887035

Note: T-alpha (Regist=1) = 1.9768, T-alpha (Regist=2) = 2.1314

Confidence - Limits of Difference Section

Variance		Mean	Standard	Standard	95% LCL	95% UCL
Assumption	**DF**	**Difference**	**Deviation**	**Error**	**of Mean**	**of Mean**
Equal	157	6.161224E-03	1.131892	0.2983841	-0.5832038	0.5955262
Unequal	18.64	6.161224E-03	1.59022	0.2944751	-0.6109824	0.6233048

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0957

Equal-Variance T-Test Section

Alternative		Prob	Decision	Power	Power
Hypothesis	**T-Value**	**Level**	**(5%)**	**(Alpha=.05)**	**(Alpha=.01)**
Difference <> 0	0.0206	0.983552	Accept Ho	0.050048	0.010016
Difference < 0	0.0206	0.508224	Accept Ho	0.047915	0.009467
Difference > 0	0.0206	0.491776	Accept Ho	0.052157	0.010559

Difference: (Regist=1)-(Regist=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.0209	0.983530	Accept Ho	0.050045	0.010014
Difference < 0	0.0209	0.508235	Accept Ho	0.047953	0.009493
Difference > 0	0.0209	0.491765	Accept Ho	0.052116	0.010531

Difference: (Regist=1)-(Regist=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Regist=1)	1.6161	0.106080	Cannot reject normality
Kurtosis Normality (Regist=1)	1.2946	0.195452	Cannot reject normality
Omnibus Normality (Regist=1)	4.2877	0.117203	Cannot reject normality
Skewness Normality (Regist=2)	1.0253	0.305214	Cannot reject normality
Kurtosis Normality (Regist=2)	-0.4679	0.639822	Cannot reject normality
Omnibus Normality (Regist=2)	1.2702	0.529869	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.0334	0.932651	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.0022	0.962626	Cannot reject equal variances

Median Statistics

Variable	Count	Median	95% LCL of Mean	95% UCL of Mean
Regist=1	143	-5.539258E-02	-0.3114893	0.1492706
Regist=2	16	-0.188085	-1.161442	0.7249744

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Regist=1	1163	11459	11440	174.6615
Regist=2	1125	1261	1280	174.6615

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			-0.1088	0.913375	Accept Ho	-0.1059	0.915646	Accept Ho
Diff<0			-0.1088	0.543312	Accept Ho	-0.1116	0.544447	Accept Ho
Diff>0			-0.1088	0.456688	Accept Ho	-0.1059	0.457823	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.130245	0.3368	.050	Accept Ho	0.9372
D(1)<D(2)	0.130245	0.3368	.025	Accept Ho	
D(1)>D(2)	0.101836	0.3368	.025	Accept Ho	

Variable Factor 2

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Regist=1	143	-1.766455E-02	1.146393	9.586617E-02	-0.2071739	0.1718448
Regist=2	16	0.1578769	1.065457	0.2663643	-0.4098651	0.725619

Note: T-alpha (Regist=1) = 1.9768, T-alpha (Regist=2) = 2.1314

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.1755415	1.138909	0.3002337	-0.7685598	0.4174768
Unequal	19.10	-0.1755415	1.565061	0.2830906	-0.767839	0.4167561

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0923

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.5847	0.559600	Accept Ho	0.089496	0.023701
Difference < 0	-0.5847	0.279800	Accept Ho	0.143962	0.040346
Difference > 0	-0.5847	0.720200	Accept Ho	0.012973	0.001830

Difference: (Regist=1)-(Regist=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.6201	0.542526	Accept Ho	0.090660	0.023199
Difference < 0	-0.6201	0.271263	Accept Ho	0.147659	0.040177
Difference > 0	-0.6201	0.728737	Accept Ho	0.012430	0.001836

Difference: (Regist=1)-(Regist=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Regist=1)	-0.8260	0.408792	Cannot reject normality
Kurtosis Normality (Regist=1)	-0.9689	0.332605	Cannot reject normality
Omnibus Normality (Regist=1)	1.6210	0.444627	Cannot reject normality
Skewness Normality (Regist=2)	-0.4345	0.663923	Cannot reject normality
Kurtosis Normality (Regist=2)	-0.6133	0.539703	Cannot reject normality
Omnibus Normality (Regist=2)	0.5649	0.753941	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.1577	0.706236	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.0336	0.854761	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Regist=1	143	9.907707E-02	-0.2390135	0.2702571
Regist=2	16	0.1899693	-0.6937467	0.8547708

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Regist=1	1034	11330	11440	174.6615
Regist=2	1254	1390	1280	174.6615

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			0.6298	0.528832	Accept Ho	0.6269	0.530707	Accept Ho
Diff<0			0.6298	0.264416	Accept Ho	0.6269	0.265354	Accept Ho
Diff>0			0.6298	0.735584	Accept Ho	0.6327	0.736520	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.130245	0.3368	.050	Accept Ho	0.9372
D(1)<D(2)	0.130245	0.3368	.025	Accept Ho	
D(1)>D(2)	0.069930	0.3368	.025	Accept Ho	

Variable Factor 3

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Regist=1	143	-3.946902E-03	1.173325	9.811835E-02	-0.1979083	0.1900145
Regist=2	16	3.527543E-02	1.12001	0.2800025	-0.5615357	0.6320866

Note: T-alpha (Regist=1) = 1.9768, T-alpha (Regist=2) = 2.1314

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-3.922233E-02	1.168336	0.3079912	-0.6475633	0.5691186
Unequal	18.88	-3.922233E-02	1.622071	0.2966962	-0.6604819	0.5820373

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0939

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.1273	0.898827	Accept Ho	0.051837	0.010594
Difference < 0	-0.1273	0.449414	Accept Ho	0.064501	0.013900
Difference > 0	-0.1273	0.550586	Accept Ho	0.038226	0.007091

Difference: (Regist=1)-(Regist=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.1322	0.896227	Accept Ho	0.051809	0.010549
Difference < 0	-0.1322	0.448114	Accept Ho	0.064593	0.013790
Difference > 0	-0.1322	0.551886	Accept Ho	0.038163	0.007152

Difference: (Regist=1)-(Regist=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Regist=1)	-2.7596	0.005787	Reject normality
Kurtosis Normality (Regist=1)	3.6516	0.000261	Reject normality
Omnibus Normality (Regist=1)	20.9498	0.000028	Reject normality
Skewness Normality (Regist=2)	-2.1505	0.031518	Reject normality
Kurtosis Normality (Regist=2)	2.2879	0.022146	Reject normality
Omnibus Normality (Regist=2)	9.8588	0.007231	Reject normality
Variance-Ratio Equal-Variance Test	1.0975	0.810730	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1514	0.697717	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Regist=1	143	2.245238E-02	-0.1035473	0.2519303
Regist=2	16	-0.0229625	-0.3835986	0.6365423

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Regist=1	1118	11414	11440	174.6615
Regist=2	1170	1306	1280	174.6615

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati	Approximati					
		Without Cor	Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			0.1489	0.881665	Accept Ho	0.1460	0.883924	Accept Ho
Diff<0			0.1489	0.440832	Accept Ho	0.1460	0.441962	Accept Ho
Diff>0			0.1489	0.559168	Accept Ho	0.1517	0.560297	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.133304	0.3368	.050	Accept Ho	0.9285
D(1)<D(2)	0.133304	0.3368	.025	Accept Ho	
D(1)>D(2)	0.100524	0.3368	.025	Accept Ho	

Variable Factor 4

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Regist=1	143	-2.085485E-02	1.299638	0.1086812	-0.235697	0.1939873
Regist=2	16	0.1863902	1.133973	0.2834932	-0.4178613	0.7906416

Note: T-alpha (Regist=1) = 1.9768, T-alpha (Regist=2) = 2.1314

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.207245	1.284733	0.3386753	-0.8761928	0.4617028
Unequal	19.69	-0.207245	1.724805	0.3036116	-0.8412114	0.4267214

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0881

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.6119	0.541470	Accept Ho	0.093336	0.025133
Difference < 0	-0.6119	0.270735	Accept Ho	0.150204	0.042746
Difference > 0	-0.6119	0.729265	Accept Ho	0.012093	0.001678

