VALUE DISCIPLINES:
MEASURING CUSTOMER PREFERENCES

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ABSTRACT

According to the *World Competitiveness Report: 1999*, South Africa ranks poorly in terms of delivering customer services (Garelli, 1999). In order to assist South African organisations to identify their customers' value preferences, three scales collectively called the Customer Preference Questionnaire (CPQ) were developed. The purpose was to assess the three value disciplines as conceptualised by Treacy and Wiersema (1993; 1995a; 1995b) by empirically evaluating the CPQ and determining the psychometrical properties of the various identified scales. A combined sample (N = 436), consisting of undergraduate (N = 281) and post-graduate (N = 155) students in the field of human resource management, were asked to assess the university from a customer's point of view. All three scales were subjected to factor analysis and iterative item analysis. The three scales yielded acceptable alpha coefficients, indicating that customers' preferences could be measured reliably. The implications of these findings are discussed.

OPSOMMING

Luidens die *World Competitiveness Report: 1999* vaar Suid-Afrika swak ten opsigte van kliëntediens-lewering (Garelli, 1999). Om Suid-Afrikaanse organisasies te help met die identifisering van hulle kliënte se waardevoorkeure, is drie skale wat gesamentlik die Kliëntevoorkeurvraelys (CPQ) genoem word, ontwikkel. Die doel was om die drie waardedissiplines te meet soos dit deur Treacy en Wiersema (1993; 1995a; 1995b) gekonseptualiseer is, deur die CPQ empiries te evalueer en die psigometriese eienskappe te bepaal van die onderskeie skale wat geïdentifiseer kon word. 'n Gekombineerde steekproef (N = 436), bestaande uit voorgraadse (N = 281) en nagraadse (N = 155) studente in menslike hulpbronbestuur, is genader om die universiteit vanuit 'n kliënt se oogpunt te evalueer. Die drie skale is onderwerp aan 'n faktorontleding en iteratiewe itemontleding. Die drie skale het aanvaarbare alfa-koëffisiënte opgelewer, wat daarop dui dat kliënte se voorkeure met betroubaarheid gemeet kon word. Die implikasies van hierdie bevindinge word bespreek.

The central concern of this study is with the domain specificity of customer preference within the South African context. In the present highly competitive and global market-environment, an increased emphasis is placed on organisations to adopt a new corporate paradigm, i.e. a value orientation towards delivering total quality customer service. In general, South African organisations have a poor track record of neither being service nor client orientated (Garelli, 1999). A possible reason could be that organisations lack the insight into what their customers' preferences are and therefore have difficulty to differentiate those preferences in terms of value disciplines. Value disciplines are in essence about the redefined role of customer service in quality-centered organisations. These three value disciplines, as conceptualised by Treacy and Wiersema (1993; 1995a; 1995b) are later defined.

Gauging and communicating what an organisation's products/services are worth to its customers has never been more important. One of the many reasons why so many businesses fail, could be ascribed to the fact that too much of their measurements, analyses and learning revolves around profit and too little around value creation (Anderson & Narus 1998; Reichheld, 1996). Nowadays, value means more than a customer's positive perception of some combination of quality and price, since today's customers will not pay higher prices unless they receive greater value. McLagan and Nel (1995, p. 11) label this scenario *cost cutting*, adding that an additional concern nowadays is the fact that quality is rapidly becoming the minimum prerequisite for customer satisfaction.

Comparative Research
In a recent study Govender (1999, p.1) illustrates the situation of poor customer service in the financial services, by claiming that financial service companies in South Africa lose customers more often on account of poor service than because of poor products. The challenges facing South Africa are nowhere more apparent

than in the *World Competitiveness Report: 1999*, where South Africa continues to feature at 42 and 44 out of 47 participating countries. Furthermore, South Africa ranks at 43 and 46 on customer orientation/awareness and society values, respectively.

Critical areas where South African organisations have to work and improve on, towards achieving world-class standards of excellence are (Pretorius, 1998):

- Creating value for customers (SA ranked at 47).
- Increasing customer retention and relationships (SA ranked at 43).
- Optimising marketing efficiency (SA ranked at 38).
- Efficient and effective leadership and management (SA ranked at 40).
- The development of human resources (SA ranked at 47).
- The application of information technology and infrastructure (SA ranked at 44).

The *World Competitiveness Report* disseminates the imperative for achieving optimal levels of competitiveness which should be rooted in trends that shape the strategic direction of world-class companies. According to the present study, this strategic direction can be achieved by adopting a value orientation towards delivering total quality customer service, by means of excelling in any one of the three concepts of competitiveness, namely, product leadership, operational excellence and customer intimacy (Treacy & Wiersema, 1993; 1995a; 1995b). These strategic issues confirm the importance of South African organisations to position themselves in an increasingly competitive global context and emphasise the importance that service plays in this process.

However, organisations can only make this change if they relocate their strategy to focus on their customers' needs and value preferences. If organisations gain information regarding these value preferences, these can be aligned with their corporate strategy. Doing so can structure the organisation in terms of the identified value preferences, in order to build processes and systems that revolve around customers.

Customer value preferences: Measured in terms of value disciplines

The three value disciplines

These value disciplines can be seen as a *unique way of doing business*, because the "product/service" idea should be seen as more than just the product or service itself – it extends to everything the organisation does to create value (Morobe, 1999). This implies, thinking beyond the product, to focus on customer service and adding value in the process, so that the service that is delivered exceeds customers' expectations (Cheales, 1994; Dorrian, 1996).

