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CONTENTS

THE EFFECTS OF LEADERSHIP STYLES ON KNOWLEDGE-BASED CUSTOMER RELATIONSHIP MANAGEMENT IMPLEMENTATION

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ABSTRACT

This study examined how transformational and transactional leadership styles affect knowledge-based customer relationship management implementation in the Taiwanese hotel industry. A model of the relationship was created based on earlier research and used Bass and Avolio's Multi-Factor Leadership Questionnaire along with questions to assess a multi-dimensional construct for CRM. The model was tested and modified using structural equation modeling. The results generally support a positive relationship between transformational leadership styles and the implementation of knowledge-based CRM while rejecting transactional styles. Suggestions for future research are also included.

JEL: M00, M12, M16

KEYWORDS: leadership styles, knowledge-based customer relationship, Multi-factor leadership

INTRODUCTION

Prior research studies have suggested that leadership styles are related to organizational performance (e.g. Elenkov, 2002; Howell, Neufeld & Avolio, 2005; Tosi, Misangyi, Fanelli, Waldman & Yammarino, 2004), job satisfaction, job performance, and organizational commitment (Lok & Crawford, 1999; Yousef, 2000; Lok & Crawford, 2004; Huang, Cheng & Chou, 2005; Lee, 2005; Politis, 2006; Bartram & Casimir, 2007; Erkutlu, 2008). However, hospitality organizations are under pressure to improve their performance, to anticipate change, and develop new structures. Effective leadership is therefore essential to ensure that change leads to increased efficiency and profitability (Pittaway et al., 1998; Zhao & Merna, 1992; Slattery & Olsen, 1984). On the other hand, Customer Relationship Management (CRM) has generally been assumed to create a competitive edge for an organization, as well as to have a positive impact on organizational performance (Sin, Tse & Yim, 2005). Swift (2001, p. 12) defined CRM as an "enterprise approach to understanding and influencing customer behavior through meaningful communications in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability." According to this definition, Francis (2004) suggested that a customer focused culture for successfully implementing Customer Relationship Management needs to be developed by the leadership and through the design of formal systems of the company, as well as the myths and stories that are created within the firm. Additionally, Karmarkar (2004) suggested that managers will need to make proactive changes which focus even more intensely on customer preferences, quality, and technological interfaces in order to stay competitive in such a dynamic environment. Furthermore, Osarenkhoe and Bennani (2007) have found that to implement sustainable CRM strategy required the endorsement by and commitment from top management.

Although the importance of customer knowledge management has been addressed recently by several researchers (e.g. Davenport & Prusak, 1998; Davenport, 1998; Bulter, 2000; Davenport, Harris & Kohli, 2001; Gareia-Murillo & Annabi, 2002; Gibbert, Leibold & Probst, 2002), still there is a lack of knowledge management research in both the hospitality and tourism industries (e.g. Ruhanen & Cooper, 2004; Xiao & Smith, 2007). Therefore, in this study the integration of knowledge management and customer relationship management is addressed and is defined as knowledge-based customer relationship management implementation. Given the preceding arguments, it is worthwhile to be able to characterize the relationships between managers' leadership styles and knowledge-based customer relationship management implementation and is, therefore, the purpose of this study.

The paper will provide a brief review of the relevant literature along with construct definitions, two hypotheses, the methodology used in the study, the results of the hypotheses testing. In addition, there are two models shown which are based on the structural equation modeling. The paper closes with a discussion and conclusions.

LITERATURE REVIEW AND CONSTRUCT DEFINITIONS

Leadership has been defined as building the vision, trust, value, commitment, and working environment, as well as influencing activity to accomplish the organization's goals (e. g. Richards & Engle, 1986; Lohmann, 1992; House & Aditya, 1997; Bass, 1997). Two types of leadership styles will be addressed in this study: transformational and transactional. They have been studied since the 1980's and recently have become part of "the New Leadership" paradigm (Bryman, 1992). Transformational leadership is defined as leadership that heightens consciousness of the organization's members with a collective interest and helps them to achieve it. In contrast, transactional leadership focuses on promoting the individual interests of the leaders and their followers and attaining the satisfaction of implied or actual contractual obligations on the part of both by establishing objectives, monitoring actions, and controlling the results (Bass & Avolio, 2000). Bass (1998) identified four components of transformational leadership which are (1) Idealized Influence, (2) Inspirational Motivation, (3) Intellectual Stimulation, and (4) Individualized Consideration. Bass (1998) also summarizes three styles inherent in transactional leadership which are (1) Contingent Rewards, (2) Management by Exception, and (3) Laissez-Faire.

Although CRM has become widely recognized as an important business approach, there is no universally accepted definition (Ngai, 2005). However, in the marketing literature, the terms "CRM" and "Relationship marketing" are used almost interchangeably (Parvatiyar & Sheth, 2000). Berry (1983, p. 26) defined relationship marketing (RM) as "attracting, maintaining and enhancing customer relationships." Christopher, Panyne, and Ballantyne (1991, p. 32) proposed that "the relationship marketing concept is emerging as a new focal point, integrating customer service and quality with a market orientation." CRM, on the other hand, has evolved from business concepts and processes such as relationship marketing and the increased emphasis on improving customer retention through effective management of customer relationships. Essentially, CRM is based on the belief that developing a relationship with customers is the best way to get them to become loyal because loyal customers are more profitable than non-loyal customers (Dowling, 2002).

Gebert, Geib, Kolbe and Brenner (2003) proposed the concept of knowledge-enabled customer relationship management to integrate customer relationship management (CRM) and knowledge management (KM). They suggest that CRM focuses on managing the relationship between a company and its current and prospective customer base as a key to success, while KM recognizes the knowledge available to a company as a major success factor. Furthermore, Rowley (2004) argues that there is a need to develop an understanding of the interaction and interface between KM and CRM, and to operate this in the parallel contexts of systems, people and processes. The key drivers of the KM process consist of knowledge creation, sharing, dissemination and exploitation, while the CRM process includes communication, creation of a loyal and stable customer base, customer service, trust cultivation and relationship maintenance. Minna and Aino (2005) conclude that there is an evident need in the marketing discipline to further elaborate on the concepts of "customer knowledge" and "customer knowledge management". Customer knowledge management is about gaining, sharing, and expanding the knowledge residing in customers, to both customer and corporate benefit. It is also the strategic process by which cutting-edge companies transform their customers from passiveness as recipients of products and services, to empowerment as knowledge partners (Gibbert, Leibold & Probst, 2002). Recently Battor, Zairi and Francis (2008) identified four principles required for making CRM implementation a success: share the vision, develop customer knowledge, focus on valued customers, and share knowledge.

Based on prior research, Chen (2004) identified 16 activities of customer knowledge management that organizations will typically implement. These activities are shown in Table 1. More recently, researchers Sin, Tse and Yim (2005) organized prior related literature and in-depth interviews with CRM managers to develop a multi-dimensional construct for CRM. They identified the four broad behavioral components shown in Table 2.

Table 1: Typical Customer Knowledge-Management Activities

Customer Knowledge-Management Activities	
1.	Focuses on the most valued customers and captures the knowledge from interactions (or "socialization") with customers.
2.	Creates a workplace culture that is moving toward the customer-centric.
3.	Uses business strategies to know which customers to focus on and what new behaviors the customers should exhibit.
4.	Develops enough appropriate repositories for knowledge collection.
5.	Creates and utilizes techniques for collecting and sharing the knowledge from customers and partners.
6.	Applies the competitive knowledge created to problem solving and decision making.
7.	Creates a process and tool for managing customer data and translating data into knowledge.
8.	Encourages its members to share their working experiences, such as their experiences in interacting with customers.
9.	Transfers employees' working experiences into "resources" that can be used by employees anytime and anywhere.
10.	Creates a place, such as a library, for employees to search for knowledge they need.
11.	In order to avoid organizational boundaries, creates a community that allows the members of the organization to share and create knowledge.
12.	Organization leadership supports the activities related to knowledge sharing.
13.	Customers become "co-innovators" and "co-developers" of products or services.
14.	Employees receive new job related knowledge from job training programs or conferences.
15.	In order to develop the competitive products or services, the organization creates and shares knowledge with their partners.
16.	**In order to help customers make purchasing decisions, the organization helps customers to identify and sort the relevant knowledge.**

Table 1 shows the 16 organizational activities typically implemented for customer knowledge management as proposed by Chen (2004)

Table 2: Four Broad Behavioral Components of Customer Relationship Management

Behaviors	**Description**	**Source**
Key customer focus	This involves an overwhelming customer-centric focus and continuously delivering superior and added value to key customers through customized marketing. This dimension includes customer-centric marketing, key customer lifetime value identification, personalization, and interactive co-creation marketing.	Vandermerwe (2004)
CRM organization	The key considerations for successfully organizing the whole firm around CRM should involve organizational structure, organization-wide commitment of resources, and human resources management.	
Knowledge management	To build good relationships with customers, it is necessary to serve each customer in her/his preferred way. Therefore, the management of customer knowledge should be emphasized. Key facets of "knowledge management" include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness.	Davenport, Harris, and Kohli (2001)
Technology-based CRM	This involves utilizing computer technologies in building relationships, leveraging existing technology and rigorously linking technology deployment to targeted business initiatives	Harding, Cheifetz, DeAngelo, & Ziegler (2004)

Table 2 shows the four broad behavioral components identified by Sin, Tse and Yim (2005) for developing a multi-dimensiona construct for customer relationship management.

This present study organizes the findings of Chen (2004) and Sin et al. (2005) to develop a measurement for the implementation of knowledge-based customer relationship management.

HYPOTHESES

Transformational And Transactional Leadership Styles And Knowledge-Based CRM Implementation
Kandampully and Duddy (1999) suggested that management's task today is increasingly associated with actualizing and unleashing the potential from both within and outside the organization in an effort to strengthen the loyalty between the firm and customer. In a relationship context, the task of management also extends far beyond the firm's primary relationship (firm-customer) to include both the internal and external relationships that firms must aim to develop, nurture, and maintain. However, the relationships among leadership, employee, and customer will also be an important issue. Although there is a lack of research on the relationship between transformational/transactional leadership and knowledge-based CRM implementation, this present study offers viewpoints to better understand this relationship.

Leaders using idealized influence build trust with colleagues; respect their opinions; show extraordinary capabilities, persistence, and determination; demonstrate high standards of ethical and moral conduct; and are willing to take risks by being consistent rather than arbitrary. Thus, leaders who behave in these ways are able to take a whole marketing system view (consisting of competitors, customers, and environment) in planning business; to develop an annual marketing plan and also a long-term plan; and to communicate and implement the plan from the top down. Additionally, leaders using contingent rewards give followers a clear understanding of what needs to be done and what is expected of them. In CRM implementation, thus, the decision would be made by the leader to enhance company profits by focusing on more profitable customers via more customized offerings. A leader's ability to give personal attention to followers and make each one feel valued and important would enhance the organization's ability to practice one-to-one marketing through the use of mass customization, allowing customers to seek unique solutions to their specific needs. Leaders using individualized consideration would work with customers to offer customized solutions, create relationship value, and enhance customer loyalty.