Difference: (Regist=1)-(Regist=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.6826	0.502813	Accept Ho	0.099607	0.026371
Difference < 0	-0.6826	0.251407	Accept Ho	0.162183	0.045598
Difference > 0	-0.6826	0.748593	Accept Ho	0.010594	0.001515

Difference: (Regist=1)-(Regist=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Regist=1)	-1.8110	0.070147	Cannot reject normality
Kurtosis Normality (Regist=1)	1.7501	0.080102	Cannot reject normality
Omnibus Normality (Regist=1)	6.3424	0.041953	Reject normality
Skewness Normality (Regist=2)	-0.6933	0.488139	Cannot reject normality
Kurtosis Normality (Regist=2)	-0.6372	0.523995	Cannot reject normality
Omnibus Normality (Regist=2)	0.8866	0.641899	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.3135	0.483410	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1406	0.708171	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Regist=1	143	-4.930821E-02	-0.3146623	0.2136904
Regist=2	16	0.432966	-0.6856057	1.08508

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Regist=1	1054	11350	11440	174.6615
Regist=2	1234	1370	1280	174.6615

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			0.5153	0.606356	Accept Ho	0.5124	0.608357	Accept Ho
Diff<0			0.5153	0.303178	Accept Ho	0.5124	0.304179	Accept Ho
Diff>0			0.5153	0.696822	Accept Ho	0.5181	0.697822	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.184878	0.3368	.050	Accept Ho	0.6370
D(1)<D(2)	0.184878	0.3368	.025	Accept Ho	
D(1)>D(2)	0.105769	0.3368	.025	Accept Ho	

APPENDIX G

Two Sample T-test Report for Significant Difference Among Male and Female Respondents

Variable **Factor 1**

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Gender=1	123	8.061048E-02	1.144989	0.1032401	-0.1237637	0.2849846
Gender=2	36	-0.2754192	1.037496	0.172916	-0.6264573	7.561896E-02

Note: T-alpha (Gender=1) = 1.9796, T-alpha (Gender=2) = 2.0301

Confidence - Limits of Difference Section

Variance		Mean	Standard	Standard	95% LCL	95% UCL
Assumption	**DF**	**Difference**	**Deviation**	**Error**	**of Mean**	**of Mean**
Equal	157	0.3560297	1.121918	0.2125963	-6.388827E-02	0.7759476
Unequal	62.14	0.3560297	1.54512	0.2013913	-4.652841E-02	0.7585877

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9989

Equal-Variance T-Test Section

Alternative		Prob	Decision	Power	Power
Hypothesis	**T-Value**	**Level**	**(5%)**	**(Alpha=.05)**	**(Alpha=.01)**
Difference <> 0	1.6747	0.095989	Accept Ho	0.383938	0.179112
Difference < 0	1.6747	0.952006	Accept Ho	0.000463	0.000033
Difference > 0	1.6747	0.047994	Reject Ho	0.509015	0.252679

Difference: (Gender=1)-(Gender=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	1.7678	0.081995	Accept Ho	0.413260	0.196321
Difference < 0	1.7678	0.959002	Accept Ho	0.000345	0.000025
Difference > 0	1.7678	0.040998	Reject Ho	0.541297	0.275301

Difference: (Gender=1)-(Gender=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Gender=1)	2.5841	0.009762	Reject normality
Kurtosis Normality (Gender=1)	0.0347	0.972318	Cannot reject normality
Omnibus Normality (Gender=1)	6.6790	0.035455	Reject normality
Skewness Normality (Gender=2)	-2.3240	0.020126	Reject normality
Kurtosis Normality (Gender=2)	1.5823	0.113591	Cannot reject normality
Omnibus Normality (Gender=2)	7.9044	0.019212	Reject normality
Variance-Ratio Equal-Variance Test	1.2179	0.469857	Cannot reject equal variances
Modified-Levene Equal-Variance Test	1.2309	0.268923	Cannot reject equal variances

Median Statistics

Variable	Count	Median	95% LCL of Mean	95% UCL of Mean
Gender=1	123	-5.539258E-02	-0.3146774	0.2284175
Gender=2	36	-0.1067433	-0.5632581	0.1492706

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	Whitney U	Sum Ranks	of W	of W
Gender=1	2463	10089	9840	242.9813
Gender=2	1965	2631	2880	242.9813

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati	Approximati					
		Without Cor	Correction					
Alternative	Prob	Decision		Prob	Decision		Prob	Decision
Hypothesis	Level	(5%)	Z-Value	Level	(5%)	Z-Value	Level	(5%)
Diff<>0			-1.0248	0.305472	Accept Ho	-1.0227	0.306444	Accept Ho
Diff<0			-1.0248	0.847264	Accept Ho	-1.0268	0.847749	Accept Ho
Diff>0			-1.0248	0.152736	Accept Ho	-1.0227	0.153222	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	Criterion Value	Greater Than	Level	(Test Alpha)	Level
D(1)<>D(2)	0.146341	0.2577	.050	Accept Ho	0.5346
D(1)<D(2)	0.078591	0.2577	.025	Accept Ho	
D(1)>D(2)	0.146341	0.2577	.025	Accept Ho	

Variable Factor 2

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	Count	Mean	Deviation	Error	of Mean	of Mean
Gender=1	123	-0.1247798	1.117928	0.1008002	-0.3243239	7.476422E-02
Gender=2	36	0.4263311	1.110477	0.1850794	5.059991E-02	0.8020623

Note: T-alpha (Gender=1) = 1.9796, T-alpha (Gender=2) = 2.0301

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	-0.551111	1.116271	0.2115264	-0.9689156	-0.1333063
Unequal	57.39	-0.551111	1.575729	0.2107488	-0.9730654	-0.1291565

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0022

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-2.6054	0.010059	Reject Ho	0.735482	0.500818
Difference < 0	-2.6054	0.005030	Reject Ho	0.828764	0.601250
Difference > 0	-2.6054	0.994970	Accept Ho	0.000011	0.000000

Difference: (Gender=1)-(Gender=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-2.6150	0.011379	Reject Ho	0.729429	0.485514
Difference < 0	-2.6150	0.005690	Reject Ho	0.826168	0.589753
Difference > 0	-2.6150	0.994310	Accept Ho	0.000012	0.000001

Difference: (Gender=1)-(Gender=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Gender=1)	-0.9317	0.351484	Cannot reject normality
Kurtosis Normality (Gender=1)	-1.2392	0.215253	Cannot reject normality
Omnibus Normality (Gender=1)	2.4038	0.300618	Cannot reject normality
Skewness Normality (Gender=2)	-0.4365	0.662509	Cannot reject normality
Kurtosis Normality (Gender=2)	-0.1452	0.884527	Cannot reject normality
Omnibus Normality (Gender=2)	0.2116	0.899613	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.0135	0.960859	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1768	0.674676	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Gender=1	123	-0.1016575	-0.3961598	0.1504121
Gender=2	36	0.5457514	-0.0577024	0.7072899

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Gender=1	1635	9261	9840	242.9813
Gender=2	2793	3459	2880	242.9813

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati	Approximati					
		Without Cor	Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			2.3829	0.017177	Reject Ho	2.3808	0.017273	Reject Ho
Diff<0			2.3829	0.008588	Reject Ho	2.3808	0.008637	Reject Ho
Diff>0			2.3829	0.991412	Accept Ho	2.3850	0.991459	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.253388	0.2577	.050	Accept Ho	0.0454
D(1)<D(2)	0.253388	0.2577	.025	Accept Ho	
D(1)>D(2)	0.000000	0.2577	.025	Accept Ho	

Variable Factor 3

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Gender=1	123	2.916513E-02	1.192488	0.1075231	-0.1836875	0.2420178
Gender=2	36	-9.964753E-02	1.074098	0.1790163	-0.4630699	0.2637749

Note: T-alpha (Gender=1) = 1.9796, T-alpha (Gender=2) = 2.0301

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	0.1288127	1.167136	0.221165	-0.30803	0.5656553
Unequal	62.48	0.1288127	1.604903	0.2088254	-0.2885601	0.5461854

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 1.9987

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.5824	0.561114	Accept Ho	0.089187	0.023586
Difference < 0	0.5824	0.719443	Accept Ho	0.013048	0.001843
Difference > 0	0.5824	0.280557	Accept Ho	0.143453	0.040153