These three value disciplines are distinct customer-focussed approaches (also known by other names, such as value propositions, value predispositions, strategic value approaches or value-adding disciplines). They are called disciplines because each one produces a different kind of customer value that is hardly esoteric:

• *Operational excellence* is a strategic approach to the production of products or the delivery of services. It imparts the ability to provide customers with reliable products and services, at the best perceived cost/benefit ratios and competitive prices in the industry, and delivered with minimal difficulty or inconvenience (French, 1995; Gubman, 1995; Treacy & Wiersema, 1993; Zemke, 1993).

• *Product leadership* is a strategic approach to produce and offer continuous leading-edge, state-of-the-art products and services, on a regular basis that consistently enhances the customer's use or application of the product or service. Thereby they make rivals' products or services (or even sometimes the organisation's own products or services) obsolete (French, 1995; Gubman, 1995; Treacy & Wiersema, 1993; Zemke, 1993).

• *Customer intimacy* is a strategic approach to understand and respond to the highly specific and changing needs of very segmented customers. This is achieved by continually segmenting and targeting markets precisely and then tailoring and shaping products and services to match exactly the demands and requirements to fit those niches (French, 1995; Gubman, 1995; Treacy & Wiersema, 1993; Zemke, 1993; Wiersema, 1996). However, Zemke (1993, p. 50) adds a more common meaning of intimacy to this, namely "a warm friendship development through long association", which includes at least four customer intimacy tactics that are used, namely frequency marketing, narrow market segmentation (N = 1), customer education and partnering.

What these value disciplines indicate is that customers buy more than a product or service, they buy perceived value (Tersine, Harvey & Buckley, 1997). Therefore organisations need to go one step further by creating added-value to their products and services, not only to attract new customers, but also to retain existing ones (Govender, 1999; Hawkins, Best & Coney, 1995; McLagan & Nel, 1995; Treacy & Wiersema, 1993; Zemke, 1993).

Treacy and Wiersema (1993) assert that the best way to accomplish this would be to concentrate on any one of the above three value disciplines which define market leaders. The reason for this is that no organisation can succeed today by trying to be all things to all people. Porter (1996) claims that the problem with organisations that lose their strategic focus, lies in the action of managers who push to improve on all fronts and in doing so move further away from the viable competitive positions. Positioning (once the pivot of strategy) is rejected as being too static for today's dynamic customers, markets and changing technologies. Leading-edge organisations instead try to find the unique value they can deliver to a chosen market, as an endeavour to keep up with their customers' identified preferences (Treacy & Wiersema, 1995).

When deciding which value discipline to pursue, both operational effectiveness and strategy are essential for delivering superior performance, which is after all, the primary goal of any organisation (Porter, 1996).

In this regard, Porter (1985; 1996) has introduced the "value chain" approach, where he created three generic strategies to analyse the complexity of industry competition, namely lowest cost, differentiation and focus. The value chain segments the organisation into strategically important activities which add value to the delivery of a product or service. The best level for creating a value chain is at business unit level. According to Porter (1985) an industry or sector-wide value chain is too broad due to the many possible sources of competitive advantage. Such segmentation brings structure to the task of strategic positioning. The segmentation also indicates how competitive advantage can be defined in terms of relative cost and relative prices, thus linking it directly to profitability. Consequently, it produces a disciplined structure to the question of how organisations achieve superiority, peerless competition and unsurpassed profitability.

Linking value disciplines to organisational strategy: The creation of a value delivery system

Over the last decade industry-leading organisations have not succeeded simply by focussing on quality and intensive marketing strategies. Instead, organisations have concentrated on perfecting one of the three value disciplines and the consequent mastering in any one of these disciplines served to distinguish an organisation from its competitors.

However, for organisations to become leaders in one of these value disciplines and to sustain their market share, they must at least meet and maintain industry standards in both of the other two value disciplines (Treacy & Wiersema, 1995). This new framework which offers insight into the relationship between strategy and market leadership, enables an organisation to focus simultaneously on both quality and distinctiveness. Treacy and Wiersema (1995) classify business strategies and market leadership from the vantage point of how *customers* define and perceive value.

Due to the impossibility of being "all things to all customers", organisations can become truly effective and significant if they align their core strategy with their methods, organisational structure and culture. Such an achievement leads to the promotion of seamless activities, quality and continuous value improvement, all of which are grounded in a strong disciplinary base of theory (Fournier, Dobscha & Mick 1998; Gubman, 1995; Tersine et al., 1997). This customer-driven perspective is predominantly based on the responsiveness to customers' needs and an internal flexibility to react and adapt to constantly changing demands.

Tersine et al. (1997) state that the values and preferences of customers must take precedence and should become the driving-force behind the way an organisation is managed. Simultaneously it ought to be aligned with the organisation's business strategies and value propositions, internal customer requirements and human resource strategies. These systems must focus intentionally on delivering increased value to customers (Gubman, 1995).

Such a customer-driven orientation requires the organisation to take advantage in anticipating and responding to customers' needs. Consequently, it can set its strategy to achieve new levels of value in one of the three value disciplines. Only then it can commence in building efficient, effective and total business systems, e.g. management processes, operating systems, technology and a culture, to enforce the discipline and deliver more of that value to its customers than competitors.