Prior empirical studies that were conducted to examine the relationships among transformational/transactional leadership, organizational commitment, job satisfaction, job performance, and knowledge management have reported positive relationships (e.g. Dubinsky, Yammario & Spangler, 1995; Savery, 1991; Bass, 1985; Bass, Avolio & Goodheim, 1987; Yammarino & Bass, 1990; Politis, 2001, 2002; Chen, 2002; Chen & Barnes, 2003a, 2003b, 2006). However, these results support both transformational and transactional leadership to successfully organize the whole firm around CRM and include organizational structure, organization-wide commitment of resources, and human resources management. Drucker (2002, p. 12) argued that the only way to achieve leadership in a knowledge-based organization is "to spend time with promising knowledge professionals; to know them and to be known by them; to mentor them and to listen to them; to challenge them and to encourage them."

Two recent studies conducted by Politis (2001, 2002) examined the relationship of various leadership styles with knowledge acquisition attributes (Mykytyn, Mykytyn & Raja, 1994) provide support for the research proposition of this study. In the first study by Politis (2001), five leadership styles (self-management leadership (Manz & Sims, 1987) transformational leadership (Bass, 1985), transactional leadership (Bass, 1985), initiating structure and consideration (Stodgill, 1963)) were compared to knowledge acquisition attributes (Mykytyn et al., 1994). Politis reported that overall self-management, transformational, and transactional leadership styles are positively correlated with some dimensions of knowledge acquisition attributes. In the second study, Politis (2002) concluded that in general the dimension of attributed charismatic leadership has a positive and significant relationship with the knowledge acquisition of knowledge workers. Thus, he argues that "such leaders must contribute to the creation of a corporate knowledge culture and a managerial mindset that promotes the flow of knowledge throughout the organization" (p. 194).

Leadership with intellectual stimulation encourages new ways of looking at old methods and problems. Additionally, idealized influence leadership shares a vision and sense of mission with the followers. These leadership attributes thus allow the organization to establish a strategic vision that, according to CRM, calls for "information-intensive strategies". According to Harding et al. (2004), "information-intensive strategies" will utilize computer technologies in building relationships, leveraging existing technology, and rigorously linking technology deployment to targeted business initiatives, and a study by Schepers, Wetzels and Ruyter (2005) supported this viewpoint. They found the transformational leadership style positively influenced the perceived usefulness of technology. Additional analysis illustrated that this effect fully accounted for the sub dimension of intellectual stimulation. Therefore, they suggested that encouraging new ways of thinking and enabling subordinates to analyze problems from many different viewpoints will directly yield a better individual technology acceptance level within the organization. On the other hand, Romm and Pliskin (1999) considered the role of leadership in the diffusion and implementation of e-mail in a university community. The diffusion of e-mail was strongly supported by the charismatic president of the university and was a technical success. Based upon these viewpoints, this present study proposes that transformational/transactional leadership styles do have a significant effect on the implementation of knowledge-based customer relationship management with these hypotheses:

H1: Leaders' transformational leadership style is positively correlated with the implementation of knowledge-based CRM.
H2: Leaders' transactional leadership style is positively correlated with implementation of knowledge-based CRM.

METHODOLOGY

This section presents the research methodology used in this study. We describe the sample used and discuss how each of the variables included in the study is operationalized.

Sample and Data Collection

The sample for this study was selected from international tourist hotels located in the middle-part of Taiwan (primarily Taichung City and Taichung County). Taichung is expected to become a highly competitive market for the hotel industry due to the following three developments: (1) The merger of Taichung County with Taichung City will result in Taichung City becoming the third largest city in Taiwan, (2) The addition of the Central Taiwan Science Park constructed in 2003 to Taichung City and Taichung County, and (3) The city's airport now offers direct flights to/from Mainland China. Data collection involved a series of contacts that consisted of email, phone calls, and face to face meetings over a two-month period. Five international tourist hotels agreed to participate in this study. Employees who work in the room department, food and beverage department, and marketing department of the case hotels were the sample for this study. As the front office and restaurant staffs would be those to face customers most directly, these employees were chosen for this survey. A total of 300 surveys were sent to these hotels, from which 146 were returned, and 135 were found to be valid for a usable response rate of 45%.

Measures

For the measures of the various constructs, existing scales previously validated by other authors were used by adapting the items to the hotel industry. To measure transformational and transactional leadership styles, the Multifactor Leadership Questionnaire developed by Bass and Avolio (2000) was used to examine the "full range" of transformational leadership and transactional leadership styles. It consists of 36 items to measure transformational leadership and transactional leadership. A five-point Likert scale, ranging from "not at all" valued as a "1" to "frequently if not always" valued as a "5," was used. The transformational leadership styles measured by the MLQ are: idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, and individualized consideration. The transactional leadership styles measured by the MLQ are: contingent reward, active management by exception, passive management by exception, and laissez-faire. In order to validate the multidimensional scale of transformational and transactional leadership styles, the confirmatory factor analysis (CFA) was conducted and the results are shown in Table 3 and Table 4. Indices of RMSEA, GFI, AGFI, and CFI for the construct of transformational leadership were found to be 0.093, .0733, 0.649, and 0.662 respectively. For the construct of transactional leadership style, the indices were found to be 0.102, 0.780, 0.695, and 0.728 respectively. These indices tended to approach the suggested values (Byrne, 1998; Bentler, 1995; McDonald & Ho, 2002). Additionally, Cronbach's alpha, composite reliability, and average variance extracted (AVE) were used to analyze the reliabilities of the scales. The results of these indices in each of the dimensions met the suggested values (George & Mallery, 2001; Hair et al., 1998). Generally, the results of CFA found all indicators were related to their specified constructs. Therefore, the MLQ-5X (Bass & Avolio, 2000) was confirmed as an appropriate instrument for this present study.

Table 3: Descriptive Statistics and CFA in Transformational Leadership

Latent variables and indictors	**Mean**	**SD**	**Loading**	**t-value**	**Cronbach alpha**	**Composite Reliability**	**Average Variance Extracted**
Idealized influence (Attribute)			0.474***	11.451	0.626	0.967	0.777
LS10	3.19	0.932	0.705***	9.897			
LS18	3.21	0.832	0.476***	6.957			
LS21	3.10	0.822	0.331***	4.675			
LS25	3.44	0.740	0.348***	5.553			
Idealized influence (Behaviors)			0.461***	12.536	0.597	0.930	0.772
LS06	3.15	0.902	0.522***	7.275			
LS14	3.18	0.800	0.502***	8.032			
LS23	3.27	0.765	0.385***	6.201			
LS34	3.15	0.768	0.444***	7.275			
Inspirational motivation			0.483***	12.087	0.646	0.933	0.784
LS09	3.13	0.868	0.637***	9.334			
LS13	3.07	0.755	0.449***	7.113			
LS26	3.30	0.792	0.369***	5.350			
LS36	3.20	0.818	0.480***	7.013			
Intellectual stimulation			0.417***	9.406	0.709	0.937	0.789
LS02	3.21	0.754	0.478***	7.682			
LS08	3.33	0.763	0.504***	8.075			
LS30	3.16	0.866	0.535***	7.451			
LS32	3.21	0.767	0.453***	7.061			
Individualized consideration			0.430***	9.536	0.685	0.938	0.794
LS15	3.13	0.814	0.432***	6.214			
LS19	3.33	0.781	0.472***	7.253			
LS29	2.92	0.783	0.495***	7.657			
LS31	3.06	0.896	0.625***	8.642			
Goodness of fit: $\chi^2(160)=553.273$							
RMSEA=0.093							
GFI=0.733							
AGFI=0.649							
CFI=0.662							

*Table 3 shows the confirmatory factor analysis results for the variables and elements o transformational leadership style and confirms that all indicators are related to their specified constructs. ***: P<0.01; SD: Standard deviation*

The measurement of knowledge-based CRM implementation (KCRM) for this present study was developed based on two prior studies (Chen, 2004; Sin et al, 2005). A five-point Likert scale, ranging from "strongly disagree" valued as a "1" to "strongly agree" valued as a "5" was used to reflect employees' perceptions of KCRM in the hotel organizations. In this case, the construct of KCRM needed to be developed. Based upon the collected data, an exploratory factor analysis (EFA) was performed, and the construct of KCRM was found to be a variable with multi-dimensions. These dimensions were then defined as key customer focus, knowledge-based CRM organization, knowledge sharing, and technology-based CRM. CFA was then conducted to confirm the theoretical factors as defined by using EFA.

Indices of RMSEA, GFI, AGFI, and CFI were found to be 0.077, 0.760, 0.688, and 0.814 respectively (Table 5), and they tended to approach the suggested values (Byrne, 1998; Bentler, 1995; McDonald & Ho, 2002). Additionally, Cronbach's alpha, composite reliability, and average variance extracted (AVE) were conducted. The results of these indices for each of dimensions met the suggested values (George & Mallery, 2001; Hair et al., 1998). Therefore, a reliable scale was developed to measure how the hotel organizations implemented knowledge-based customer relationship management.

RESULTS

The Profile of Respondents

The demographic questions for this study focused on gender, age, job level in the hotel, educational level, and tenure. More than 70% of respondents were female (71.9%) and 28.1% of respondents were male. Overall, most employees of the five international tourist hotels were between 26 and 30 years old (44.4%) or between 31 and 35 years (23.7%). The highest educational level was the bachelor's degree for 68.1% of the respondents. Approximately 69% of respondents have worked for their hotels between 1 and 2 years, and only 33% of respondents were in management.

Table 4: Descriptive Statistics and CFA in Transactional Leadership

Latent variables and indictors	Mean	SD	Loading	t-value	Cronbach alpha	Composite reliability	Average variance extracted
Contingent reward			0.152***	3.064	0.558	0.915	0.739
LS01	3.27	0.987	0.423***	4.625			
LS11	3.13	0.913	0.322***	3.745			
LS16	2.87	0.893	0.582***	7.487			
LS35	3.33	0.751	0.534***	8.286			
Management by exception (Active)			0.042	0.965	0.494	0.874	0.647
LS04	3.21	0.847	0.433***	5.558			
LS22	3.21	0.884	0.453***	5.578			
LS24	3.39	0.713	0.311***	4.667			
LS27	3.20	0.771	0.243***	3.297			
Management by exception (Passive)			0.526***	10.374	0.801	0.957	0.847
LS03	2.82	0.854	0.606***	8.965			
LS12	2.84	0.945	0.644***	8.507			
LS17	2.82	0.854	0.642***	9.697			
LS20	2.91	0.859	0.585***	8.497			
Lassez faire			0.682***	16.371	0.733	0.951	0.830
LS05	2.81	0.948	0.677***	9.085			
LS07	2.75	0.960	0.535***	6.661			
LS28	2.84	0.845	0.670***	10.453			
LS33	3.16	0.900	0.499***	6.616			
Goodness of fit: $\chi^2(98)=301.131$							
RMSEA=0.102							
GFI=0.780							
AGFI=0.695							
CFI=0.728							

*Table 4 shows the confirmatory factor analysis for transactional leadership style and confirms that all elements are related to their specified constructs. ***: P<0.01 SD: Standard deviation; Composite reliability = (sum of standardized loadings)^2/[(sum of standardized loadings)^2 + (sum of indicator measurement error)]. Variance extracted estimates = (sum of squared standardized loading)/[(sum of squared standardized loadings) + (sum of indicator measurement error)].*

Hypotheses Testing and Path Analysis

Structural equation models (SEM) are the most powerful instruments for analyzing the causal models that specify causal relationships between particular variables (Hatcher, 1998). Table 6 shows that the initial model was found to be discredited. The $\chi 2$ value is 440.453, and its degree of freedom is 63. The $\chi 2$ value was significant at the 0.05 level of significance, indicating that difference between model-implied covariance matrix Σ and the observed data were significantly large. The common level of the χ 2/df ratio is less than 5 (Joreskog & Sorbom, 1993). With the χ 2/df ratio of proposed model is 6.991, therefore, this proposed model needed to be modified. Results in Table 6 indicate that standardized factor loading of item TS2 was not significant (p>0.05) which suggests that elimination of item TS2 might create a substantial improvement in model fit.