Difference: (Gender=1)-(Gender=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	0.6168	0.539579	Accept Ho	0.093223	0.024871
Difference < 0	0.6168	0.730210	Accept Ho	0.012064	0.001694
Difference > 0	0.6168	0.269790	Accept Ho	0.150411	0.042469

Difference: (Gender=1)-(Gender=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Gender=1)	-2.8224	0.004767	Reject normality
Kurtosis Normality (Gender=1)	3.5288	0.000417	Reject normality
Omnibus Normality (Gender=1)	20.4182	0.000037	Reject normality
Skewness Normality (Gender=2)	-1.6671	0.095499	Cannot reject normality
Kurtosis Normality (Gender=2)	2.2240	0.026151	Reject normality
Omnibus Normality (Gender=2)	7.7251	0.021014	Reject normality
Variance-Ratio Equal-Variance Test	1.2326	0.443424	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1351	0.713687	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	**Count**	**Median**	**of Mean**	**of Mean**
Gender=1	123	6.544742E-02	-7.954562E-02	0.276311
Gender=2	36	-0.1386391	-0.6063058	0.2480671

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Gender=1	2470	10096	9840	242.9813
Gender=2	1958	2624	2880	242.9813

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati Without Cor	Approximati Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			-1.0536	0.292076	Accept Ho	-1.0515	0.293019	Accept Ho
Diff<0			-1.0536	0.853962	Accept Ho	-1.0556	0.854433	Accept Ho
Diff>0			-1.0536	0.146038	Accept Ho	-1.0515	0.146510	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.157182	0.2577	.050	Accept Ho	0.4454
D(1)<D(2)	0.045393	0.2577	.025	Accept Ho	
D(1)>D(2)	0.157182	0.2577	.025	Accept Ho	

Variable Factor 4

Descriptive Statistics Section

			Standard	Standard	95% LCL	95% UCL
Variable	**Count**	**Mean**	**Deviation**	**Error**	**of Mean**	**of Mean**
Gender=1	123	6.565351E-02	1.235813	0.1114295	-0.1549323	0.2862393
Gender=2	36	-0.2243162	1.425169	0.2375281	-0.7065239	0.2578916

Note: T-alpha (Gender=1) = 1.9796, T-alpha (Gender=2) = 2.0301

Confidence - Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	157	0.2899697	1.280454	0.2426379	-0.1892861	0.7692254
Unequal	51.39	0.2899697	1.886356	0.2623664	-0.2366568	0.8165961

Note: T-alpha (Equal) = 1.9752, T-alpha (Unequal) = 2.0072

Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	1.1951	0.233861	Accept Ho	0.220822	0.081845
Difference < 0	1.1951	0.883069	Accept Ho	0.002293	0.000223
Difference > 0	1.1951	0.116931	Accept Ho	0.324579	0.126821

Difference: (Gender=1)-(Gender=2)

Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	1.1052	0.274217	Accept Ho	0.191861	0.066189
Difference < 0	1.1052	0.862891	Accept Ho	0.003112	0.000333
Difference > 0	1.1052	0.137109	Accept Ho	0.289726	0.105655

Difference: (Gender=1)-(Gender=2)

Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (Gender=1)	-1.2574	0.208594	Cannot reject normality
Kurtosis Normality (Gender=1)	0.9184	0.358397	Cannot reject normality
Omnibus Normality (Gender=1)	2.4247	0.297503	Cannot reject normality
Skewness Normality (Gender=2)	-1.3987	0.161888	Cannot reject normality
Kurtosis Normality (Gender=2)	1.6875	0.091511	Cannot reject normality
Omnibus Normality (Gender=2)	4.8041	0.090532	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.3299	0.296583	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.1632	0.686734	Cannot reject equal variances

Median Statistics

			95% LCL	95% UCL
Variable	Count	Median	of Mean	of Mean
Gender=1	123	0.0286581	-0.2683579	0.3531382
Gender=2	36	-0.1898423	-0.8401949	0.4042437

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

	Mann	W	Mean	Std Dev
Variable	**Whitney U**	**Sum Ranks**	**of W**	**of W**
Gender=1	2463	10089	9840	242.9813
Gender=2	1965	2631	2880	242.9813

Number Sets of Ties = 1, Multiplicity Factor = 6

	Exact Proba	Approximati	Approximati					
		Without Cor	Correction					
Alternative	**Prob**	**Decision**		**Prob**	**Decision**		**Prob**	**Decision**
Hypothesis	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**	**Z-Value**	**Level**	**(5%)**
Diff<>0			-1.0248	0.305472	Accept Ho	-1.0227	0.306444	Accept Ho
Diff<0			-1.0248	0.847264	Accept Ho	-1.0268	0.847749	Accept Ho
Diff>0			-1.0248	0.152736	Accept Ho	-1.0227	0.153222	Accept Ho

Kolmogorov-Smirnov Test For Different Distributions

Alternative	Dmn	Reject Ho if	Test Alpha	Decision	Prob
Hypothesis	**Criterion Value**	**Greater Than**	**Level**	**(Test Alpha)**	**Level**
D(1)<>D(2)	0.130759	0.2577	.050	Accept Ho	0.6722
D(1)<D(2)	0.027778	0.2577	.025	Accept Ho	
D(1)>D(2)	0.130759	0.2577	.025	Accept Ho	

APPENDIX H

Summary and Discussion of the Results for Significant Difference in Consumer Behaviour for the Initial 28 Variables

Further analysis explored any significant differences in consumer behaviour among the initial 28 variables of the study.

The results for the Two Sample T-tests are summarised in Table 15 below.

Table 15: Results of the T-tests for the Initial 28 Variables

Variables	Difference Between High Income and High Net Worth Individuals	Difference Between Original Sample and Sample who Volunteered	Difference Between Registered and not Registered Respondents	Difference Between Male and Female Respondents
Personal service from private banker (Q1)	0.50	0.27	0.11	**0.01***
Convenience through information technology (Q2)	**0.08**	0.13	0.62	**0.001***
Investments with competitive returns (Q3)	0.05	0.57	0.47	**0.0005***
Transactional banking facilities (Q4)	0.41	0.96	0.07	0.12
Cash investments with competitive returns (Q5)	0.01*	0.89	0.85	0.05
Extensive products and services (Q6)	0.99	0.72	0.64	0.62
Limited products and services (Q7)	0.69	0.93	0.73	0.47
Financial advice (Q8)	0.06	**0.02***	0.81	**0.09**
Quality service vs lending rates (Q9)	**0.06**	0.81	0.63	**0.08**
Importance of information to make decisions (Q10)	0.58	**0.85**	0.47	0.22
Investment management vs adhoc alternative investment products (Q11)	**0.50**	0.38	0.72	0.47
Trusting private banker vs private bank (Q12)	0.07	0.05	0.71	0.88
Relationship with private banker vs private bank (Q13)	0.29	0.19	0.69	0.60

Variables	Difference Between High Income and High Net Worth Individuals	Difference Between Original Sample and Sample who Volunteered	Difference Between Registered and not Registered Respondents	Difference Between Male and Female Respondents
Technology vs personal relationships (Q14)	0.32	0.97	0.96	0.62
Convenience and control vs safety (Q15)				
Low level of knowledge and understanding (Q16)	0.16	0.46	0.81	0.11
Confident in financial matters (Q17)	0.20	0.61	0.53	0.03*
Low enjoyment in being active with financial affairs (Q18)	0.20	0.26	0.53	0.77
Difficult to evaluate product performance (Q19)	0.06	0.23	0.23	0.41
Opinions of family and friends (Q20)	0.07	0.49		
Long term relationship with private banker (Q21)	0.02*	0.22	0.70	**0.17**
High product risk (Q22)	0.93	0.51	0.33	0.31
Products must perform as intended (Q23)	**0.87**	0.16	0.97	**0.97**
Wealth creation (Q24)	**0.52**	0.81	**0.04***	0.99
Wealth management (Q25)	**0.24**	0.27	0.23	0.07
Wealth preservation (Q26)	0.42	0.92	**0.02***	0.51
Basic products (Q27)	0.98	**0.02***	0.97	0.52
Complex products (Q28)	**0.005***	0.79	0.60	0.001

Where the test results did not meet the assumption of equal variance, the results of the Aspin-Welsh test were analysed. These results are indicated in **bold**.