In attracting and retaining customers, it is necessary for an organisation to tailor a "value delivery system" to fulfil and exceed its customers' needs and to deliver superior service, by focussing constantly on customers, through means of creating perpetual value (Manning, 1997). This system includes rather obvious elements, such as the organisation's products, processes and people, as well as less obvious elements, such as the organisation's business philosophies. No matter how efficient an organisation is, its value delivery system can only do exactly the

right and precise things for a very narrowly defined audience. This implies that an organisation needs to design and continuously align itself, to deliver superior service, exceed customer expectations and fulfil customers' preferences, without bending the strategic-fit of the chosen discipline (Jaffe, 1990). The operation of these systems is illustrated in Figure 1.
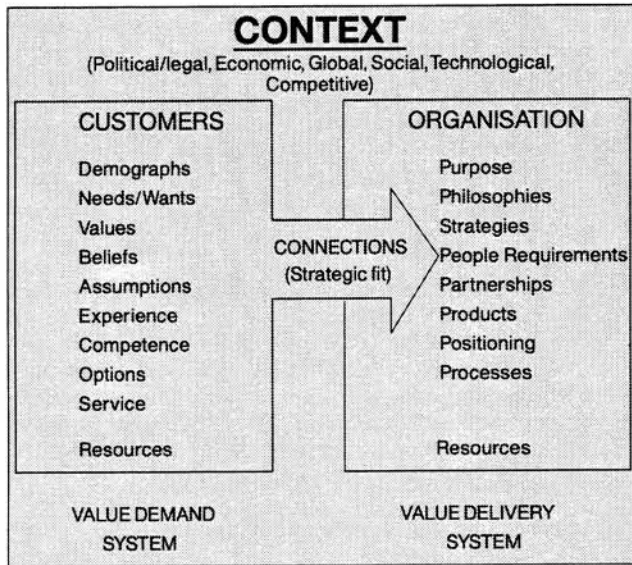

Figure 1: **The values delivery system and value demand system. Adapted from Manning, 1997; p23**

Figure 1 illustrates that the customers' value preference serves as a fundamental point of departure with respect to how the organisation should translate its strategy in creating a complete customer focussed environment and subsequently complying to what they proclaim to their customers. Figure 1 is also an illustration of how an organisation gains strategic advantage by focussing on customer retention through creating value.

Anderson and Narus (1998) claim that understanding value in business markets and doing business based on the value delivered, gives an organisation the means to get an equitable return for its efforts. The essence of customer value is to deliver superior value and to get an equitable return for it, both of which depend on value assessment.

Building the organisation's core competencies in regard to its value discipline(s)
Organisations are rapidly paring down (not to get "lean and mean" – the rhetoric of the 1980s) but to eliminate areas of the organisation that are not central to the value that the organisation adds (Stewart, 1996). The jargon is *core competence*: "We'll invest in our core competence and eliminate or outsource the rest". When an organisation decides on pursuing a value discipline, in order to focus on a core competence, it is not the same as choosing a strategy. The reason is that a value discipline cannot be forced onto or integrated into an organisation's existing operating philosophy, because it is not a "quick fix", a marketing scheme, a promotional campaign, or a way to increase stockholders' interest (Treacy & Wiersema, 1995; Sull, 1999).

Selecting and pursuing a value discipline is a central act that shapes, directs and structures every subsequent plan and decision that an organisation makes, embellishing the entire organisation, from its competencies to its culture (see Figure 2). In effect, the choice of a value discipline defines what an organisation does and therefore what it is. Deciding on a value discipline should eminently be guided by customers' value preferences, thorough knowledge of the market and the organisation's strategies.

Treacy (1995) contends that by selecting a value discipline(s), the organisation's strategy must first fit the culture and core competence, before the organisation can afford to have a superior operating model. Resulting from this the organisation can create value and treat its customers, shareholders and employees correctly and precisely, within a customer-focussed context.

Disciplines

		Operational Excellence	Product Leadership	Customer Intimacy
O r g a n i s a t i o n	Core business processes that...	Sharpen distribution systems and provide no-hassle service	Nurture ideas, translate them into products and market them skilfully	Provide solutions and help customers run their businesses
	Core capabilities/ Focus on...	Application	Innovation	Relationship building
	Structure that...	Has, strong, central authority and a finite level of empowerment	Acts in ad hoc, organic, loosely knit and ever-changing way	Pushes empowerment close to customer contact
T r a i t s	Management systems that...	Maintain standard operating procedures	Reward individuals' innovative capacity and new product success	Measure the cost of providing service and of maintaining customer loyalty
	Culture that...	Acts predictably and believes "one size fits all"	Experiments and thinks "out-of-the-box"	Is flexible and thinks "have it your way"

Figure 2: **Value discipline and organisational capabilities. Adapted and expanded from Treacy and Wiersema, 1995a; p56**

Figure 2 principally imparts that the customers' preference is required as an integral vantage point, before an organisation can engage in adapting or adopting an invincible strategy to suit its customers' identified value preference.

Regarding this Kaplan and Norton (1996) argue that customers' value preferences represent the value attribute(s) that supplying organisations provide through their products and services, in order to create loyalty and satisfaction in targeted customer segments. Therefore, it serves as an indication of the critical value-adding processes that drive an organisation. However, these indications must be investigated in a systematic, disciplined fashion and must be sought *throughout the whole of the organisation*, because the value discipline is the key concept for understanding the drivers of the core measurements of satisfaction, acquisition, retention, market and account share.

An organisation – or a business unit or even a work team, as long as it has autonomy – that adheres to its core competencies can bring its values in line with its customers, people and professional fraternities. However, the reverse is also true: To find values that work, one has to look at where value is added.