Table 5: Descriptive Statistics and CFA in KCRM

Variables and indictors	**Mean**	**SD**	**Loading**	**t-value**	**Cronbach alpha**	**Composite Reliability**	**Average Variance Extracted**
Key customer focus					0.800	0.948	0.824
KCRM01	3.50	0.772	0.349***	5.187			
KCRM02	3.49	0.752	0.558***	9.483			
KCRM03	3.49	0.690	0.597***	11.771			
KCRM04	3.47	0.700	0.546***	10.155			
Knowledge-based CRM organization					0.887	0.974	0.760
KCRM08	3.06	0.929	0.681***	9.555			
KCRM09	3.36	0.758	0.563***	9.720			
KCRM10	3.29	0.771	0.532***	8.777			
KCRM14	3.61	0.763	0.514***	8.525			
KCRM15	3.50	0.645	0.510***	10.632			
KCRM16	3.44	0.760	0.576***	10.017			
KCRM17	3.45	0.760	0.567***	9.772			
Knowledge sharing					0.775	0.948	0.821
KCRM19	3.27	0.848	0.599***	8.259			
KCRM20	3.16	0.908	0.581***	7.345			
KCRM21	3.16	0.857	0.541***	7.215			
KCRM22	3.15	0.842	0.625***	8.755			
Technology-based CRM					0.880	0.969	0.889
KCRM24	3.09	0.885	0.760***	12.001			
KCRM25	3.02	0.950	0.870***	13.243			
KCRM26	3.13	0.893	0.677***	10.015			
KCRM27	3.16	0.905	0.605***	8.444			
Goodness of fit: $\chi^2(146)=403.999$							
RMSEA=0.077							
GFI=0.760							
AGFI=0.688							
CFI=0.814							

Table 5 shows the confirmatory factor analysis for KCRM and confirms that all elements are related to their specified constructs.
****: P<0.01; SD: Standard deviation*

Table 7 shows the results of the first modified model without item TS2. All indictor t-values range from 3.064 to 16.371, indicating that all items are significant (p<0.05). This supports the convergent validity of all indicators effectively measuring the same construct (Anderson & Gerbing, 1988). The reliability of the measures is assessed using composite reliability and variance extracted estimates, as listed in Table 7. The composite reliability of most constructs exceeded 0.7 in this study, satisfying the minimally acceptable level (Hair et al., 1998; Hatcher, 1998). Fornell and Larcker (1981) also suggest that variance extracted estimates should exceed 0.5, however, this test is quite conservative, and variance extracted estimates will often be below 0.5 in practice, even given acceptable reliability (Hatcher 1998). All indices in Table 8 exceed 0.5. The χ2 value is 292.697, and its degree of freedom is 52. The χ2/df ratio of modified measurement model was decreased to 5.628, which indicates an acceptable fit in this sample. The indices of Comparative Fit Index (CFI), Goodness-of-fit Index (GFI), Normed Fit Index (NFI) and Non-Normed Fit Index (NNFI) were found to be 0.726, 0.785, 0.690 and 0.652 respectively. These indices, however, did not meet the recommend level of 0.9. Table 8 and Figure 1 summarize the results of path analysis. The path coefficients of Hypothesis 2 in this current model found no statistical significance (p<0.05) indicating a rejection of transactional leadership's affect on knowledge-based CRM. Hypothesis 1, however, indicates that transformational leadership positively and directly affects knowledge-based CRM.

Table 6: Summary Measurement Statistics for the Proposed Model – Initial

CFA results	Chi-square	df	CFI	GFI	AGFI	RMR	NFI	NNFI
Measurement model	440.453	63	0.628	0.704	0.572	0.245	0.597	0.539

Latent variables	Items	Standardized factor loadings	t value	Reliability	Variance extracted estimates
Transformational leadership				0.961	0.833
	TF1: Idealized influence (Attribute)	0.475***	11.476	0.919	
	TF2: Idealized influence (Behaviors)	0.460***	12.516	0.928	
	TF3: Inspirational motivation	0.481***	11.985	0.921	
	TF4: Intellectual stimulation	0.419***	9.467	0.914	
	TF5: Individualized consideration	0.434***	9.672	0.912	
Transactional leadership				0.914	0.805
	TS1: Contingent reward	0.152***	3.064	0.903	
	TS2: Management by exception (Active)	0.042	0.965	0.914	
	TS3: Management by exception (Passive)	0.526***	10.374	0.901	
	TS4: Lassez faire	0.682***	16.371	0.918	
Knowledge-based CRM				0.905	0.717
	K1: Key customer focus	0.414***	8.155	0.901	
	K2: Knowledge-based CRM organization	0.510***	9.734	0.898	
	K3: Knowledge sharing	0.262***	4.246	0.880	
	K4: Technology-based CRM	0.318***	4.418	0.861	

*Table 6 shows the summary measurement statistics for the initial model of leadership style and KCRM and indicates that standardized factor loading for TS2 was not significant and should be eliminated. ***: P<0.01; Reliability = (sum of standardized loadings)^2/[(sum of standardized loadings)^2 + (sum of indicator measurement error)]. Variance extracted estimates: (sum of squared standardized loading)/[(sum of squared standardized loadings) + (sum of indicator measurement error)].*

Table 7: Summary Measurement Statistics for the Proposed Model – First Modification

CFA results	Chi-square	df	CFI	GFI	AGFI	RMR	NFI	NNFI
Measurement model	292.697	52	0.726	0.785	0.678	0.193	0.690	0.652

Latent variables	Items	Standardized factor loadings	t value	Reliability	Variance extracted estimates
Transformational leadership				0.961	0.833
	TF1: Idealized influence (Attribute)	0.475***	11.476	0.919	
	TF2: Idealized influence (Behaviors)	0.460***	12.517	0.928	
	TF3: Inspirational motivation	0.481***	11.985	0.921	
	TF4: Intellectual stimulation	0.419***	9.466	0.914	
	TF5: Individualized consideration	0.434***	9.672	0.912	
Transactional leadership				0.929	0.843
	TS1: Contingent reward	0.152***	3.064	0.903	
	TS3: Management by exception (Passive)	0.526***	10.374	0.901	
	TS4: Lassez faire	0.682***	16.371	0.918	
Knowledge-based CRM				0.905	0.717
	K1: Key customer focus	0.414***	8.156	0.901	
	K2: Knowledge based CRM organization	0.510***	9.733	0.898	
	K3: Knowledge sharing	0.262***	4.246	0.880	
	K4: Technology based CRM	0.318***	4.419	0.861	

*Table 7 shows the summary measurement statistics for the first modified mode without TS2 but CFI, GFI, NFI and NNFI did not meet the recommended level of .9. 1***: P<0.01; Reliability = (sum of standardized loadings)^2/[(sum of standardized loadings)^2 + (sum of indicator measurement error)]. Variance extracted estimates: (sum of squared standardized loading)/[(sum of squared standardized loadings) + (sum of indicator measurement error)].*

Table 8: Results of the Theoretical Model Test – First Modification

Path	**Standardized parameter estimate**	**t-value**	**Hypothesis**
Transformational leadership → Knowledge-based CRM (H1)	0.493***	6.109	Not reject
Transactional leadership → Knowledge-based CRM (H2)	-0.150*	-1.752	Reject

*Table 8 summarizes the results of the path analysis which indicate a rejection of transactional leadership's affect on KCRM. ***: P<0.01; *: P<0.05; *: P<0.1*

Figure 1: Estimation of Structural Model – First Modification

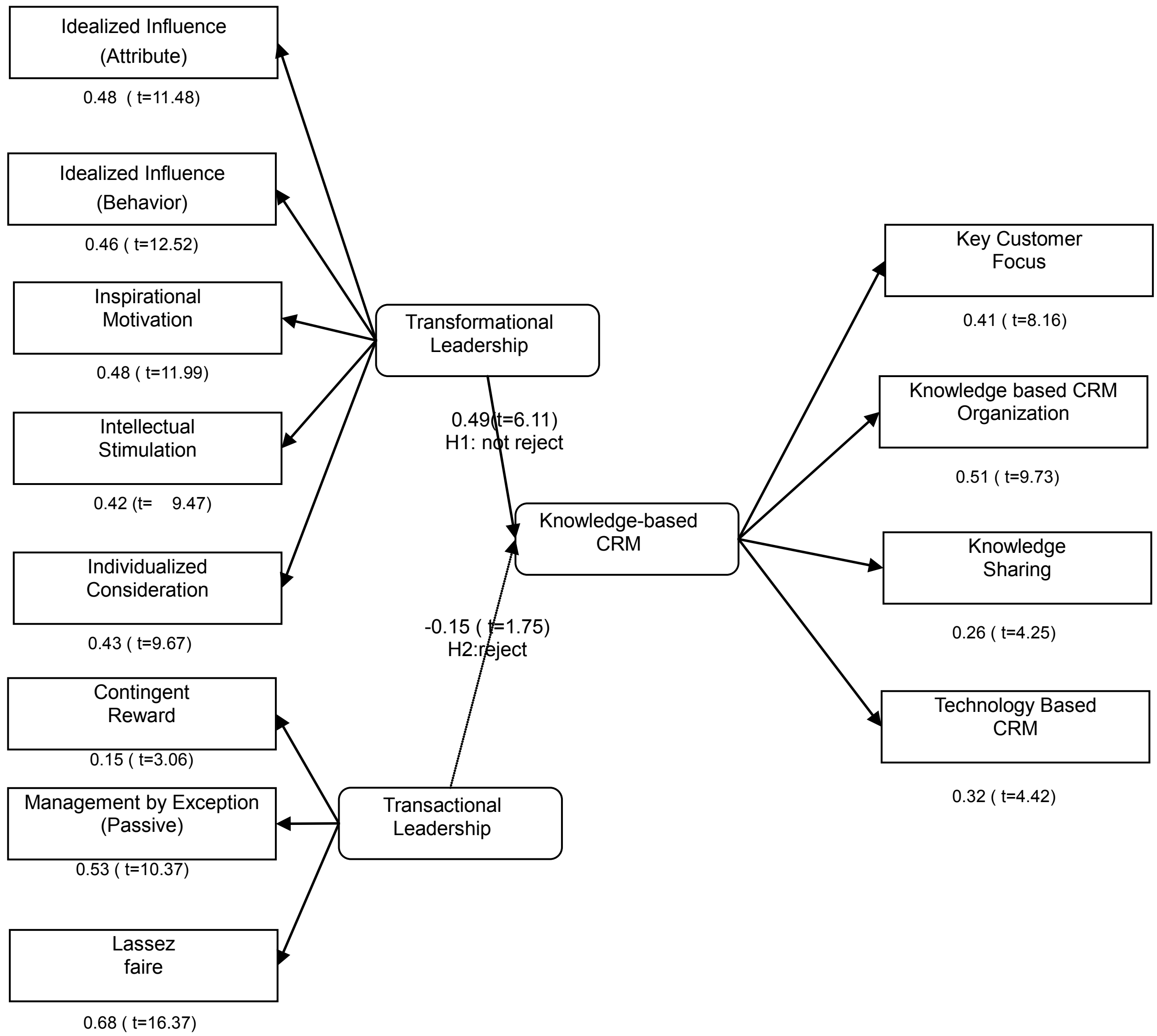

Figure 1 shows the results of the path analysis of the initial model with the indication that transactional leadership's affect on KCRM is not statistically significant.