Data were not normally distributed with the exception of the following variables that show normality for the observations collected for high net worth individuals:

- attitude towards alternative investment products;
- perception towards active involvement in one's own financial affairs;
- the importance of a long-term relationship with private banker (normal data for both high income and high net worth individuals);
- the risk profile of traditional private banking products; and
- the use of foundation products.

According to the test results, the p-values were smaller than the 5% alpha levels, resulting in the failure to reject H_0 in all instances, with the exception (p-values less than the 5% alpha level are indicated by *) of:

- the test for a significant difference between the consumer behaviour of high net worth and high income earning individuals, where H_0 was rejected for the expected benefits of cash investment opportunities, the perception regarding the importance of a long-term relationship with a private banker and product behaviour in relation to complex private banking products;
- the test for a significant difference between the original sample and participants who voluntarily submitted their responses, regarding the use of foundation products and the expectation to receive of financial advice from a private banker;
- the test for a significant difference between the responses of registered and non-registered members of the loyalty programme in relation to their wealth creation and wealth preservation motivations; and
- the test for significant difference in consumer behaviour between male and females, where H_0 was rejected for the expectation of personal service from a private banker, the expectation of convenience through information

technology, the expectation of investment opportunities and confidence in one's own ability to deal with financial matters.

This means that there are consumer behaviour differences between high income and high net worth individuals, respondents drawn from the original sample and those that are not, members of the loyalty programme and those that are not and clients of different gender for the above variables.

APPENDIX I

Analysis of Variance Report for Age Groups

Response Factor 1

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	1.5458	0.122145	Accept
Kurtosis Normality of Residuals	1.4931	0.135399	Accept
Omnibus Normality of Residuals	4.6191	0.099306	Accept
Modified-Levene Equal-Variance Test	1.0469	0.385014	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Age	4	Yes	S(A)	S+sA
S(A)	153	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Age	4	9.427012	2.356753	1.91	0.112350	0.565874
S(A)	153	189.2582	1.236982			
Total (Adjusted)	157	198.6852				
Total	158					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	8.99883	0.061129	Accept Ho
Corrected for Ties	4	8.998843	0.061128	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	3	212.00	70.67	-0.3376	-0.4378703
2	60	5206.50	86.78	1.5638	0.1417874
3	47	4052.50	86.22	1.2019	-4.537795E-02
4	24	1378.00	57.42	-2.5675	-0.684631
5	24	1712.00	71.33	-0.9495	-0.2061551

Means and Effects Section

Term	Count	Mean	Standard Error	Effect
All	158	9.896862E-03		3.332979E-03
A: Age				
1	3	-0.1922871	0.642127	-0.1889541
2	60	0.1876692	0.143584	0.1910022
3	47	0.1481844	0.1622306	0.1515174
4	24	-0.4639197	0.2270262	-0.4605867
5	24	-0.2062575	0.2270262	-0.2029245

Response **Factor 2**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-0.3097	0.756789	Accept
Kurtosis Normality of Residuals	-0.9245	0.355205	Accept
Omnibus Normality of Residuals	0.9507	0.621671	Accept
Modified-Levene Equal-Variance Test	1.2206	0.304394	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Age	4	Yes	S(A)	S+sA
S(A)	153	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Age	4	10.98597	2.746494	2.18	0.073800	0.632238
S(A)	153	192.7454	1.259774			
Total (Adjusted)	157	203.7314				
Total	158					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	8.38732	0.078377	Accept Ho
Corrected for Ties	4	8.387332	0.078377	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	3	344.00	114.67	1.3441	0.7072899
2	60	4390.50	73.18	-1.3596	-0.2183408
3	47	3369.50	71.69	-1.3959	-0.2987671
4	24	2212.00	92.17	1.4727	0.2712395
5	24	2245.00	93.54	1.6325	0.3814125

Means and Effects Section

Term	**Count**	**Mean**	**Standard Error**	**Effect**
All	158	-3.778934E-03		7.574826E-03
A: Age				
1	3	0.8927244	0.6480159	0.8851495
2	60	-0.19037	0.1449008	-0.1979448
3	47	-0.1617512	0.1637183	-0.169326
4	24	0.3049483	0.2291082	0.2973734
5	24	0.351271	0.2291082	0.3436961

Response **Factor 3**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-2.4960	0.012559	Reject
Kurtosis Normality of Residuals	3.5924	0.000328	Reject
Omnibus Normality of Residuals	19.1355	0.000070	Reject
Modified-Levene Equal-Variance Test	3.6933	0.006701	Reject

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Age	4	Yes	S(A)	S+sA
S(A)	153	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Age	4	2.444988	0.611247	0.44	0.778426	0.151658
S(A)	153	211.8051	1.384347			
Total (Adjusted)	157	214.2501				
Total	158					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	0.6297746	0.959698	Accept Ho
Corrected for Ties	4	0.6297756	0.959698	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	3	271.00	90.33	0.4140	0.1744349
2	60	4650.50	77.51	-0.4281	-1.902191E-02
3	47	3655.50	77.78	-0.3081	1.583941E-02
4	24	1995.00	83.13	0.4215	0.0912578
5	24	1989.00	82.88	0.3924	0.2143973

Means and Effects Section

Term	**Count**	**Mean**	**Standard Error**	**Effect**
All	158	1.768302E-03		3.185995E-03
A: Age				
1	3	0.3696777	0.6793003	0.3664917
2	60	-2.236835E-02	0.1518962	-2.555435E-02
3	47	-0.140583	0.1716222	-0.143769
4	24	0.127666	0.2401689	0.12448
5	24	0.1689948	0.2401689	0.1658088

Response **Factor 4**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-1.8454	0.064973	Accept
Kurtosis Normality of Residuals	1.6394	0.101134	Accept
Omnibus Normality of Residuals	6.0932	0.047520	Reject
Modified-Levene Equal-Variance Test	1.4325	0.225878	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Age	4	Yes	S(A)	S+sA
S(A)	153	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Age	4	3.600043	0.9000108	0.54	0.708330	0.177450
S(A)	153	256.1503	1.674185			
Total (Adjusted)	157	259.7503				
Total	158					

Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	2.506096	0.643545	Accept Ho
Corrected for Ties	4	2.5061	0.643544	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	3	353.00	117.67	1.4587	1.369642
2	60	4649.50	77.49	-0.4317	-0.1100051
3	47	3663.50	77.95	-0.2777	0.0286581
4	24	2016.00	84.00	0.5232	0.2388297
5	24	1879.00	78.29	-0.1405	-0.0236339

Means and Effects Section

Term	**Count**	**Mean**	**Standard Error**	**Effect**
All	158	3.139153E-04		5.905095E-03
A: Age				
1	3	0.8985063	0.7470352	0.8926013
2	60	-4.564514E-02	0.1670422	-5.155024E-02
3	47	-7.959419E-02	0.1887351	-8.549929E-02
4	24	0.176603	0.2641168	0.1706979
5	24	-1.686489E-02	0.2641168	-2.276999E-02

APPENDIX J

Summary and Discussion of the Results of the Analysis of Variance Report for Age Groups for the Initial 28 Variables

Further analysis explored any significant differences in responses of age groups to the initial 28 variables of the study.

The results for the Analysis of Variance Report for Age Groups are summarised in Table 16 below.