Building the organisation's human resource system(s) in regard to its value discipline
The management of human resources holds the key to an organisation's future success, since organisations are increasingly experiencing unprecedented opportunities to refocus their human resource management (HRM) systems into strategic assets (Ulrich, Losey & Lake, 1997). Inspired human resource (HR) leaders need to capitalise on a chosen value discipline in order to develop practices and strategic goals that effectively link human resources to overall organisational strategies, improved customer service and the creation of extraordinary value. A HRM system that achieves developing and maintaining an organisation's infrastructure should be considered an investment. Ulrich et al. (1997) state that such an investment is an essential element of the infrastructure that supports a value creation process and holds a potential strategic lever for the organisation in becoming customers' preferred supplier.

Any South African organisation that wants to capture and keep its customers, must be a partner, rather than an orator to its customers and this partnering should then be translated into their strategy (Manning, 1997). When an organisation accomplishes this alignment, it is able to provide maximum value to customers, respond rapidly to shifts in customer demands and deliver superior customer service. Ultimately it results in repeated and expanded business and inevitably becomes indispensable to customers (Gubman, 1995; Manning, 1997; Tersine et al., 1997). Augustine (1997) states that the

process of such change should be invisible to customers but the *results* must be very apparent and positive. According to Ulrich et al. (1997) the tangible evidence of such a process is an internally coherent, externally aligned and effectively implemented HRM system which ultimately leads to the establishment of a HR value chain.

Learning to master such a system will accelerate customer satisfaction from a mere slogan to a science that will ultimately result in true strategic management. This alignment is illustrated in Figure 3.
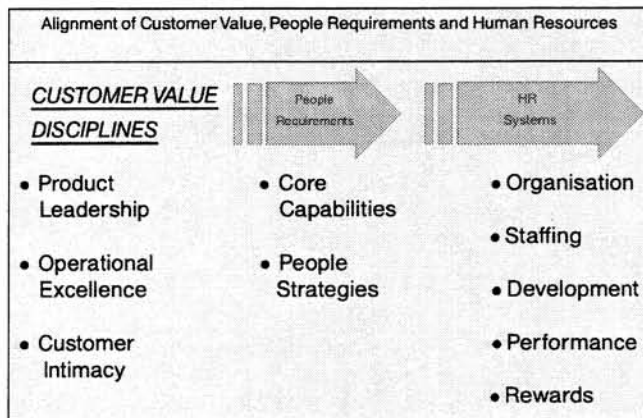

Figure 3: **Alignment of customer value, people requirements and human resources. Adapted from Gubman, 1995; p9**

Figure 3 illustrates the importance of first establishing the customers' preferred value discipline, before the organisation can structure, build and streamline its service delivery process and HRM system in accordance with its customers' identified value preference. Figure 3 illustrates that the essential feature of this strategic HRM system is that it is linked to the organisation's chosen value discipline and people requirements that constitutes an organisation's business and strategic initiatives. Once an organisation has successfully aligned its chosen customer value discipline with its core capabilities, people strategies/requirements and HRM system, it can become the customer's preferred supplier for life. Although HRM systems are important within the context of industrial psychology, it does not mean that other systems such as the financial or information technology (IT) systems should not also be built in regard to the value discipline the organisation pursues.

Purpose of the study
The purpose of the present study was to empirically evaluate a measuring instrument that has been developed to enable organisations in segmenting their services into different value disciplines, based on their customers' identified preferences. A corollary of the study was to determine the psychometrical properties of the various scales that could be identified.

METHOD

Sample
The research was conducted in a large university in South Africa. Participants were approached as customers of the specific university and were requested to evaluate the university where they are studying. They thus completed the questionnaire from a customer's point of view. The motivation behind this was that universities operate like organisations that offer products and services to their customers. In this instance, the students were the customers of the university who had to evaluate the organisation, i.e. the university.

Two non-probability convenience samples were drawn from the population. The first sample was drawn from a total population of 450 students of whom 155 respondents completed the questionnaire. This sample consisted of students following a post-graduate distance education course in Human Resource Management. The second sample was drawn from a total population of 440 students of whom 281 completed the ques-

tionnaire. The second sample consisted of second year undergraduate students studying for a degree in Industrial Psychology. The total sample consisted of 436 respondents.

The respondents' ages ranged from younger than 20 years to 60 years of age and it can be inferred from Table 1 that the majority of respondents (79%) were younger than 30 years. The larger proportion (67%) of the sample was female. The qualifications of the respondents were relatively high. The majority of respondents have a grade 12 (matric) or equivalent qualification (53%), 27,3% have a B-degree and 9,9% have post-graduate qualifications. From the total sample only 0,9% have a qualification lower than grade 12.

As far as the respondents' marital status is concerned 80,3% reported that they have never been married, 16,4% are married, 2,5% have been divorced and 0,7% widowed. The majority of participants (86,7%) resided in urban or sub-urban areas.