Because the relationship between transactional leadership and KCRM found no statistically significant result, and the model structure was modified. Table 9 shows the results of the second modified model which deleted the path between the transactional leadership and KCRM. All indictor t-values are significant ($p<0.05$). The $\chi 2$ value is 85.638, and its degree of freedom is 26. The $\chi 2$/df ratio of modified measurement model was decreased to 3.294 which indicates an acceptable fit in this sample. In the second modified model structure, the indices of the Comparative Fit Index (CFI), Goodness-of-fit Index (GFI), Normed Fit Index (NFI) and Non-Normed Fit Index (NNFI) were found to be 0.896, 0.870, 0.860 and 0.856 respectively, so these indices tended to approach the suggested level of 0.9. Table 10 and Figure 2 summarize the results of path analysis. In this current model, the path coefficients of Hypothesis 1 are found to have a statistically significant result ($p<0.05$).

Figure 2: Estimation of Structural Model – Second Modification

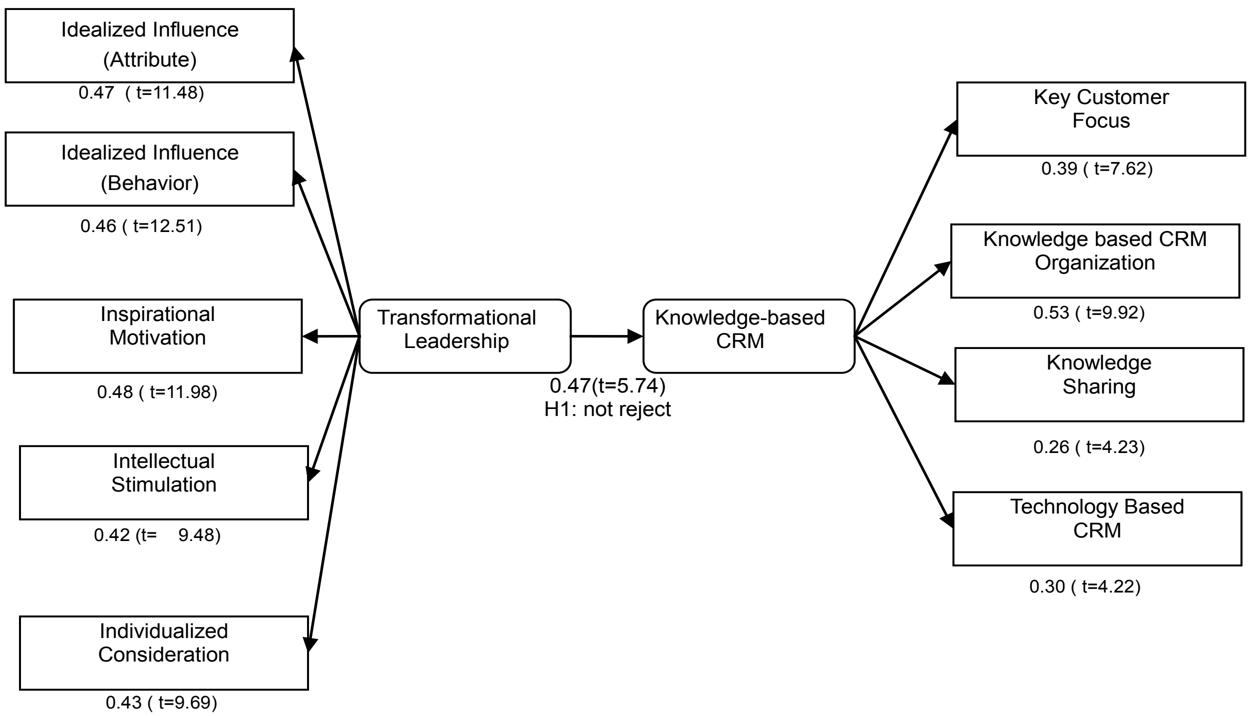

Figure 2 shows the second modified model without Transactional leadership linking to KCRM, and shows statistically significant results supporting H1.

Table 9: Summary Measurement Statistics for the Proposed Model – Second Modification

CFA results	Chi-square	df	CFI	GFI	AGFI	RMR	NFI	NNFI
Measurement model	85.638	26	0.896	0.870	0.775	0.062	0.860	0.856

Latent variables	Items	Standardized factor loadings	t value	Reliability	Variance extracted estimates
Transformational leadership				0.961	0.833
	TF1: Idealized influence (Attribute)	0.474***	11.456	0.919	
	TF2: Idealized influence (Behaviors)	0.460***	12.513	0.928	
	TF3: Inspirational motivation	0.480***	11.975	0.921	
	TF4: Intellectual stimulation	0.419***	9.484	0.914	
	TF5: Individualized consideration	0.434***	9.687	0.912	
Knowledge-based CRM				0.902	0.714
	K1: Key customer focus	0.391***	7.619	0.900	
	K2: Knowledge based CRM organization	0.531***	9.921	0.896	
	K3: Knowledge sharing	0.259***	4.232	0.881	
	K4: Technology based CRM	0.301***	4.219	0.862	

*Table 9 shows the results of the second modified model without transactional leadership linking to KCRM. ***: P<0.01; Reliability = (sum of standardized loadings)^2/[(sum of standardized loadings)^2 + (sum of indicator measurement error)]. Variance extracted estimates: (sum of squared standardized loading)/[(sum of squared standardized loadings) + (sum of indicator measurement error)].*

Table 10: Results of the Theoretical Model Test – Second Modification

Path	Standardized parameter estimate	t-value	Hypothesis
Transformational leadership → Knowledge-based CRM (H1)	0.471***	5.739	Not reject

*Table 10 summarizes the results of the second modified path analysis and indicates statistically significant results for transformational leadership's affect on KCRM. ***: P<0.01*

DISCUSSION AND CONCLUSIONS

Hotel organizations are increasingly concerned with building and maintaining relationships with customers by implementing knowledge-based customer relationship management. Some hotels have recognized the importance of constructing a knowledge-based CRM organization building on the concept of the service profit chain (Heskett, et al., 1997) where the internal relationship of the organization will affect the capability of service value and consequent impact on the level of customer satisfaction and loyalty. Furthermore, some hotels have recognized the importance of building internal relationships, and the relationships between transformational/transactional leadership styles and knowledge-based CRM implementation were examined in the previous section. Transformational leadership styles were found to positively correlate with knowledge-based CRM implementation. In particular, the dimensions of knowledge-based CRM organization and key customer focus were found to be most affected by the transformational leadership styles while transactional styles were rejected. Thus, in this case, to most effectively lead, managers should be aware of and concerned with: (1) acting as role models for their followers; (2) inspiring and motivating their subordinates by providing meaning and challenge to their followers' work; (3) promoting intelligence, rationality, and careful problem solving; (4) giving personal attention, treating each employee individually, and coaching and advising each employee (Yammarino, Spangler, & Bass, 1993; Bass & Avolio, 1994; Bass, 1998). Additionally, managers with a transformational leadership style will benefit their organizations by building customer centric marketing, identifying key customer lifetime value, treating customers individually, and creating interactive co-creation marketing. Finally, hotels hoping to successfully implement KCRM should avoid transactional leadership styles in their leaders.

One weak area of the results regards the dimension of technology-based CRM. In the sample hotels not all employees have the opportunity to operate the computer system. Management employees operate the computer system most frequently, and in this case a low response rate was received from managers. The knowledge sharing dimension also produced a weak result, but managers in hotel organizations should still appreciate the benefits of external organization knowledge sharing with other strategic alliance organizations. For future research, the same relationship model could be studied in Mainland China to explore the perception of leadership styles and knowledge-based CRM implementation in five star hotels. Because the Taiwanese government has created a policy to attract tourists from Mainland China, this sort of future study offers an important issue on which to focus.

APPENDICES

Appendix A: Transformational leadership styles

Transformational leadership variables	*Transformational leadership indicators*
Idealized influence (Attribute)	*LS10 Instills pride in being associated with him/her*
	LS18 Goes beyond self-interest for the good of the group.
	LS21 Acts in ways that build my respect.
	LS25 Displays a sense of power and confidence.
Idealized influence (Behavior)	*LS06 Talks about their most important values and beliefs.*
	LS14 Specifies the importance of having a strong sense of purpose.
	LS23 Considers the moral and ethical consequences of decisions
	LS34 Emphasizes the importance of having a collective sense of mission.
Inspiration motivation	LS09 Talks optimistically about the future.
	LS13 Talks enthusiastically about what needs to be accomplished.
	LS26 Articulates a compelling vision of the future.
	LS36 Expresses confidence that goals will be achieved.
Intellectual stimulation	*LS02 Reexamines critical assumptions to question whether they are appropriate.*
	LS08 Seeks differing perspectives when solving problems.
	LS30 Gets me to look at problems from many different angles.
	LS32 Suggests new ways of looking at how to complete assignments.
Individualized consideration	*LS15 Spends time teaching and coaching.*
	LS19 Treats me as an individual rather than just as a member of a group.
	LS29 Considers me as having different needs, abilities and aspirations from others.
	LS31 Helps me to develop my strengths.