Table 16: Summary of the Analysis of Variance Report for Age Groups

Variables	Normality	Equal Variance	Alternative Hypothesis
Personal service from private banker (Q1)	Reject	Cannot reject	Accept H_0 P-value=0.91
Convenience through information technology (Q2)	Reject	Cannot reject	Accept H_0 P-value=0.72
Investments with competitive returns (Q3)	Reject	Reject	Reject H_0 P-value=0.001
Transactional banking facilities (Q4)	Reject	Cannot reject	Accept H_0 P-value=0.36
Cash investments with competitive returns (Q5)	Reject	Cannot reject	Reject H_0 P-value=0.02
Extensive products and services (Q6)	Cannot reject	Cannot reject	Accept H_0 P-value=0.47
Limited products and services (Q7)	Reject	Cannot reject	Accept H_0 P-value=0.24
Financial advice (Q8)	Reject	Cannot reject	Reject H_0 P-value=0.007
Quality service vs lending rates (Q9)	Reject	Cannot reject	Accept H_0 P-value=0.80
Importance of information to make decisions (Q10)	Reject	Cannot reject	Accept H_0 P-value=0.63
Investment management vs adhoc alternative investment products (Q11)	Reject	Cannot reject	Accept H_0 P-value=0.06
Trusting private banker vs private bank (Q12)	Reject	Cannot reject	Reject H_0 P-value=0.03
Relationship with private banker vs private bank (Q13)	Reject	Cannot reject	Accept H_0 P-value=0.96
Technology vs personal relationships (Q14)	Reject	Cannot reject	Accept H_0 P-value=0.17
Convenience and control vs safety (Q15)	Reject	Cannot reject	Accept H_0 P-value=0.24

Variables	Normality	Equal Variance	Alternative Hypothesis
Low level of knowledge and understanding (Q16)	Reject	Cannot reject	Accept H_0 P-value=0.76
Confident in financial matters (Q17)	Cannot reject	Cannot reject	Reject H_0 P-value=0.04
Low enjoyment in being active with financial affairs (Q18)	Reject	Cannot reject	Accept H_0 P-value=0.71
Difficult to evaluate product performance (Q19)	Reject	Cannot reject	Accept H_0 P-value=0.26
rOpinions of family and friends (Q20)	Reject	Cannot reject	Accept H_0 P-value=0.30
Long term relationship with private banker (Q21)	Cannot reject	Cannot reject	Accept H_0 P-value=0.11
High product risk (Q22)	Reject	Cannot reject	Accept H_0 P-value=0.95
Products must perform as intended(Q23)	Reject	Cannot reject	Accept H_0 P-value=0.88
Wealth creation (Q24)	Reject	Cannot reject	Accept H_0 P-value=0.56
Wealth management (Q25)	Reject	Cannot reject	Accept H_0 P-value=0.45
Wealth preservation (Q26)	Reject	Cannot reject	Accept H_0 P-value=0.95
Basic products (Q27)	Reject	Cannot reject	Accept H_0 P-value=0.24
Complex products (Q28)	Reject	Cannot reject	Accept H_0 P-value=0.38

According to the results of the report for age groups, the tests for normality (Skewness Normality of Residuals, Kurtosis Normality of Residuals and Omnibus Normality of Residuals) indicate that the observations are not normally distributed. This applies with the exception of the data for the variables relating to the expectation of an extensive array of products and services, the perception of

confidence in dealing with one's own financial affairs and the perceived importance of a long-term relationship with a private banker.

In all instances, the Modified-Levene Equal-Variance Test shows equal variance with the exception of the expectation to be presented with investment opportunities that provide competitive returns.

The results of the Kruskall-Wallis test failed to reject the null hypothesis in all instances with the exception of the following variables: the expectation for investment opportunities that present competitive returns, the expectation to benefit from being presented with cash investment opportunities with competitive returns, the expectation of financial advice, the attitude towards trusting the private banker rather than the private bank and the perceived ability to deal with one's own financial matters. There are, therefore, no differences in observations across the various age groups, but for the above stated variables.

With regard to the expectation to be presented with investment and cash investment opportunities that produce competitive returns, groups 25-35 and 36-45 both show the same response pattern. These groups agree that these opportunities are presented to them as opposed to the other groups that strongly agree that these opportunities should be presented to them.

On analysing the responses of the various age groups with regard to their expectation of financial advice, the youngest age group and the 46-55 age group strongly agreed with this statement while the other groups agreed. As the younger age group is a very small sample of three, this response should be noted but treated with caution. This should be tested with a bigger sample of younger individuals.

With regards to the variable relating to the confidence to deal with financial matters, the youngest age group and the 46-55 age group remained neutral, while the other groups agreed.

The results show that in relation to the variable stating that it is more important to trust the private banker than the private bank, the youngest age group and the 46-55 group have a similar response in agreeing with this statement. The other groups remained neutral.

APPENDIX K

Analysis of Variance Report for Geographical Groups

Response **Factor1**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	1.7994	0.071957	Accept
Kurtosis Normality of Residuals	1.2591	0.208004	Accept
Omnibus Normality of Residuals	4.8231	0.089678	Accept
Modified-Levene Equal-Variance Test	0.5814	0.676557	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Region	4	Yes	S(A)	S+sA
S(A)	154	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Region	4	1.105204	0.276301	0.21	0.931068	0.094924
S(A)	154	200.0406	1.298965			
Total (Adjusted)	158	201.1458				
Total	159					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	1.378578	0.847910	Accept Ho
Corrected for Ties	4	1.37858	0.847909	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	63	4754.00	75.46	-1.0071	-0.1968513
2	50	4170.00	83.40	0.6306	4.176283E-02
3	21	1648.00	78.48	-0.1628	-0.1566021
4	19	1656.00	87.16	0.7222	0.5466615
5	6	492.00	82.00	0.1085	-7.419322E-02

Means and Effects Section

Term	Count	Mean	Standard Error	Effect
All	159	-5.257848E-16		8.95177E-05
A: Region				
1	63	-7.371569E-02	0.1435914	-7.380521E-02
2	50	5.592588E-02	0.161181	5.583636E-02
3	21	-3.335131E-02	0.2487076	-3.344082E-02
4	19	0.1658404	0.26147	0.1657509
5	6	-0.100466	0.4652894	-0.1005555

Response **Factor 2**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-0.5986	0.549410	Accept
Kurtosis Normality of Residuals	-1.0209	0.307314	Accept
Omnibus Normality of Residuals	1.4006	0.496446	Accept
Modified-Levene Equal-Variance Test	0.5759	0.680500	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Region	4	Yes	S(A)	S+sA
S(A)	154	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Region	4	8.001432	2.000358	1.57	0.184778	0.476885
S(A)	154	196.0887	1.273303			
Total (Adjusted)	158	204.0901				
Total	159					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	6.443706	0.168372	Accept Ho
Corrected for Ties	4	6.443716	0.168371	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	63	4933.00	78.30	-0.3768	-3.086427E-02
2	50	3516.00	70.32	-1.7955	-0.2360857
3	21	2051.00	97.67	1.8874	0.6317875
4	19	1650.00	86.84	0.6903	0.1460638
5	6	570.00	95.00	0.8135	0.626981

Means and Effects Section

Term	**Count**	**Mean**	**Standard Error**	**Effect**
All	159	-3.156106E-16		4.485639E-03
A: Region				
1	63	-5.689183E-02	0.142166	-6.137747E-02
2	50	-0.2236795	0.1595809	-0.2281652
3	21	0.421458	0.2462387	0.4169724
4	19	0.1910433	0.2588744	0.1865577
5	6	0.3812866	0.4606704	0.376801

Response **Factor 3**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-3.1299	0.001749	Reject
Kurtosis Normality of Residuals	3.7307	0.000191	Reject
Omnibus Normality of Residuals	23.7144	0.000007	Reject
Modified-Levene Equal-Variance Test	0.4971	0.737859	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Region	4	Yes	S(A)	S+sA
S(A)	154	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Region	4	1.345009	0.3362522	0.24	0.913453	0.102021
S(A)	154	212.9836	1.38301			
Total (Adjusted)	158	214.3286				
Total	159					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	1.243722	0.870849	Accept Ho
Corrected for Ties	4	1.243724	0.870849	Accept Ho

Number Sets of Ties 1

Multiplicity Factor 6

Group Detail

		Sum of	Mean		
Group	**Count**	**Ranks**	**Rank**	**Z-Value**	**Median**
1	63	4810.00	76.35	-0.8099	-2.243725E-03
2	50	4065.00	81.30	0.2411	-0.0229625
3	21	1718.00	81.81	0.1933	5.482502E-02
4	19	1684.00	88.63	0.8708	0.3634393
5	6	443.00	73.83	-0.3344	-0.1936954

Means and Effects Section

Term	Count	Mean	Standard Error	Effect
All	159	1.31551E-15		3.308424E-04
A: Region				
1	63	-7.733046E-02	0.1481639	-0.0776613
2	50	5.476765E-02	0.1663136	5.443681E-02
3	21	-5.721409E-02	0.2566274	-5.754493E-02
4	19	0.1954344	0.2697963	0.1951035
5	6	-6.305353E-02	0.480106	-6.338438E-02

Response **Factor 4**

Tests of Assumptions Section

	Test	Prob	Decision
Assumption	**Value**	**Level**	**(0.05)**
Skewness Normality of Residuals	-1.9653	0.049377	Reject
Kurtosis Normality of Residuals	1.8199	0.068769	Accept
Omnibus Normality of Residuals	7.1747	0.027672	Reject
Modified-Levene Equal-Variance Test	0.2033	0.936262	Accept

Expected Mean Squares Section

Source		Term	Denominator	Expected
Term	**DF**	**Fixed?**	**Term**	**Mean Square**
A: Region	4	Yes	S(A)	S+sA
S(A)	154	No		S(A)

Note: Expected Mean Squares are for the balanced cell-frequency case.