TABLE 1
RESPONDENT'S BIOGRAPHICAL PARTICULARS

Biographical variable	Frequency	Percentage
AGE		
‹20 YEARS	174	40,1
21–30	169	38,9
31–40	69	15,9
41–50	19	4,4
51–60	3	0,7
TOTAL N	434	100
GENDER		
Male	145	33,3
Female	290	66,6
TOTAL N	435	100
MARITAL STATUS		
Never married	347	80,3
Married	71	16,4
Divorced	11	2,5
Widowed	3	0,7
TOTAL N	432	100
QUALIFICATIONS		
Matric	229	53
Post matric Diploma/Certificate	25	5,8
Technicon Diploma	8	1,9
University Diploma/Certificate	0	0
B-degree	118	27,3
Honours degree	39	9
Masters degree	4	0,9
TOTAL N	432	100
RESIDENCE		
Urban	256	59,8
Sub-urban	115	26,9
Peri-urban	23	5,4
Rural	34	7,9
TOTAL N	428	100

Measuring instrument
The Customer Preference Questionnaire (CPQ), consists of three scales, based on Treacy and Wiersema's (1993, 1995a, 1995b) conceptualisation of the three value disciplines. The CPQ was developed by GATES[1]. The three scales consist of the following:

Scale 1:	Operational Excellence	–	24 items
Scale 2:	Product Leadership	–	25 items
Scale 3:	Customer Intimacy	–	26 items
	TOTAL	–	75 items

The response format of the items is a 7-point intensity scale, where only the extreme poles are defined. A value of one indicates a low preference for the activity described in the statement, while a seven indicates a strong preference for the activity described in the statement.

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1. *Global Assessment Tools for Excellence in Service (GATES). The authors can be approached for more information on GATES*

The rationale of the questionnaire was to measure the three value disciplines according to the value discipline that customers give preference to. The questionnaire was designed with the deliberate intention of keeping it as short as possible, in order to minimize the time required for customers to complete it.

A preliminary analysis of the results of the first sample (N = 155) yielded Cronbach alpha coefficients of 0,836, 0,898 and 0,911 in respect of operational excellence, product leadership and customer intimacy, respectively. The final obtained reliability coefficients for the three scales are reported under the heading 'Results'.

Procedure

Instructions for the completion of the three scales of the questionnaire were either given by the lecturer or by student tutors of the department. The respondents were told to complete the scales from a customer's perspective and the university as a provider of a service. The respondents were told that there were no right or wrong answers and that they should be as spontaneous as possible in responding to the scales. The administration of the questionnaire to the 155 respondents took place during a study school and was completed during class time. The administration of the questionnaire to the 281 students ran concurrently with their Industrial Psychology semester test.

RESULTS

The Statistical Consultation Service of the Rand Afrikaans University conducted all the statistical analyses. In the analyses of the three scales of the CPQ it was decided to subject each of the scales to a factor analysis followed by an item analysis. In order to obviate the effects associated with differential skewness of items, a procedure developed by Schepers (1992) was followed. This procedure prevents the creation of artefactors.

Separate analyses were conducted for the three scales. The first analysis will be described in detail. Exactly the same procedure has been followed with the other two scales and only the results of the analyses for Scales 2 and 3 will be given. In respect of Scale 1 (Operational Excellence) the 24 items were intercorrelated and the eigenvalues of the unreduced intercorrelation matrix were calculated. Owing to limited space the matrix of intercorrelations and eigenvalues of Scale 1 (Operational Excellence) will not be reported here. However, these matrices are available on request.

The estimation of the number of factors concerned was based on the Kaiser (1961) criterion (number of eigenvalues greater than unity). From an inspection of the eigenvalues in respect of Scale 1, it was clear that there were six eigenvalues greater than unity. Accordingly six factors were extracted, using the principal factor analysis (PFA) technique and rotated to simple structure by means of the Varimax rotation (an orthogonal rotation).

Subsequently subtests were computed for each of the six factors that were extracted by adding the scores of the items with high loadings on each factor. Finally the six subtests were intercorrelated and subjected it to a PFA and rotated to simple structure by means of the Direct Oblimin rotation (an oblique rotation).

The intercorrelation matrix of the subtests appears in Table 2 and the eigenvalues of the unreduced intercorrelation matrices are given in Table 3.

TABLE 2
INTERCORRELATIONS OF SUBTESTS IN RESPECT OF
OPERATIONAL EXCELLENCE

	Subtest 1	Subtest 2	Subtest 3	Subtest 4	Subtest 5	Subtest 6
SUBTEST 1	1,000					
SUBTEST 2	0,488	1,000				
SUBTEST 3	0,331	0,094	1,000			
SUBTEST 4	0,242	0,362	0,103	1,000		
SUBTEST 5	0,515	0,280	0,396	0,112	1,000.	
SUBTEST 6	0,488	0,295	0,200	0,169	0,286	1,000

TABLE 3
EIGENVALUES OF ENREDUCED INTERCORRELATION MATRIX FOR OPERATIONAL EXCELLENCE

ROOT	EIGENVALUE	CUMULATIVE % VARIANCE
1	2,522	42,032
2	1,099	60,341
3	0,814	73,901
4	0,674	85,132
5	0,516	93,730
6	0,376	100,00
TRACE	6,000	

An inspection of the factor matrix indicates that two factors were obtained, using the Direct Oblimin rotation. The rotated factor matrix and the matrix of intercorrelations of the factors are both contained in Table 4.

TABLE 4
FACTOR MATRIX FOR OPERATIONAL EXCELLENCE
(DIRECT OBLIMIN ROTATION)

FACTOR SUBTESTS	I	II
SUBTEST 1	0,573	0,396
SUBTEST 2	−0,006	0,786
SUBTEST 3	0,573	−0,105
SUBTEST 4	−0,020	0,439
SUBTEST 5	0,680	−0,033
SUBTEST 6	0,341	0,271

FACTOR CORRELATION MATRIX		
	FACTOR	
FACTOR	I	II
I	1,000	0,424
II	0,424	1,00

From an inspection of the rotated factor matrix (Table 4) it is evident that the following subtests have substantial loadings on Factor I: Subtest 1 (0,573), Subtest 3 (0,573) and Subtest 5 (0,680). Subtest 6 (0,341) has a moderate loading on Factor I. Since the items have substantial and moderate loadings on Factor I, Factor I is well-determined. It can be identified as a factor of *Operational Excellence*.