Appendix B: Transactional leadership styles

Transactional Leadership Variables	**Transactional Leadership Indicators**
Contingent reward	*LS01 Provides me with assistance in exchange for my efforts.* *LS11 Discusses in specific terms who is responsible for achieving performance targets.* *LS16 Makes clear what one can expect to receive when performance goals are achieved.* *LS35 Expresses satisfaction when I meet expectations.*
Management by exception(Active)	*LS04 Focuses attention on irregularities, mistakes, exceptions and deviations from standards.* *LS22 Concentrates his/her full attention on dealing with mistakes, complaints and failures.* *LS24 Keeps track of all mistakes.* *LS27 Directs my attention toward failures to meet standards.*
Management by exception (Passive)	*LS03 Fails to interfere until problems become serious.* *LS12 Waits for things to go wrong before taking action.* *LS17 Shows that he/she is a firm believer in "If it ain't broke, don't fix it."* *LS20 Demonstrates that problems must become chronic before taking action.*
Laissez faire	*LS05 Avoids getting involved when important issues arise.* *LS07 Is absent when needed.* *LS28 Avoids making decisions.* *LS33 Delays responding to urgent questions.*

Appendix C: KCRM implementation

KCRM Variables	**KCRM Indicators**
Key customer focus	*KCRM01 Through ongoing dialogue, we work with individual key customers to customize our offerings.* *KCRM02 My organization provides customized services and products to our key customers.* *KCRM03 My organization makes an effort to find out what our key customer needs.* *KCRM04 When my organization finds that customers would like to modify a product/service, the departments involved make coordinated efforts to do so.*
Knowledge-based CRM organization	*KCRM08 My organization has the sales and marketing expertise and resources to succeed in CRM.* *KCRM09 Our employee training programs are designed to develop the skills required for acquiring and deepening customer relationship.* *KCRM10 My organization has established clear business goals related to customer acquisition, development, retention, and reactivation.* *KCRM14 My organization's employees are willing to help customers in a responsive manner.* *KCRM15 My organization fully understands the needs of our key customers via knowledge learning.* *KCRM16 My organization provides channels to enable ongoing, two-way communication with our key customers and us.* *KCRM17 Customers can expect prompt service from employees of my organization.*
Knowledge sharing	*KCRM19 My organization and strategic alliance partners have visited each regularly for the purpose of knowledge sharing and learning.* *KCRM20 My organization regularly conducts meetings with strategic alliance partners for the purpose of communication and knowledge developing and sharing.* *KCRM21 My organization and strategic alliance partners create a "community" that allows strategic alliance members to share and create knowledge.* *KCRM22 In order to develop competitive products or services, my organization creates and shares knowledge with strategic alliance partners.*
Technology-based CRM	*KCRM24 My organization has the right software to serve our customers.* *KCRM25 My organization has the right hardware to serve our customers.* *KCRM26 Individual customer information is available at every point of contact.* *KCRM27 My organization maintains a comprehensive database of our customers.*

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CONSUMER PENALTY EVALUATION: DIFFERENCES BETWEEN COOPERATIVE AND REBELLIOUS CUSTOMERS

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ABSTRACT

This research investigates different types of antecedents such as fairness, disconfirmation and emotion and their influences on different types of satisfaction and behavioral intentions. It also examines how different types of customers, cooperative vs. rebellious, respond to penalties differently. Based on existing literatures, the study proposes a model that views transaction-specific satisfaction as a mediator between cognitive and affective antecedents and overall satisfaction and repurchase intentions. The model is tested on data collected via online survey. The study found that affective and cognitive antecedents have differential impacts on two types of satisfaction judgments, transaction-specific satisfaction and overall satisfaction, and behavioral intentions to repurchase. For example, the influence of emotion is fully mediated by transaction-specific satisfaction while cognitive antecedents have direct influences on both transaction-specific satisfaction and overall satisfaction. Customers weigh transaction-specific evaluations, penalty-related evaluations such as fairness, disconfirmation, emotion and dissatisfaction with the penalty, and global satisfaction evaluation differently based on their relationship with the company. Cooperative customers weigh overall satisfaction more heavily than transaction-specific evaluations. Rebellious customers weigh transaction-specific evaluations more heavily than overall satisfaction. Implications for measurement and management are offered.

JEL: M31

KEYWORDS: customer satisfaction, transaction-specific satisfaction, mediator, cognitive antecedents

INTRODUCTION

Service industry's popular use of fees and penalties has received vast attention from public policy makers as consumers' complaints about unfair penalty practices have escalated over the years. For example, Congress (Government Accountability Office) recently commissioned a study investigating fees and interest rates of 28 popular credit card companies and released a report in 2006 that late payment penalty had increased over the years and averaged $34, up from $13 in 1995 (Houston Chronicle 2006). Consumer penalties have gained attention not only from public policy makers who are concerned with the welfare of consumers but also from companies who are struggling to find the happy medium between the pressure to increase revenue through penalties and fees and the competitive urge to keep their customers happy. It is important that companies regularly review their penalty policies and examine how customers perceive and evaluate penalties because negative events such as a penalty incident can have a detrimental impact on the company's business (e.g., customer attrition, negative word-of-mouth).

Surprisingly, as of today, very little research has been done to understand the impact of penalty on customers and how different types of customers use different penalty evaluation processes (Kim and Smith 2005; McCarthy and Fram 2000). In order to address these important yet under-explored issues, this study first investigates different types of antecedents and their influences on penalty evaluations and behavioral consequences. More specifically, the study examines how cognitive versus affective antecedents influence penalty-specific vs. overall satisfaction judgments and behavioral intentions. Several previous studies (Dube 1990; Yu and Dean 2001; Smith and Bolton 2002; Wirtz and Bateson

1999) explored the roles of cognitive versus affective antecedents in satisfaction judgment, but they did not specifically examine how their effects manifest in different types of satisfaction judgments. This study also investigates how different types of customers respond to penalties differently. It uses the nature of relationship to create two customer groups (i.e., labeled as "cooperative" and "rebellious" customer groups based on their intent to follow or break the company's rules after a penalty incident) and tests whether the model works the same way for the two different customer groups. For example, the influences of different types of satisfaction judgments on behavior may vary based on the customer type. Studies (Ahluwalia, Burnkrant, and Unnava 2000; Smith and Bolton 1998; Tax, Brown, and Chandrashekaran 1998) suggest that the nature of relationship customers have with a company has a significant influence on their attitude toward the company and behaviors. Customers who have a positive relationship with the company tend to be functional and cooperative, while those who have a negative relationship are often dysfunctional and, in some extreme cases, rebellious especially upon encountering a negative incident (Ahluwalia, Burnkrant, and Unnava 2000; Smith and Bolton 1998; Tax, Brown, and Chandrashekaran 1998). This means that penalized customers may engage in different evaluation processes depending on their prior relationship with the company. The study investigates the following specific research questions:

- How do customers weigh cognitive versus affective antecedents in their penalty evaluation? More specifically, which antecedent (cognitive or affective) has a more significant impact on penalty-specific vs. overall satisfaction judgments and behavioral intentions?
- How does the nature of relationship influence customer's evaluation of the penalty? Do cooperative versus rebellious customers weigh penalty-specific evaluations and global evaluation (i.e., overall satisfaction) differently in determining behavioral intentions? If so, which type of evaluation affects their behaviors more?
- Does global evaluation (overall satisfaction) play a different mediating role for cooperative vs. rebellious customers? If so, how? That is, does overall satisfaction mediate the relationship between penalty-specific satisfaction and behavioral intentions directly or indirectly for cooperative vs. rebellious customers?

The findings of the study will make significant contributions to the marketing literature by broadening the understanding of the roles of cognitive vs. affective antecedents in their influences on transaction-specific satisfaction and overall satisfaction. Prior research delved into the issues of different types of antecedents but very little has been done to link them to different types of satisfaction judgment. The study findings will also shed light on the differences of customer groups in their evaluations of the penalty. They will offer an identification of a condition in which weights of transaction-specific evaluations and overall satisfaction may differ in their predictions of repurchase intentions. This will provide guidance to managers about how companies can effectively handle different types of customers faced with penalties. The paper is structured in the following order. First, literature review that examines previous studies on punishment and compliance is offered. This review allows an establishment of an appropriate foundation for categorizing customers into two groups. Second, the study offers a discussion on cognitive versus affective antecedents and their influences on different types of satisfaction judgments. In addition, it presents a discussion on how customers engage in different evaluation processes based on their relationship with the company. Third, the research methodology and data analyses are presented. Finally, the study's findings and implications are offered.

LITERATURE REVIEW

Compliance Intent as a Proxy of Relationship Nature

Customer penalty is considered an economic form of *punishment* in that customers receive a negative stimulus (i.e., penalty) for their failures to conform to the company's rules (Kim and Smith 2005; McCarthy and Fram 2000). Compliance is one of the benefits organizations usually seek when they use punishment and it can be achieved when punishment is used appropriately as evidenced in marketing and other literatures (psychology, sociology, organizational behavior; Antia and Frazier 2001; Butterfield, Trevino, and Ball 1996; Kumar, Scheer, and Steenkamp 1998). For example, the studies of Antia and Frazier (2001) and Kumar, Scheer, and Steenkamp (1998) that examined antecedents of punitive actions in the distribution channel suggest compliance is one of the desirable outcomes of using punitive actions. Other studies (Bowman, Heilman and Seetharaman 2004; Taylor and Bower 2004) in the context of the business-to-consumer relationship (e.g., consumer's use of a drug in accordance to the instruction) suggest that consumers' compliance with the organization's standards and instructions is critical for the organization to achieve customer satisfaction and operational efficiency. These previous studies indicate that compliance is a desirable outcome of using punishment and that customers who become compliant or have intentions to comply with the organization's rules following a punishment event are "cooperative,' "desirable," and "functional." On the other hand, those who refuse to be complaint or have no intentions to comply even after a punishment event are considered "rebellious," "dysfunctional," and "destructive." These rebellious customers are unwilling to change their behaviors, prohibiting the organization from achieving operational efficiency and incurring costs to the company. Take an example of a customer who is late in returning a DVD rental and unwilling to change his/her behavior for the next time. This uncooperative customer behavior will increase the chance that the company faces inventory shortage and dissatisfaction from other customers. Thus, customers' intent of compliance is not only a precursor of their behaviors toward the organization but also a proxy of the nature of relationship customers have with the company. For example, a positive and constructive relationship is suggested when a customer shows a high level of compliance intentions and cooperation. Thus, this study views compliance intent as a proxy of relationship nature and labels customers with a high level of compliance intentions as "cooperative" and those with a low level of compliance intentions as "rebellious."

Different Types of Satisfaction Judgment

Marketing literature (Bitner and Hubbert 1994; Jones and Suh 2000) suggests that customers' evaluations can be measured in the context of a specific service encounter or global (overall) evaluation of the aggregated previous experiences. While transaction-specific satisfaction judgment concerns evaluation of a specific service encounter (e.g., penalty assessment), overall satisfaction is based on all encounters that a customer experiences with a particular organization (Bitner and Hubbert 1994; Jones and Suh 2000; Smith Bolton, and Wagner 1999). Thus, satisfaction judgments involving an incident are expected to influence overall satisfaction judgments, and transaction-specific satisfaction/dissatisfaction updates overall satisfaction judgment. For example, a negative experience resulting from a penalty assessment may affect a customer's overall evaluation of the company. Thus, a customer's evaluation regarding a certain incident will update his/her overall evaluation of the organization. This study views that transaction-specific satisfaction judgment is a short-term output because it is regarding a specific event and overall satisfaction is a long-term output as it is based on accumulated experiences.

Cognitive versus Affective Antecedents

This study considers disconfirmation and fairness *cognitive* antecedents and negative emotion an *affective* antecedent and examines their influences on customer's evaluation of the penalty. Disconfirmation is a *cognitive* antecedent whereby a customer compares an organization's performance to his/her prior expectations. The concept of disconfirmation has been well established in customer satisfaction literature and it is found to have a significant impact on customer's satisfaction judgments (LaBarbera and Mazursky 1983; Oliver 1980; Smith and Bolton 1999). Perceived fairness, another *cognitive* antecedent, is about customer's evaluation of the penalty in terms of justice. Penalized customers will rely on different types of justice (distributive justice, procedural justice and interactional justice) to evaluate the penalty incident. Distributive justice is concerned with distribution of resources (Adams 1965; Homans 1961; Deutsch 1975). Penalized customers will take into account the amount of the penalty when evaluating this type of justice. Procedural justice involves perceived fairness of the process through which the outcome was reached or resources were distributed (Thibaut and Walker 1975). In the penalty context, a customer may consider flexibility the company showed to the customer when evaluating procedural justice. Interactional justice reflects the interpersonal dimension of fairness and represents the interactional style used to communicate outcomes (Bies and Moag 1986). A customer may evaluate service employees' interactional performance to judge this type of justice. The study considers both disconfirmation and perceived fairness *cognitive* antecedents because these generally require customers to engage in cognitive processes.