Analysis of Variance Table

Source		Sum of	Mean		Prob	Power
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**	**(Alpha=0.05)**
A: Region	4	3.72718	0.9317951	0.56	0.691689	0.183767
S(A)	154	256.0256	1.662504			
Total (Adjusted)	158	259.7528				
Total	159					

* Term significant at alpha = 0.05

Kruskal-Wallis One-Way ANOVA on Ranks

		Chi-Square	Prob	
Method	**DF**	**(H)**	**Level**	**Decision(0.05)**
Not Corrected for Ties	4	3.141524	0.534427	Accept Ho
Corrected for Ties	4	3.141529	0.534427	Accept Ho

Number Sets of Ties 1, Multiplicity Factor 6

Group Detail

Group	Count	Sum of Ranks	Mean Rank	Z-Value	Median
1	63	5182.00	82.25	0.5000	0.1767323
2	50	3647.00	72.94	-1.3095	-0.1998367
3	21	1878.00	89.43	1.0073	0.0286581
4	19	1435.00	75.53	-0.4513	-0.2380592
5	6	578.00	96.33	0.8858	0.8592744

Means and Effects Section

Term	Count	Mean	Standard Error	Effect
All	159	1.54733E-15		2.422975E-03
A: Region				
1	63	4.096097E-02	0.1624468	3.853799E-02
2	50	-0.1658862	0.182346	-0.1683092
3	21	0.2556467	0.2813661	0.2532237
4	19	-9.092326E-02	0.2958044	-9.334623E-02
5	6	0.3454548	0.5263877	0.3430318

APPENDIX L

Summary and Discussion of the Results of the Analysis of Variance Report for Geographical Groups for the Initial 28 Variables

Further analysis explored any significant differences in responses of geographical groups to the initial 28 variables of the study.

The results for the Analysis of Variance Report for Geographical Groups are summarised in Table 17 below.

Table 17: Summary of the Analysis of Variance Report for Geographical Groups

Variables	Normality	Equal Variance	Alternative Hypothesis
Personal service from private banker (Q1)	Reject	Cannot Reject	Accept H_0 P-value=0.88
Convenience through information technology (Q2)	Reject	Cannot Reject	Accept H_0 P-value=0.49
Investments with competitive returns (Q3)	Reject	Cannot Reject	Accept H_0 P-value=0.43
Transactional banking facilities (Q4)	Reject	Cannot Reject	Accept H_0 P-value=0.99
Cash investments with competitive returns (Q5)	Reject	Cannot Reject	Accept H_0 P-value=0.80
Extensive products and services (Q6)	Cannot Reject	Cannot Reject	Accept H_0 P-value=0.56
Limited products and services (Q7)	Reject	Cannot Reject	Accept H_0 P-value=0.91
Financial advice (Q8)	Reject	Cannot Reject	Accept H_0 P-value=0.36
Quality service vs lending rates (Q9)	Reject	Cannot Reject	Accept H_0 P-value=0.63
Importance of information to make decisions (Q10)	Reject	Cannot Reject	Accept H_0 P-value=037
Investment management vs adhoc alternative investment products (Q11)	Reject	Cannot Reject	Accept H_0 P-value=0.87
Trusting private banker vs private bank (Q12)	Reject	Cannot Reject	Accept H_0 P-value=0.58
Relationship with private banker vs private bank (Q13)	Reject	Cannot Reject	Accept H_0 P-value=0.53
Technology vs personal relationships (Q14)	Reject	Cannot Reject	Accept H_0 P-value=0.74

Variables	Normality	Equal Variance	Alternative Hypothesis
Convenience and control vs safety (Q15)	Reject	Cannot Reject	Accept H_0 P-value=0.56
Low level of knowledge and understanding (Q16)	Reject	Cannot Reject	Accept H_0 P-value=0.77
Confident in financial matters (Q17)	Cannot Reject	Cannot Reject	Accept H_0 P-value=0.87
Low enjoyment in being active with financial affairs (Q18)	Reject	Cannot Reject	Accept H_0 P-value=0.13
Difficult to evaluate product performance (Q19)	Reject	Cannot Reject	Accept H_0 P-value=0.50
Opinions of family and friends (Q20)	Reject	Cannot Reject	Accept H_0 P-value=0.18
Long term relationship with private banker (Q21)	Cannot Reject	Cannot Reject	Accept H_0 P-value=0.90
High product risk (Q22)	Reject	Cannot Reject	Accept H_0 P-value=0.87
Products must perform as intended(Q23)	Reject	Cannot Reject	Accept H_0 P-value=0.82
Wealth creation (Q24)	Reject	Cannot Reject	Accept H_0 P-value=0.92
Wealth management (Q25)	Reject	Cannot Reject	Accept H_0 P-value=0.95
Wealth preservation (Q26)	Reject	Cannot Reject	Accept H_0 P-value=0.40
Basic products (Q27)	Reject	Cannot Reject	Accept H_0 P-value=0.34
Complex products (Q28)	Reject	Cannot Reject	Accept H_0 P-value=0.98

The results for the report for geographical groups indicate that the Skewness Normality of Residuals, Kurtosis Normality of Residuals and Omnibus Normality of Residuals tests have rejected normality in all instances, with the exception of

the following variables: the expectation to have access to an extensive range of private banking products and services, the perceived confidence in the ability to deal with one's own financial affairs and the perceptual importance of a long-term relationship with a private banker in fulfilling the expectations regarding private banking products and services.

The Modified-Levene Equal-Variance Test shows equal variances for the data observations in all instances.

The Kurskall-Wallis test across all variables failed to reject the null hypothesis in all instances. There is, therefore, no significant difference in responses across the various geographical groupings.

APPENDIX M

Report on K-Means Cluster Analysis

Minimum Iteration Section

Iteration No.	No. of Clusters	Percent of Variation	Bar Chart of Percent
3	2	91.95	|||||||||||||||||||||||||||
5	3	85.51	|||||||||||||||||||||||||
9	4	82.24	|||||||||||||||||||||||
12	5	79.28	|||||||||||||||||||||
14	6	76.93	|||||||||||||||||||||
17	7	74.74	|||||||||||||||||||
20	8	72.34	|||||||||||||||||||
23	9	70.19	|||||||||||||||||
27	10	68.75	|||||||||||||||||
29	11	66.55	|||||||||||||||
31	12	64.98	|||||||||||||||
36	13	63.01	|||||||||||||||
39	14	63.04	|||||||||||||||
40	15	60.42	|||||||||||||||
45	16	59.18	|||||||||||||||
48	17	58.35	|||||||||||||||
49	18	57.22	|||||||||||||||
53	19	56.20	|||||||||||||||
55	20	54.98	|||||||||||||||