Subtest 2 (0,786) and Subtest 4 (0,439) have significant loadings on Factor II and Subtest 1 (0,396) has a moderate loading on Factor II. Although Factor II is just-determined it is still acceptable for research purposes and can be interpreted as a factor of *Operational Excellence*. It further turns out that Factor I and Factor II are moderately correlated (0,424). These two factors explain 60,34% of the variance for Scale 1 (Operational Excellence).

Accordingly, two scales were formed corresponding to the two factors that emerged. These scales were subjected to an iterative item analysis procedure using the NP50 programme of the National Institute for Personnel Research (NIPR).

The results of the item statistics in respect of Scale I appear in Table 5. An inspection of Table 5 indicates that all the items possess highly acceptable item reliability indices. The item reliabilities varied between 0,463 and 0,871 while the item-total correlations ranged from 0,416 to 0,674. The item means for Scale I varied from 4,303 to 6,479. From an inspection of Table 5 it appears that Item 17 has an item reliability index of 0,151 and an item-total correlation of 0,188 which is not satisfactory. After the rejection of item 17, the Cronbach alpha coefficient was 0,813.

The results of the item statistics of the second scale of *Operational Excellence* appear in Table 6. No items were rejected and Scale II yielded a Cronbach Alpha of 0,709. The item means of Scale II varied from 3,901 to 6,057. The item reliabilities ranged from 0,560 to 0,856, while the item-total correlations varied from 0,392 to 0,639.

TABLE 5
ITEM STATISTICS IN RESPECT OF OPERATIONAL EXCELLENCE (SCALE 1)

ITEM	ITEM MEAN	STANDARD DEVIATION	ITEM RELIABILITY INDEX	ITEM-TOTAL CORRELATION
1	4,303	1,317	0,547	0,416
2	6,002	1,547	0,849	0,549
4	6,222	1,132	0,679	0,600
6	6,330	0,950	0,504	0,531
7	6,239	0,948	0,483	0,509
9	6,131	0,922	0,508	0,551
10	6,092	1,526	0,871	0,571
16	5,865	0,984	0,564	0,573
17*	6,477*	0,803*	0,151*	0,188*
19	6,479	0,735	0,479	0,650
20	6,351	0,991	0,668	0,674
21	6,431	0,815	0,463	0,568
22	6,394	0,805	0,509	0,632
23	5,188	1,373	0,591	0,431
24	6,241	0,917	0,595	0,649
MEANS	**6,019**	**1,069**	**0,594**	**0,565**

* Item omitted in the item analysis after the first interation
• Cronbach alpha = 0,813

The final results (as contained in Tables 5 and 6) differ slightly from the preliminary factor analysis on the data set of the first sample (N = 155) where only one factor was extracted and a single scale was obtained.

TABLE 6
ITEM STATISTICS IN RESPECT OF OPERATIONAL EXCELLENCE (SCALE II)

ITEM	ITEM MEAN	STANDARD DEVIATION	ITEM RELIABILITY INDEX	ITEM-TOTAL CORRELATION
3	3,901	1,619	0,635	0,392
5	5,339	1,353	0,780	0,577
8	5,752	1,436	0,741	0,516
11	5,544	1,155	0,628	0,544
12	5,537	1,177	0,672	0,571
13	5,076	1,339	0,815	0,608
14	5,674	1,110	0,710	0,639
15	5,053	1,379	0,856	0,621
18	6,057	0,977	0,560	0,573
MEANS	**5,326**	**1,263**	**0,711**	**0,560**

• Cronbach alpha = 0,899

According to the analyses, these two scales have acceptable psychometrical properties.

Exactly the same procedure was followed in analysing Scales 2 (Product Leadership) and 3 (Customer Intimacy) of the CPQ. Consequently only the results of these two scales will be given here.

In respect of Scale 2 six subtests were intercorrelated and subjected to a PFA, which yielded one eigenvalue greater than unity.

TABLE 7
INTERCORRELATIONS OF SUBTESTS IN RESPECT OF PRODUCT LEADERSHIP

	Subtest 1	Subtest 2	Subtest 3	Subtest 4	Subtest 5	Subtest 6
SUBTEST 1	1,000					
SUBTEST 2	0,383	1,000				
SUBTEST 3	0,583	0,309	1,000			
SUBTEST 4	0,525	0,455	0,520	1,000		
SUBTEST 5	0,434	0,421	0,420	0,461	1,000.	
SUBTEST 6	0,522	0,314	0,457	0,426	0,398	1,000

TABLE 8
EIGENVALUES OF UNREDUCED INTERCORRELATION MATRIX FOR PRODUCT LEADERSHIP

ROOT	EIGENVALUE	CUMULATIVE % VARIANCE
1	**3,223**	**53,733**
2	0,783	66,777
3	0,580	76,443
4	0,563	85,827
5	0,453	93,376
6	0,397	100,00
TRACE	6,000	

No rotation of axes was necessary as the scale contained only one factor. This factor explains 53,73% of the variance of Scale 2. The obtained factor matrix for Scale 2 is given in Table 9.