Emotion is an *affective* state associated with a specific event. Emotion has been incorporated into studies modeling customers' evaluations of an incident (e.g., service failure) and the studies showed emotion plays a significant role in satisfaction judgment even after controlling for the effects of cognitive antecedents (Liljander and Strandvik 1997; Smith and Bolton 2002). Further, some studies that examined the influences of customers' affective versus cognitive responses on satisfaction judgment demonstrated emotion has a greater predictive power than cognitive evaluations (e.g., disconfirmation) in predicting satisfaction/dissatisfaction judgment in certain situations (Dube 1990; Yu and Dean 2001; Wirtz and Bateson 1999; Westbrook 1980). Unlike tangible products, services are hard to evaluate and customers can have poorly-formed expectations about services especially when services are high in credence quality. Thus, in those situations, cognitive evaluations such as disconfirmation may play a less important role than emotion in satisfaction/ /dissatisfaction judgment.

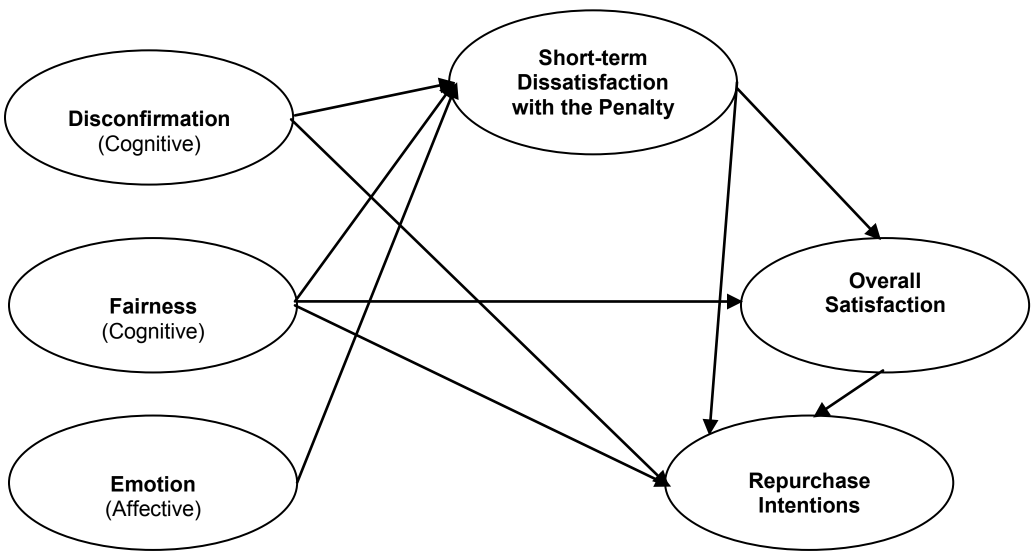
CONCEPTUAL FRAMEWORK

The study first examines impacts of cognitive versus affective antecedents on different types of satisfaction judgments as shown in Figure 1. Next, differences between customer groups are examined. The different weights of transaction-specific evaluations versus global evaluation (overall satisfaction) on repurchase intentions are expected based on the customer group. Also, global evaluation (overall satisfaction) is expected to operate differently for the different customer groups. The different evaluation processes will suggest that companies will have to use different strategies in dealing with different type of customers.

<u>Match between Input and Output</u>

The differential effects of cognitive versus affective (emotion) antecedents on different types of satisfaction judgment may exist due to their different nature. Emotion, which is based on a specific event, is a short-term input to evaluation and is expected to have a more significant impact on short-term output (transaction-specific satisfaction) than long-term output (overall satisfaction). On the other hand, cognitive antecedents (e.g., disconfirmation, fairness) because they usually involve cognitive processes encompassing information processing, systematic thinking, and analyzing, are considered long-term input to evaluation and are likely to have a significant impact not only on short-term output (penalty-specific satisfaction) but also long-term output (overall satisfaction and behavioral intentions). For example, a customer who is upset about an incident may continue the relationship with the company because a decision to switch is usually based on a more rational ground (which requires cognitive processing) than emotion. Prior research supports this view that the effect of short-term input to evaluation (emotion) is more pronounced in short-term output (transaction-specific satisfaction) than long-term output (overall satisfaction) (Alford and Sherrell 1996; Smith and Bolton 2002). In other words, match between input and output is likely to occur. Smith and Bolton (2002) in their study on service failure and recovery showed that emotion explains more variances in transaction-specific satisfaction than overall satisfaction. They concluded *"customers' emotional responses more strongly "color" their transaction-specific evaluations than overall satisfaction judgments (p. 18)."* Similarly, Alford and Sherrell (1996) found that affect associated with the provider has no significant direct effect on repurchase intentions. The study shows that the influence of affect on repurchase intentions is mediated through perceptions of performance and satisfaction judgment. In other words, the effect of emotion does not carry over beyond transaction-related satisfaction judgment. This may be more so when customers have a strong prior relationship with the company and are less responsive to the effect of one poor service episode. These previous studies suggest that emotion plays an important role but the effect can be fully mediated through penalty-specific satisfaction judgment in affecting overall satisfaction and repurchase intentions. On the other hand, cognitive antecedents are considered having a significant direct effect on overall satisfaction as well as an indirect effect through transaction-specific satisfaction. As discussed earlier, cognitive antecedents usually require customers to be involved (e.g., systematic thinking), and global evaluation (overall satisfaction) is likely to be influenced by this type of antecedent (cognitive). Therefore, it is anticipated that cognitive antecedents will have a significant influence on overall satisfaction even after accounting for the effect of transaction-specific satisfaction.

Figure 1: Antecedents and Outcomes of Consumer Penalty Evaluation



Impacts of cognitive versus affective antecedents on different types of satisfaction judgments.

In sum, this study expects that cognitive antecedents, which are long-term inputs to evaluation, will have a significant influence on long-term outputs (overall satisfaction and behavioral intentions) in addition to their direct impact on transaction-specific satisfaction. On the other hand, the effect of emotion, a short-term input to evaluation, will be more pronounced in short-term output (that is transaction-specific satisfaction) than long-term output (i.e., overall satisfaction and behavioral intentions). More specifically, the study hypothesizes that the influence of emotion on overall satisfaction and behavioral intentions will be completely mediated by the influence of transaction-specific satisfaction judgment. On the other hand, the influence of cognitive antecedents on overall satisfaction and behavioral intentions will be partially mediated by transaction-specific satisfaction judgment.

H1: The impact of affective antecedent (emotion) on overall satisfaction and behavioral intentions to repurchase will be completely mediated by transaction-specific satisfaction (penalty-related satisfaction).

H2: The impacts of cognitive antecedents (disconfirmation, fairness) on overall satisfaction and behavioral intentions to repurchase will be partially mediated by transaction-specific satisfaction (penalty-related satisfaction).

Cooperative versus Rebellious Customers and Their Responses

One of the important research questions to be asked is which type of customer satisfaction (i.e., transaction-specific satisfaction vs. overall satisfaction) is more predictive of customer's future behavioral intentions such as intentions to repurchase. Since overall satisfaction is more similar to attitude toward an organization, it is *generally* considered more predictive of behavioral tendencies (e.g., repurchase intentions) than transaction-specific judgments based on one incident (Jones and Suh 2000; Yi and La 2004). Prior research (Yi and La 2004) suggests that the roles of transaction-specific satisfaction and overall satisfaction may differ based on the type of customers and the quality of relationship customers have with the company. For example, Yi and La (2004) showed that loyal customers are less influenced by a current transactional experience than non-loyal customers and suggested that loyal customers' satisfaction judgment involves two aspects; one regarding the current transaction and the other related to accumulated experiences. On the other hand, non-loyal customers' satisfaction judgment mainly involves transaction-related evaluation. Based on prior research, this study views that cooperative customers (i.e., willing to be compliant), who are likely to have already developed a positive relationship with the organization will be less reliant on one negative service episode in determining their behaviors (e.g., intentions to repurchase). For them, the aggregated experiences will have a more significant influence on their behavioral intentions to repurchase. On the other hand, customers who are rebellious and unwilling to comply with the company's rules will be easily influenced by a negative service incident because they haven't had an opportunity to develop emotional bond with the company, and, thus, overall satisfaction will have a relatively small role in influencing their behaviors (e.g., repurchase intentions). These rebellious customers will be easily subject to the effect of a negative episode. Thus, the following hypotheses are proposed:

> *H3: For cooperative customers, overall satisfaction will explain more variances in repurchase intentions than transaction-specific evaluations (disconfirmation, fairness, emotion, dissatisfaction).*
>
> *H4: For rebellious customers, transaction-specific evaluations (disconfirmation, fairness, emotion, and dissatisfaction) will explain more variances in repurchase intentions than overall satisfaction.*

Different Mediating Role of Overall Satisfaction

Prior research suggests that overall satisfaction mediates the relationship between service attributes and behavioral intentions of repurchase, and the role of overall satisfaction may differ based on the type of customers and their relations with the company (Garbarino and Johnson 1999). For example, Garbarino and Johnson (1999) showed that trust and commitment are two major mediators of the relationship between repurchase intentions and service attributes for customers with a stronger relation with the company (e.g., consistent subscribers to a theater). On the other hand, for customers with a weaker relation with the company (e.g., occasional subscribers to a theater), overall satisfaction was the mediator. The study suggests that overall satisfaction plays a different role based on the type of customers and the quality of the relationship customers have with the company.

As discussed before, overall satisfaction is expected to mediate the relationship between transaction-specific satisfaction and repurchase intentions. However, the role of overall satisfaction as a mediator may differ depending on the type of customers. Because overall satisfaction is expected to play a more important role than transaction-specific satisfaction for cooperative customers, overall satisfaction is expected to fully mediate the relationship between transaction-specific satisfaction and behavioral intentions, wiping out the direct effect of transaction-specific satisfaction on repurchase intentions. In other words, the effect of transaction-specific satisfaction will be completely mediated through the effect of overall satisfaction because these customers tend to rely heavily on overall satisfaction in determining their future behaviors. On the other hand, overall satisfaction is expected to have a partial mediating effect on behavioral intentions for rebellious customers. Because these customers tend to weigh heavily the experience of a negative episode (transaction-specific satisfaction), a direct effect of transaction-specific satisfaction on behavioral intentions is expected even after controlling for the effect of overall satisfaction. Thus, the following hypotheses are proposed.

> *H5: Overall satisfaction will fully mediate the relationship between transaction-specific satisfaction and repurchase intentions for cooperative customers.*
>
> *H6: Overall satisfaction will partially mediate the relationship between transaction-specific satisfaction and repurchase intentions for rebellious customers.*

RESEARCH METHODOLOGY

Sample and Data Collection

Data were collected using cross-sectional survey on customers of various service organizations. Emails requesting participation in the study were sent out to members of two separate organizations that supported the study. The first group was an organization that had approximately 10,000 members who were interested in swing dance. The second group was an MBA program of a university in the northeast region of the U.S., which regularly communicated to its members (about 250---many of them were full-time workers) via email. Participants were invited to visit the website where the online survey was available. Small incentives (e.g., shoes, book store gift certificate) that were relevant to each participant group were promised in the electronic cover letter to increase the response rate. Follow-up emails were sent out two weeks after the initial email.