Iteration Section

Iteration No.	No. of Clusters	Percent of Variation	Bar Chart of Percent
1	2	98.37	||||||||||||||||||||||||||||||
2	2	92.38	||||||||||||||||||||||||||||
3	2	91.95	||||||||||||||||||||||||||||
4	3	90.20	||||||||||||||||||||||||||||
5	3	85.51	||||||||||||||||||||||||
6	3	85.51	||||||||||||||||||||||||
7	4	83.40	||||||||||||||||||||||||
8	4	83.44	||||||||||||||||||||||||
9	4	82.24	||||||||||||||||||||||
10	5	80.06	||||||||||||||||||||||
11	5	79.61	||||||||||||||||||||
12	5	79.28	||||||||||||||||||||
13	6	77.43	||||||||||||||||||||
14	6	76.93	||||||||||||||||||||
15	6	77.21	||||||||||||||||||||
16	7	75.41	||||||||||||||||||
17	7	74.74	||||||||||||||||||
18	7	74.78	||||||||||||||||||
19	8	72.38	||||||||||||||||
20	8	72.34	||||||||||||||||
21	8	73.36	||||||||||||||||
22	9	70.98	||||||||||||||||
23	9	70.19	||||||||||||||||
24	9	70.92	||||||||||||||||
25	10	68.81	||||||||||||||||
26	10	68.97	||||||||||||||||
27	10	68.75	||||||||||||||||
28	11	67.39	||||||||||||||||
29	11	66.55	||||||||||||||||
30	11	67.14	||||||||||||||||
31	12	64.98	||||||||||||||||
32	12	66.17	||||||||||||||||

Iteration No.	No. of Clusters	Percent of Variation	Bar Chart of Percent
33	12	66.03	||||||||||||||||||
34	13	64.68	||||||||||||||||||
35	13	63.58	||||||||||||||||||
36	13	63.01	||||||||||||||||||
37	14	63.08	||||||||||||||||||
38	14	63.37	||||||||||||||||||
39	14	63.04	||||||||||||||||||
40	15	60.42	||||||||||||||||||
41	15	60.86	||||||||||||||||||
42	15	60.64	||||||||||||||||||
43	16	59.66	||||||||||||||||||
44	16	59.94	||||||||||||||||||
45	16	59.18	||||||||||||||||||
46	17	58.74	||||||||||||||||||
47	17	58.62	||||||||||||||||||
48	17	58.35	||||||||||||||||||
49	18	57.22	||||||||||||||||||
50	18	57.70	||||||||||||||||||
51	18	58.06	||||||||||||||||||
52	19	56.50	||||||||||||||||||
53	19	56.20	||||||||||||||||||
54	19	56.86	||||||||||||||||||
55	20	54.98	||||||||||||||||||
56	20	55.28	||||||||||||||||||
57	20	55.53	||||||||||||||||||

Cluster Means

Variables	Cluster1	Cluster2	Cluster3
DediPBQ1	1.066978	1.245586	1.671775
ConvITQ2	1.040187	1.049117	1.422178
InvestQ3	1.151483	1.702293	1.765472
TrnsctQ4	4.157615	4.317695	3.734842
CshinvQ5	1.235989	1.793351	1.732226
Ex10svQ6	1.330258	1.844708	1.971763
Ltdp_sQ7	3.008185	2.963325	2.48296
FinadvQ8	1.401368	2.031984	2.013923
QualSQ9	2.092731	2.377399	2.152167
InfoQ10	1.962394	1.457929	1.922457
AllnvQ11	1.634068	2.048653	2.018902
TrustQ12	2.070454	3.136415	2.467646
RelatQ13	2.073351	2.841723	2.45972
ITvsRQ14	2.384521	2.414898	2.087566
SSQ15	2.206398	2.281607	2.06481
KnowQ16	2.295635	3.193886	2.347502
ConfQ17	2.062627	1.516498	1.938285
ActivQ18	3.23135	4.253778	2.800345
EvalQ19	2.339399	3.464261	2.401604
IgnorQ20	2.529701	2.508757	2.512231
LtRQ21	1.522521	1.89657	2.03369
RiskQ22	3.146132	3.918525	2.927295
PrfrmQ23	1.503901	1.294495	2.001367
CrtWQ24	1.38334	1.306147	1.88442
MtnWQ25	1.325719	1.701309	2.127343
PrsvWQ26	1.402739	1.969717	2.066628
BasicQ27	1.515943	1.61178	1.969596
CmplxQ28	2.694336	2.509758	2.89461
Count	65	54	52

Cluster Standard Deviations

Variables	Cluster1	Cluster2	Cluster3
DediPBQ1	0.2357366	0.3997135	0.4761549
ConvITQ2	0.1855701	0.2044168	0.48094
InvestQ3	0.372447	0.5802098	0.4888466
TrnsctQ4	1.129501	1.049228	1.258146
CshinvQ5	0.4553676	0.6835104	0.5690958
Ex10svQ6	0.4458049	0.520991	0.4854349
Ltdp_sQ7	1.192089	0.8791481	0.6143907
FinadvQ8	0.4855725	0.8642495	0.7321455
QualSQ9	0.824859	0.9618863	0.5712104
InfoQ10	0.7239158	0.5564375	0.5492831
AllnvQ11	0.4624834	0.6749378	0.6249761
TrustQ12	0.6894358	1.234832	0.719032
RelatQ13	0.6489193	1.101665	0.6598995
ITvsRQ14	0.8223526	0.9642357	0.7694684
SSQ15	0.6238338	0.9364187	0.6143862
KnowQ16	0.5291029	1.032206	0.751252
ConfQ17	0.5317319	0.4922657	0.4544749
ActivQ18	1.04339	1.063647	0.549283
EvalQ19	0.6568024	1.196847	0.5057971
IgnorQ20	0.6765602	0.9103021	0.5957255
LtRQ21	0.4930815	0.6847854	0.5697848
RiskQ22	0.7652895	1.103731	0.777195
PrfrmQ23	0.4965804	0.4395971	0.5757528
CrtWQ24	0.4969663	0.4776849	0.7769244
MtnWQ25	0.5118501	0.7178479	0.9014291
PrsvWQ26	0.6024514	1.093004	0.7081529
BasicQ27	0.5694855	0.5852175	0.6792628
CmplxQ28	0.909936	0.9254361	0.7689414
Count	65	54	52

F-Ratio Section

			Between	Within		Prob
Variables	**DF1**	**DF2**	**Mean Square**	**Mean Square**	**F-Ratio**	**Level**
DediPBQ1	2	170	5.529006	0.1404096	39.38	0.000000
ConvlTQ2	2	170	2.627224	9.694585E-02	27.10	0.000000
InvestQ3	2	170	6.969353	0.2310893	30.16	0.000000
TrnsctQ4	2	170	4.880993	1.315202	3.71	0.02645
CshinvQ5	2	170	5.720355	0.324003	17.66	0.000000
Ex10svQ6	2	170	7.020158	0.2326927	30.17	0.000000
Ltdp_sQ7	2	169	4.702952	0.8966949	5.24	0.00616
FinadvQ8	2	166	7.77282	0.4819879	16.13	0.000000
QualSQ9	2	169	1.28428	0.6482171	1.98	0.14108
InfoQ10	2	169	4.40789	0.3883934	11.35	0.00002
AllnvQ11	2	169	3.244272	0.3440452	9.43	0.00013
TrustQ12	2	168	16.89309	0.8190644	20.62	0.000000
RelatQ13	2	168	8.732794	0.6754959	12.93	0.000000
ITvsRQ14	2	169	1.783946	0.7298573	2.44	0.08985
SSQ15	2	168	0.6420798	0.5394787	1.19	0.30671
KnowQ16	2	169	14.08157	0.6091589	23.12	0.000000
ConfQ17	2	169	4.642789	0.2468604	18.81	0.000000
ActivQ18	2	168	29.41353	0.8580393	34.28	0.000000
EvalQ19	2	169	22.12685	0.6853877	32.28	0.000000
IgnorQ20	2	168	7.646488E-03	0.5413204	0.01	0.98597
LtRQ21	2	169	4.233246	0.3376916	12.54	0.00000
RiskQ22	2	169	14.57656	0.7859504	18.55	0.000000
PrfrmQ23	2	169	7.042478	0.2563006	27.48	0.000000
CrtWQ24	2	168	5.275311	0.3494233	15.10	0.00000
MtnWQ25	2	168	9.354074	0.507539	18.43	0.000000
PrsvWQ26	2	167	7.745368	0.6634001	11.68	0.00001
BasicQ27	2	169	3.21992	0.3721904	8.65	0.00026
CmplxQ28	2	168	1.962122	0.7650992	2.56	0.07996