TABLE 9
FACTOR MATRIX FOR PRODUCT LEADERSHIP (DIRECT OBLIMIN ROTATION)

SUBTEST	FACTOR 1
SUBTEST 1	0,759
SUBTEST 2	0,544
SUBTEST 3	0,703
SUBTEST 4	0,727
SUBTEST 5	0,628
SUBTEST 6	0,633

From an inspection of Table 9 it turns out that there are high loadings throughout the variables on Factor I of Scale 2. Since the items have high loadings on this factor, it can be interpreted as well-determined and can be seen as a factor of *Product Leadership*.

The items contained in Scale 2 were item analysed and the results of the item statistics appear in Table 10. An inspection of Table 10 indicates that all the items possess highly acceptable item reliability indices. No items were rejected. The item means for this scale varied from 4,651 to 6,390. The item reliabilities for this scale varied from 0,376 to 0,977. The item-total correlations ranged from 0,327 to 0,666. Scale 2 yielded a Cronbach alpha coefficient of 0,899. Accordingly Scale 2 has acceptable psychometrical properties.

TABLE 10
ITEM STATISTICS IN RESPECT OF THE PRODUCT LEADERSHIP SCALE

ITEM	ITEM MEAN	STANDARD DEVIATION	ITEM RELIABILITY INDEX	ITEM-TOTAL CORRELATION
1	5,466	1,258	0,803	0,638
2	5,193	1,290	0,822	0,637
3	4,940	1,249	0,831	0,666
4	5,532	1,155	0,568	0,491
5	5,450	1,030	0,621	0,603
6	4,651	1,514	0,977	0,645
7	5,131	1,340	0,840	0,626
8	4,998	1,347	0,718	0,533
9	5,929	1,082	0,543	0,502
10	6,390	0,825	0,376	0,456
11	6,119	1,209	0,602	0,498
12	5,110	1,202	0,393	0,327
13	5,211	1,018	0,621	0,610
14	5,977	0,949	0,554	0,585
15	5,626	1,064	0,593	0,557
16	4,961	1,615	0,765	0,474
17	5,385	1,142	0,666	0,584
18	5,940	0,969	0,545	0,563
19	5,571	1,123	0,569	0,507
20	5,365	1,295	0,661	0,511
21	6,083	1,084	0,538	0,497
22	6,300	0,899	0,398	0,443
23	5,273	1,278	0,704	0,551
24	5,782	1,108	0,596	0,537
25	4,867	1,356	0,796	0,586
MEANS	**5,490**	**1,716**	**0,644**	**0,545**

• Cronbach alpha = 0,709

With regard to Scale 3 (Customer Intimacy) six subtests were intercorrelated and subjected to a PFA which also produced only one eigenvalue greater than unity.

TABLE 11
INTERCORRELATIONS OF SUBTESTS IN RESPECT OF CUSTOMER INTIMACY

	Subtest 1	Subtest 2	Subtest 3	Subtest 4	Subtest 5	Subtest 6
SUBTEST 1	1,000					
SUBTEST 2	0,545	1,000				
SUBTEST 3	0,379	0,464	1,000			
SUBTEST 4	0,580	0,491	0,468	1,000		
SUBTEST 5	0,507	0,462	0,525	0,510	1,000.	
SUBTEST 6	0,353	0,353	0,366	0,366	0,384	1,000

TABLE 12
EIGENVALUES OF UNREDUCED INTERCORRELATION MATRIX FOR CUSTOMER INTIMACY

ROOT	EIGENVALUE	CUMULATIVE % VARIANCE
1	3,260	54,330
2	0,741	66,681
3	0,633	77,230
4	0,530	86,064
5	0,465	93,806
6	0,372	100,00
TRACE	6,000	

No rotation of axes was necessary, since one factor was extracted. This factor explains 54,33% of the variance of Scale 3. The obtained factor matrix in respect of Scale 3 is reproduced in Table 13.

TABLE 13
FACTOR MATRIX FOR CUSTOMER INTIMACY
(DIRECT OBLIMIN ROTATION)

SUBTESTS	FACTOR 1
SUBTEST 1	0,712
SUBTEST 2	0,695
SUBTEST 3	0,650
SUBTEST 4	0,736
SUBTEST 5	0,720
SUBTEST 6	0,511

Table 13 shows that there are high loadings on the single factor of Scale 3. Since the items have high loadings on this factor, it can be interpreted as well-determined and can be seen as a factor of *Customer Intimacy*.

The items contained in Scale 3 (Customer Intimacy) were item analysed and the results of the item analysis of Scale 3 appear in Table 14. An inspection of Table 14 indicates that all the items possess highly acceptable item reliability indices. The item means varied from 4,427 to 6,044. The item reliabilities ranged from 0,528 to 0,963 while the item-total correlations varied from 0,405 to 0,665.

Table 14 shows that Item 17 has an item reliability index of 0,326 and an item-total correlation of 0,207 which are not very satisfactory. Accordingly Item 17 was rejected. A Cronbach alpha coefficient was computed after the rejection of item 17, yielding a coefficient of 0,907, which is highly acceptable. According to the analyses, Scale 3 has acceptable psychometrical properties.