The critical incident technique was employed in the survey questionnaire design so that customers' evaluation of a recent penalty based on their own experience could be captured. The instruction part of the survey offered definition of penalty used for the study and various kinds of penalties that occur commonly in the service industry to aid respondents to recall a recent penalty incident. The first section of the survey included questions such as type of service (e.g., hotel, banking, etc.), type of penalty (e.g., cancellation fee, overdraft fee, restocking fee) and penalty amount. These questions were used as warm-up questions as well as filter questions. Few open-ended questions were used to ask respondents to describe the particular circumstance and their responses (e.g., emotion). A battery of structured questions related to evaluations of the penalty (e.g., fairness, disconfirmation) included questions related to fairness, disconfirmation, emotion, dissatisfaction with the penalty, overall satisfaction, and behavioral intentions. Finally, demographic questions were offered.

The numbers of responses from the first group (amateur dancers' group) and second group were 141 and 74, respectively, resulting in 1.4% and 30% response rates. After discarding unusable or unqualified responses, the final sample amounted to 201. In order to check for nonresponse bias especially for the first group, respondents were divided into two groups: early respondents that represent the average respondent and late respondents that represent the average non-respondent. Comparison of the characteristics of the two groups (e.g., demographic profiles) and their evaluations of the penalty using some key variables showed no significant difference between the two groups, suggesting no evidence of nonresponse bias. Also, to check for any potential problem with pooling the data between the two separate groups (MBA students and dance group members), key variables (e.g., fairness, emotion) were compared. There was no evidence that these two groups were different in terms of how they evaluate penalties.

Of the final sample of 201 respondents, 68% were female, and the average age was 35. The median household income was in the category of $45,000-$64,999. The most frequent penalties (e.g., late payment fee) occurred in the credit card industry representing 37% of the cases, followed by the banking industry (16%), the airline industry (12%), video rental (6%), and hotel industry (3.5%). The penalty amount ranged from $2 to $450, with the average of $29.

Measures

Items were generated based on the scales used in previous studies. Table 1 shows a summary of the items used for the study and reports Cronbach's alpha coefficients for measure reliabilities and factor loadings. Disconfirmation was measured with three items. It was measured by asking respondents to rate their subjective evaluations of disconfirmation. The three items, anchored by "much worse than expected" and "much better than expected" were adapted from Oliver (1980) and Prakash (1984) and used to directly measure the difference between expectations and performance. Perceived fairness was measured with five items related to three types of justice--two distributive justice related items, two interactional justice items and one procedural justice item. The items were adapted from the studies of Smith, Bolton, and Wagner (1999) and Tax, Brown, and Chandrashekaran (1998). The seven-point scale items were anchored by 'strongly disagree' and 'strongly agree.'

Negative emotion was measured with three affective items that were considered relevant to the penalty situation. The three affective attributes adapted from Liljander and Strandvik (1997) and Richins (1997) were 'angry,' 'frustrated,' and 'irritated.' Respondents were asked to rate the level of emotions elicited in association with the organization's penalty assessment. The items on a seven-point scale were anchored by "very little" and "very much." In order to measure transaction-specific satisfaction, three items were used. The items measured outcome, process, and interaction aspects of the penalty administration. The measures were adapted from Babin and Griffin (1998), Bitner and Hubbert (1994), and Oliver and Swan (1989). Because penalties are negative in nature and are likely to elicit negative responses, the measures were anchored by 'not at all dissatisfied' and 'very dissatisfied.' Overall satisfaction with the organization was measured by asking respondents to rate their overall satisfaction with the organization. Respondents were directed to think about all incidents (including the penalty situation) to evaluate their overall judgments of the organization. One item anchored by 'very dissatisfied' and 'very satisfied' was used to measure overall satisfaction. Even though using a single item measure for a construct is not ideal, using it for a well-established construct seemed beneficial because it reduces the length of the survey questionnaire. Behavioral intentions to repurchase were measured with one item, anchored by 'not at all likely' and 'very likely.'

A series of pretests was performed to improve the questionnaire design. The survey was pretested with a convenience sample of nine participants using the concurrent "think-aloud" pretest method (Bolton 1993; Bolton and Bronkhorst 1990), a sample of 70 undergraduate students using the pencil and paper survey method, and a sample of eight respondents using the online survey method. All multiple items were subjected to reliability analysis. Cronbach's alpha coefficients were obtained, and they ranged from 0.79 to 0.84, suggesting reliabilities of the measures. In order to examine discriminant validity among the constructs, correlation coefficients were obtained for comparison with reliabilities of the scales. Table 2 shows correlation matrix and descriptive statistics of the variables. None of the correlations between any constructs was higher than the reliabilities of the scales, suggesting evidence of discriminant validity (Churchill 1979). A confirmatory factor analysis was also conducted on the pair of measures to examine whether the model constraining the measures to be the same (i.e., perfectly correlated) is significantly different from the unconstrained model (i.e., correlations allowed to be free). If the chi-square difference is significant, evidence of discriminant validity is indicated (Rust, Moorman, and Dickson 2002). Table 3 shows the results of the chi-square difference tests, suggesting evidence of discriminant validity.

Table 1: Scale Items Used for the Measures

Construct and Item Measures	**Factor Loadings**
Disconfirmation (DISC) 7-point scale anchored by 'much worse than expected' and 'much better than expected'	$\alpha = 0.82$
DISC1—The penalty that I received was:	0.79
DISC2—The organization's handling of the penalty was:	0.86
DISC3—Overall, the organization's penalty practice was:	0.92
Fairness (FAIR) 7-point scale anchored by 'strongly disagree' and 'strongly agree'	$\alpha = 0.79$
FAIR1—The penalty that I received was fair.	0.71
FAIR2—I feel the amount of the penalty was right.	0.68
FAIR3—The organization showed adequate flexibility in responding to customers' different situations.	0.79
FAIR4—They gave me the courtesy I was due.	0.78
FAIR5—Their level of concern for my situation was appropriate.	0.71
Emotion (EMO) 7-point scale anchored by 'very little' and 'very much'	$\alpha = 0.80$
The following questions are about how you felt about the penalty and the way the penalty was administered.	
EMO1--Angry	0.86
EMO2--Frustrated	0.86
EMO3--Irritated	0.82
Short-term Dissatisfaction with the Penalty (DISS) 7-point scale anchored by 'not at all dissatisfied' and 'very dissatisfied'	$\alpha = 0.84$
DISS1—How did you feel about the organization during this particular incident?	0.88
DISS2—How did you feel about the penalty amount?	0.87
DISS3—How did you feel about the way the penalty was administered?	0.86
Overall Satisfaction (OVRSAT) 7-point scale anchored by 'very dissatisfied' and 'very satisfied'	N/A
OVRSAT--How do you feel overall about the organization?	
Behavioral Intentions to Repurchase (REPINT) 7-point scale anchored by 'not at all likely' and 'very likely'	N/A
REPINT—I would continue the relationship with the organization.	

This table shows scale items used for the measures. α is Cronbach's Alpha Coefficient. $\alpha>0.70$ is considered acceptable.

Table 2: Correlation Matrix and Descriptive Statistics of the Variables

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Mean	3.40	3.21	4.89	4.78	4.25	4.86
S.D.	1.24	1.56	1.82	1.79	1.81	2.27
(1)DISC	1.00					
(2)FAIR	0.70*	1.00				
(3)EMO	-0.44*	-0.48*	1.00			
(4)DISS	-0.58*	-0.66*	0.65*	1.00		
(5)OVRSAT	0.51*	0.58*	-0.37*	-0.51*	1.00	
(6)REPINT	0.56*	0.55*	-0.41*	-0.53*	0.70*	1.00

*This table shows correlation coefficients between variables and descriptive statistics. *$p < 0.01$*

Table 3: Chi-Square Difference Test for Discriminant Validity of the Measures

	Constrained χ^2	**(df)**	**Unconstrained χ^2**	**(df)**	**$\Delta\chi^2$**	**(df)**
DISC vs. FAIR	245.92	20	211.40	19	34.52*	(1)
DISC vs. EMO	153.80	9	16.71	8	137.09*	(1)
DISC vs. DISS	127.67	9	22.18	8	105.49*	(1)
FAIR vs. EMO	245.68	20	148.79	19	96.89*	(1)
FAIR vs. DISS	218.07	20	184.48	19	33.59*	(1)
EMO vs. DISS	50.05	9	10.92	8	39.13*	(1)

*This table shows the results of Chi-Square difference test and provides evidence of discriminant validity of the measures. *$p < 0.01$*
A confirmatory factor analysis was conducted on the pair of measures to examine whether the model constraining the measures to be the same is significantly different from the unconstrained model.

RESULTS

Differences between Cooperative and Rebellious Customers

In order to test some hypotheses (H3-H6), the sample was median-split into two groups based on their compliance intentions (measured by an item, "I would try to comply with the organization's policies to avoid a penalty in the future."). Customers with a higher level of compliance intentions were labeled as "cooperative," while those with a lower level of compliance intentions were labeled as "rebellious." Thus, the cooperative customer group comprised customers who were willing to comply with the company's rules in the future and they exhibited positive evaluations of the company as shown in Table 4. On the other hand, the rebellious customer group consisted of people who were unwilling to comply even after the punishment event (i.e., penalty). These customers tend to show more negative evaluations of the company and the penalty incident.

Table 4 summarizes differences between the two customer groups. Cooperative customers are found to have significantly higher means in the measures of positive disconfirmation, perceived fairness, overall satisfaction, and repurchase intentions ($p<0.05$). On the other hand, rebellious customers have higher means in negative emotion ($p>0.1$) and dissatisfaction ($p<0.05$). Two variables that were not included for modeling were found to be significant based on the t tests: age and frequency of penalties ("How often are you penalized by organizations in general?" anchored by 'very rarely' and 'very frequently.'). Rebellious customers tend to be younger than their counterparts and perceive they are more frequently penalized. Interestingly, these customers refuse to modify their behaviors even after frequent punishment events, thus, labeled as "rebellious."

Table 4: Independent Samples T Test between the Two Customer Groups

Variable	Group	N	Mean	S.D.	t	d.f.	Sig. (2-tailed)
Frequency of penalties	Rebellious	71	2.24	1.54	2.99	108[(a)]	**
	Cooperative	129	1.63	1.06			
Age	Rebellious	71	33.01	9.70	2.63	164[(a)]	**
	Cooperative	129	37.02	11.35			
Disconfirmation	Rebellious	71	3.10	1.09	2.57	198	*
	Cooperative	129	3.56	1.28			
Fairness	Rebellious	71	2.68	1.42	3.72	198	**
	Cooperative	129	3.51	1.56			
Emotion	Rebellious	71	5.03	1.64	0.85	164[(a)]	n.s.
	Cooperative	129	4.80	1.92			
Dissatisfaction with the penalty	Rebellious	71	5.19	1.66	2.44	198	*
	Cooperative	129	4.56	1.84			
Overall Satisfaction	Rebellious	71	3.77	1.78	2.84	195	**
	Cooperative	129	4.52	1.78			
Repurchase Intentions	Rebellious	71	3.99	2.31	4.19	198	**
	Cooperative	129	5.34	2.12			

*This table shows the results of Independent Samples T test between the two customers groups. *p < 0.05 **p < 0.01*
(a) Based on assumption of non-equal variances
Rebellious and cooperative customers show differences in all variables except Emotion.
(b)

Testing of the Structural Model

The hypothesized structural model was tested using Lisrel for path analysis. The results are reported in Table 5. The overall model fit is excellent (chi-square 0.84 with df=2, p=0.65; root mean squared error of approximation (RMSEA)=0.00; goodness-of-fit index (GFI)=0.998; comparative fit index (CFI)=1.00; normed fit index (NFI)=0.998; adjusted goodness-of-fit index (AGFI)=0.985). All paths except for the path from perceived fairness to repurchase intentions are significant, and the path coefficients are in the same directions as expected. Overall, the model fits the data very well and variances of dependent variables are well explained by the predictors used in the model as shown in squared multiple correlations (dissatisfaction=0.59; overall satisfaction=0.39; repurchase intentions=0.57).