Distance Section

Row	Cluster	Dist1	Dist2	Dist3
1	3	4.0316	5.2490	3.7733
2	3	4.2517	5.1124	3.2989
3	2	6.3767	4.6983	5.1600
4	1	3.9500	5.7216	4.5651
5	1	5.1158	5.9823	5.2919
6	1	5.0479	5.1946	5.5786
7	3	4.4947	3.9854	2.7117
8	2	7.3315	6.9703	8.7401
9	1	5.0461	5.6808	5.3160
10	1	4.8101	6.5033	6.7599
11	1	4.4310	5.6916	5.8510
12	2	7.8952	7.0983	8.3972
13	2	9.1841	7.8488	8.2380
14	2	7.9906	7.0514	8.1982
15	1	3.5405	5.6438	5.7537
16	1	3.5670	5.6819	5.1304
17	3	4.8870	4.5168	2.9001
18	3	7.6522	6.2453	5.5609
19	3	5.4508	4.7706	4.3914
20	1	3.5742	5.1949	4.7767
21	2	6.1703	5.8414	6.6992
22	3	4.5133	4.3138	3.9142
23	3	4.8313	4.7524	2.6668
24	2	7.2299	5.3566	5.8749
25	2	4.2491	3.9274	4.3857
26	3	3.3801	3.4506	3.1182
27	2	4.6413	4.2140	5.1625
28	3	6.6088	6.7413	6.0194
29	3	10.5764	11.4453	9.7825
30	1	3.9135	5.5214	4.3496
31	1	3.5801	5.2589	6.1213
32	1	5.4353	5.9777	6.3769
33	3	5.9744	5.0609	3.6213

Row	Cluster	Dist1	Dist2	Dist3
34	2	5.5709	5.2019	6.6455
35	1	4.0903	6.1174	5.1988
36	3	8.4440	8.8296	7.8119
37	3	6.8772	7.0236	5.6280
38	2	4.8136	4.2452	4.8778
39	1	7.1119	7.5749	8.5466
40	2	6.7388	5.4116	6.1728
41	1	4.5947	5.2328	4.7989
42	3	5.5933	6.7014	4.7767
43	3	10.7006	10.3476	10.0475
44	3	10.5980	9.4704	9.0969
45	1	5.0139	5.5181	6.2138
46	2	6.5246	5.1032	5.9567
47	2	4.3770	4.1232	4.4835
48	3	3.9598	3.7162	3.4831
49	1	4.5512	4.7375	5.1578
50	2	7.6393	6.1785	6.6996
51	2	6.6586	5.7163	6.7380
52	2	7.0916	5.0033	7.2956
53	2	7.3605	4.9169	7.0306
54	1	3.3156	4.1641	4.7876
55	2	9.2104	8.7956	10.0180
56	3	5.3192	6.0237	3.6811
57	2	5.1385	4.3545	5.2903
58	2	8.2637	6.2831	8.2136
59	2	4.5875	4.1719	5.2805
60	3	6.6392	6.2214	4.8323
61	1	4.0752	5.5317	5.6212
62	3	4.4336	4.4499	2.9915
63	2	4.6820	3.4252	5.0740
64	1	4.1674	5.5215	5.3768
65	2	7.8416	5.8984	7.0759
66	3	5.5496	5.2842	3.6809
67	1	3.0474	4.5458	3.8313
68	1	3.4338	4.1000	4.6358

Row	Cluster	Dist1	Dist2	Dist3
69	2	10.8301	8.8405	10.5301
70	1	3.1255	4.8000	4.2994
71	3	5.1761	5.9829	4.5372
72	1	3.9307	5.2153	5.2460
73	2	5.8425	5.1825	5.8160
74	1	5.6497	6.0950	6.1796
75	3	4.8815	4.3382	2.5296
76	1	3.9745	5.3976	5.6056
77	2	6.5775	6.0887	6.2301
78	1	5.8802	6.7803	6.5836
79	2	7.0763	6.4740	8.0324
80	3	6.7103	5.3984	4.8712
81	1	3.1853	4.2753	4.3566
82	2	7.2820	6.9970	7.4603
83	3	4.5179	4.0606	3.5461
84	3	4.2985	4.3045	2.7023
85	1	6.4257	8.4724	8.3371
86	2	9.1420	7.1973	9.2595
87	2	5.0031	4.5302	4.8000
88	3	4.3674	4.5737	3.2484
89	1	6.2684	6.8522	7.9341
90	3	6.0975	5.0058	4.6446
91	2	6.4709	5.2640	5.6250
92	3	5.7624	6.1933	3.8237
93	3	4.8091	4.8613	3.5401
94	1	4.7268	5.1327	6.3651
95	1	4.0377	4.7842	5.3337
96	2	5.6184	4.6437	5.7729
97	3	5.1986	5.6623	3.7111
98	1	4.8870	6.5951	4.9725
99	3	7.5319	7.3202	5.5189
100	1	3.9741	5.5838	6.5631
101	2	8.0349	5.6586	7.4337
102	1	4.5933	5.5321	6.0449
103	2	6.1954	4.5078	5.9068

Row	Cluster	Dist1	Dist2	Dist3
104	2	4.6708	4.2367	4.7014
105	1	3.4543	4.5486	4.0600
106	1	5.5162	5.8072	5.8771
107	1	5.6600	6.9730	6.1050
108	1	3.5100	5.5833	3.9064
109	1	3.8397	5.6785	6.2272
110	2	5.4389	4.0179	5.1665
111	3	4.3769	4.9684	4.1308
112	1	4.7220	5.5731	6.1773
113	2	5.2810	4.8282	6.2697
114	3	7.2742	7.1187	6.9507
115	1	5.0830	5.8472	6.1139
116	2	5.7515	4.5340	6.3588
117	2	6.0102	4.7555	5.5179
118	2	7.3350	6.5452	7.0242
119	1	3.3769	4.5682	5.5569
120	1	3.3229	4.5830	4.8785
121	1	3.1651	4.0251	4.1750
122	1	4.4021	4.8869	6.8513
123	3	6.0853	7.1306	5.7086
124	1	4.3009	6.5743	5.8021
125	3	6.9388	5.2993	5.0929
126	3	6.3036	6.0486	4.6075
127	1	5.1001	6.7688	5.3920
128	2	6.8531	5.9595	6.6421
129	1	4.7510	5.6385	5.1089
130	3	5.7063	6.1986	4.9298
131	3	4.7706	4.9902	2.9241
132	1	2.8399	4.2833	3.9611
133	2	4.5578	4.2226	4.9622
134	1	3.5817	4.5488	4.6234
135	3	5.2908	5.3801	3.1999
136	2	5.7976	4.2668	4.8070
137	1	2.7471	5.0336	4.7368
138	3	5.0028	5.3908	3.1696

Row	Cluster	Dist1	Dist2	Dist3
139	2	5.8440	5.4898	6.3490
140	2	3.8357	3.4261	3.6214
141	1	4.2959	5.7950	5.7073
142	3	4.9479	5.0576	3.7139
143	3	5.5246	5.0880	4.8152
144	2	4.9749	3.5689	4.2870
145	3	4.8136	5.0443	3.5364
146	3	4.5634	4.0506	2.3583
147	1	3.4653	5.5533	4.8205
148	1	3.6707	4.5182	5.8828
149	1	4.0530	6.4093	5.5739
150	3	6.0182	6.5115	5.4040
151	3	6.1450	6.7267	4.9376
152	1	3.6707	4.5182	5.8828
153	2	6.6924	4.7915	7.1002
154	3	5.4390	6.0092	3.9289
155	1	3.5717	6.3446	5.6254
156	1	3.6987	6.0006	5.9192
157	2	4.9868	4.0467	5.7817
158	1	5.5421	7.8209	7.5157
159	2	6.9502	5.6332	6.3031
160	3	4.3268	5.2505	3.5489
161	2	6.2653	5.7544	5.8849
162	2	5.3489	3.9014	4.7354
163	1	3.9222	6.1098	6.0921
164	3	4.9114	5.3966	4.3343
165	1	4.5631	5.9097	4.8577
166	1	5.0668	5.4460	5.5938
167	1	3.5950	5.1853	5.7916
168	1	4.0585	5.2154	5.3420
169	1	3.2535	5.2202	4.7069
170	3	5.4342	4.8708	3.9859
171	3	5.3202	6.4079	3.9531
172	2	5.8307	5.5698	6.7141
173	2	6.2017	5.6469	7.1972