DISCUSSION

Results of this study indicate that the CPQ succeeded in measuring the different value disciplines, as conceptualised by Treacy and Wiersema (1993, 1995a, 1995b), according to customers' value preferences fairly accurately. Furthermore, the CPQ also succeeded in discriminating between the value preferences of customers. In this particular study, customers gave

TABLE 14
ITEM STATISTICS IN RESPECT OF THE CUSTOMER INTIMACY SCALE

ITEM	ITEM MEAN	STANDARD DEVIATION	ITEM RELIABILITY INDEX	ITEM-TOTAL CORRELATION
1	4,805	1,560	0,824	0,528
2	4,984	1,375	0,756	0,550
3	5,789	1,230	0,712	0,578
4	5,284	1,352	0,819	0,606
5	5,904	1,091	0,591	0,541
6	5,362	1,394	0,731	0,525
7	5,594	1,187	0,528	0,445
8	4,472	1,611	0,796	0,494
9	5,677	1,227	0,679	0,553
10	5,493	1,132	0,648	0,573
11	5,282	1,299	0,684	0,527
12	5,362	1,336	0,776	0,580
13	5,390	1,297	0,735	0,567
14	5,433	1,491	0,915	0,613
15	4,427	1,596	0,877	0,549
16	4,865	1,449	0,963	0,665
17★	4,778★	1,575★	0,326★	0,207★
18	5,011	1,379	0,872	0,633
19	5,376	1,287	0,614	0,477
20	5,041	1,268	0,761	0,591
21	5,284	1,370	0,876	0,639
22	5,087	1,346	0,877	0,651
23	5,454	1,184	0,702	0,593
24	5,844	1,166	0,600	0,514
25	5,826	1,145	0,689	0,602
26	6,044	1,400	0,566	0,405
MEANS	5,324	1,328	0,744	0,560

★ Item discarded in the item analysis after the fourth itariation
• Cronbach alpha = 0,907

preference to the Operational Excellence value discipline based on a comparison of the mean scores of the different scales.

As is suggested in the literature (Gubman, 1995; Jaffe, 1990; Kaplan & Norton, 1996; Manning, 1997; Tersine et al., 1997), the point of departure in providing total quality customer service, is to identify the customers' particular value preferences. On the other hand, in establishing new businesses, entrepreneurs should create a particular consumer context (Crous, 1999) which also reflects the preferred value discipline of customers.

In using the CPQ, South African organisations can now identify their customers' value preferences. From that point onwards, an organisation can start off by designing a unique customer service delivery process. Treacy (1995) contends that this process should fit the corporate culture and core competencies in aligning optimal operating models and HR processes in the provision of excellent customer service.

Figure 4: Generic customer service competencies

Figure 4 illustrates how the specific value discipline which an organisation chooses to excel in, gives a distinct focus to its customer service. However, the organisation should at least be on industry standard in the other two disciplines.

Organisations are, however, cautioned in the use of the CPQ. The value preferences of organisations' different market segments need still to be assessed. Care should still be taken in segmenting potential markets and in assessing their value preferences. If this word of caution is applied to the present study, it means that the two samples probably have different value preferences and by treating them as equal, the organisation would not succeed in satisfying specific customer needs.

The psychometrical properties of the scales are on an acceptable level. Further research can, however, be conducted on improving the properties of these scales. It is suggested that the instrument be subjected to further research to build a repertoire of validity and reliability evidence. Considering the fact, that organisations approach their customers and request them to complete the questionnaire, thus using their valuable time, the use of shortened, but equal valid scales warrant further research attention.

Although the preliminary analysis conducted on the first sample (N = 155) alone, yielded one-factor solutions for all the different value discipline instruments, the final factor analysis on the combined and larger sample (N = 436) contradicts this finding on the *Operational Excellence* scale (Scale 1).

There are two possible explanations for this finding. Firstly, it may be that respondents from the first sample (who were postgraduate students and also quite older) have a more crystallised view about their own value preferences as compared to the younger undergraduate students who are in the process of developing their value systems. Secondly, these findings can also be attributed to possible response styles, considering the fact that a large proportion of the respondents was at undergraduate level. Thirdly, it may imply that the two subsamples had different experiences and different perceptions of the university. The latter can be seen as a limitation of the study, however, the university cannot be blamed for this.

Thus, in analysing the CPQ it appears that there are four rather than three dimensions apparent. Three of the existing scales are confirmed in this study and the forth dimension can be seen as a complimentary scale of Scale 1 (Operational Excellence). Scale II of *Operational Excellence* could be given another label. However, it has been decided against labeling it differently, since it can be ascribed to the composition of the samples. The sample N = 155 (that formed a subsample of the larger sample of this study) produced only one scale with the preliminary analysis that was conducted.

The reliabilities of the three scales are highly acceptable. The reliability of the second scale of *Operational Excellence* is not very high, due to the fact that it consists of too few items.

A limitation of this study is that the instrument was applied to customers of one organisation (the specific university) alone. A more diverse sample of customers from different organisations could have contributed to a richer data set, where comparisons could have been made between different subsets of the sample. In retrospect, it seems that the data of the two subsamples in this study should have been treated separately.

Suggestions for further research would be to make *a priori* comparisons between customer groups representing different value disciplines. This exercise could confirm the discriminant validity of the CPQ. In future research there can also be an elaboration on the CPQ in order to measure the fourth dimension that became apparent.

Contribution
Based on the results, it appears that this measurement succeeds in measuring the three value disciplines. Accruing from the

aforementioned, customers' preferences could be determined. This identification of customer value preferences could essentially contribute towards the following:
• Providing a possible explanation of the insufficient customer consciousness and service in South Africa (Govender, 1998, p. 1).
• This identification of customer value preferences can optimally be utilised by organisations as a supportive mechanism to effectively segment and narrow their markets.
• Information obtained from the above could provide the organisation with valuable insight into how to structure and align their customer service strategy in terms of their customers' value preferences.
• Once organisations start applying this customer-driven orientation it could be conducive to creating an undeniable customer-focussed environment in South Africa.
• Ultimately this can lead to an overall increase of customer service in South Africa and the constitution of higher customer service standards.

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