Hypothesis 1 is concerned with the influence of emotion on different types of satisfaction judgments and predicted that the impact of emotion on overall satisfaction and repurchase intentions (long-term outputs) will be completely mediated by transaction-specific satisfaction judgment. In other words, no direct effect of emotion on overall satisfaction or repurchase intentions was expected. A chi-square difference test was conducted by comparing the model with a direct path from emotion to overall satisfaction or repurchase intentions against the model without it. The test results show that emotion does not have a significant direct effect on these two long-term output variables, supporting Hypothesis 1. Hypothesis 2 predicts the influences of cognitive antecedents on overall satisfaction and repurchase intentions will be partially mediated by transaction-specific satisfaction judgment. Unlike emotion, cognitive antecedents are expected to have direct influences on long-term outputs. The test result shows that disconfirmation has a significant influence on overall satisfaction and repurchase intentions. However, perceived fairness has no significant influence on repurchase intentions. Therefore, Hypothesis 2 is not supported.

Table 5: Results of Path Analysis

Relationships	**Cooperative Group Path Coefficient**	**Rebellious Group Path Coefficient**	**Entire Group Path Coefficient**
DISC → DISS	-0.11	-0.19**	-0.13**
FAIR → DISS	-0.33***	-0.41***	-0.37***
EMO → DISS	0.43***	0.43***	0.42***
DISC → OVRSAT	0.22**	-0.03	0.15*
FAIR → OVRSAT	0.39***	0.19	0.36***
DISS → OVRSAT	-0.14	-0.36**	-0.19**
DISC → REPINT	0.12	0.37***	0.21***
FAIR → REPINT	0.09	-0.22*	0.00
DISS → REPINT	-0.10	-0.24**	-0.15**
OVRSAT → REPINT	0.55***	0.49***	0.52***
Overall Model Fit Indices			
χ^2	0.61, p=0.73	1.82, p=0.40	0.84 (df=2), p=0.65
GFI	1.00	1.00	1.00
AGFI	0.98	0.91	0.99
RMSEA	0.00	0.00	0.00
NFI	1.00	1.00	1.00
CFI	1.00	1.00	1.00
Squared multiple correlations for:			
Dissatisfaction with the penalty	0.54	0.68	0.59
Overall satisfaction	0.44	0.25	0.38
Repurchase Intentions	0.57	0.56	0.57

*This table shows the results of path analysis. Standardized path coefficients are reported. *p < 0.10 **p < 0.05 ***p < 0.01*

Hypotheses 3 and 4 predict that the weights of transaction-specific evaluations and global evaluation (overall satisfaction) on repurchase intentions will be different depending on the type of customers and that global evaluation (overall satisfaction), as compared to transaction-specific evaluations, will have a greater (less) influence on repurchase intentions for cooperative (rebellious) customers. To test hypotheses 3 and 4, the sample was median-split into two groups based on their compliance intentions (low versus high). The proposed model was tested on the two customer groups to examine the weights of the effects of transaction-specific evaluations vs. global evaluation on repurchase intentions. Transaction-specific evaluations included not only penalty-related satisfaction judgment (dissatisfaction with the penalty) but also disconfirmation, perceived fairness and emotion as they are specifically related to the penalty incident.

Table 6 shows the direct, indirect, and total effects of transaction-specific evaluations vs. global evaluation (overall satisfaction) on repurchase intentions. The indirect effects were calculated as a multiplicative sum of the magnitude of sequential beta weights, a method commonly used in previous studies for path analysis (Lages and Lages 2005; Moorman, Zaltman and Deshpande 1992). For example, to measure the indirect effect of disconfirmation via dissatisfaction with the penalty on repurchase intentions, the betas of -0.11 and -0.1 were multiplied to equal 0.01. The total effect is obtained by simply adding the magnitude of direct effect and indirect effect. As expected, overall satisfaction plays a more significant role in repurchase intentions than transaction-specific evaluations do for cooperative customers (total effect: 0.55 for overall satisfaction vs. 0.26 for transaction-specific evaluations measured in absolute value). On the other hand, rebellious customers tend to rely on transaction-related evaluations more heavily in determining their behavioral intentions of repurchase than overall satisfaction (total effect: 0.86 for transaction-specific evaluations measured in absolute value vs. 0.49 for overall satisfaction).

Table 6: Effects of Independent Variables on Repurchase Intentions

	Cooperative Group			Rebellious Group		
Independent Variables	**Direct Effects (1)**	**Indirect Effects (2)**	**Total Standardized Effects (1) + (2)**	**Direct Effects (1)**	**Indirect Effects (2)**	**Total Standardized Effects (1) + (2)**
Transaction-Specific Evaluations						
DISC	0.12	0.01	0.13	0.37	0.05	0.42
FAIR	0.09	0.03	0.12	-0.22	0.10	-0.12
EMO	n/a	-0.04	-0.04	n/a	-0.10	-0.10
DISS	-0.1	n/a	-0.1	-0.24	n/a	-0.24
Global Evaluation						
OVRSAT	0.55	n/a	0.55	0.49	n/a	0.49

Indirect effects were obtained by multiplying the standardized coefficients of the paths involved. Because this study intends to compare the weights of transaction-specific evaluations versus global evaluation (overall satisfaction), the indirect effects of transaction-specific evaluations do not consider the effect through overall satisfaction. For example, the indirect effect of disconfirmation on repurchase intentions through overall satisfaction is not included for the comparison purpose.

In order to test hypotheses 5 and 6 regarding the mediating effect of overall satisfaction between transaction-specific satisfaction judgment and repurchase intentions, a chi-square difference test was conducted separately for the two customer groups. The chi-square difference score was obtained by subtracting the chi-square value of the full model from the chi-square value of the model without the direct path from transaction-specific satisfaction judgment to repurchase intentions. A significant difference score will suggest that adding the direct path (from the transaction-specific satisfaction to repurchase intentions) to the model is significantly different from the model without the path and that overall satisfaction does not fully mediate the relationship between the two variables. On the other hand, a non-significant score will mean adding a direct path does not increase explained variances and that overall satisfaction fully mediates the relationship.

The results show that for cooperative customers overall satisfaction fully mediates the impact of transaction-specific satisfaction on repurchase intentions (chi-square difference score associated with the direct path from DISC to REPINT, 2.12 (df=1) $p>0.1$, FAIR to REPINT 0.94 (df=1) $p>0.1$, DISS to REPINT, 2.24 (df=1) $p>0.1$). The study found that overall satisfaction is a partial mediator for rebellious customers. The chi-square difference scores were significant (difference score associated with the direct path from DISC to REPINT, 10.25(df=1) $p<0.01$, FAIR to REPINT, 3.1 (df=1) $p<0.1$, DISS to REPINT, 4.01 (df=1) $p<0.05$), suggesting adding direct paths from transaction-specific satisfaction to repurchase intentions significantly increased explained variances. These results support hypotheses 5 and 6 that overall satisfaction plays a different mediating role for the two customer groups. Overall satisfaction is found to fully (partially) mediate the relationship between transaction-specific satisfaction and repurchase intentions for cooperative customers (rebellious customers). Table 7 shows the summary of statistical tests.

Table 7: Summary of Tests

Hypothesis	Description of Test	Results
Hypothesis 1: Transaction-specific satisfaction as a full mediator between affective antecedent and overall satisfaction (or repurchase intentions) *Supported*	Chi-square difference test comparing the model with the direct path from affective antecedent to overall satisfaction (or repurchase intentions) against the model without it	Full mediator
Hypothesis 2: Transaction-specific satisfaction as a partial mediator between cognitive antecedents and overall satisfaction (or repurchase intentions) *Not Supported*	Chi-square difference test comparing the model with the direct paths from cognitive antecedents to overall satisfaction (or repurchase intentions) against the model without it	Partial mediator for disconfirmation but a full mediator for fairness
Hypothesis 3: Total effect of overall satisfaction > total effect of transaction-specific evaluations on repurchase intentions for cooperative customers *Supported*	Total effect as a sum of direct effect and indirect effect using a path analysis (sub-group analysis)	Overall satisfaction has a greater impact (0.55 vs. 0.26)
Hypothesis 4: Total effect of transaction-specific evaluations > total effect of overall satisfaction on repurchase intentions for rebellious customers *Supported*	Total effect as a sum of direct effect and indirect effect using a path analysis (sub-group analysis)	Transaction-specific evaluations have a greater impact (0.86 vs. 0.49)
Hypothesis 5: Overall satisfaction as a full mediator between transaction-specific satisfaction and repurchase intentions for cooperative customers *Supported*	Chi-square difference test comparing the model with the direct path from transaction-specific satisfaction to repurchase intentions against the model without it	Full mediator
Hypothesis 6: Overall satisfaction as a partial mediator between transaction-specific satisfaction and repurchase intentions for rebellious customers *Supported*	Chi-square difference test comparing the model with the direct path from transaction-specific satisfaction to repurchase intentions against the model without it	Partial mediator

This table shows the results of hypothesis testing. All hypotheses but Hypothesis 2 are supported.

DISCUSSION

Implication for Measurement

The results of the study suggest that both overall satisfaction and transaction-specific satisfaction be included and measured in a customer evaluation study to capture the dynamic relationship among different types of evaluations and behavioral intentions. The findings of the study support that the two different types of satisfaction can be identified and measured separately, and that they play different roles in the prediction of repurchase intentions for different types of customers (cooperative vs. rebellious customers). Studies (Bitner and Hubbert 1994; Jones and Suh 2000) in the past indicated that global evaluation (overall satisfaction) is a stronger predictor of behavioral intentions than transaction-specific evaluations and they were not clear about the conditions in which transaction-specific evaluations or global evaluation (overall satisfaction) can have a greater influence on repurchase intentions. Comparison of the weights of the influences of transaction-specific evaluations and global evaluation (overall satisfaction) on repurchase intentions for two different types of customers revealed that customers weigh these two types of evaluations differently. Cooperative customers tend to weigh global evaluation more heavily than transaction-specific evaluations in determining their repurchase intentions. This offers an identification of an important condition in which the weights of transaction-specific evaluations and global evaluation are different in their predictions of repurchase intentions. In addition, the finding of the study suggests that global evaluation (overall satisfaction) plays a different mediating role for different types of customers. A chi-square difference test was conducted by hypothesizing that overall satisfaction is a full mediator only for cooperative customers and not for rebellious customers. The result supporting the hypothesis indicates a limiting condition, in which overall satisfaction is a full or partial mediator by showing overall satisfaction acts differently for different types of customers.

One interesting finding regarding the different types of satisfaction was that affective response (i.e., emotion) has a different relationship with overall satisfaction and repurchase intentions than cognitive response. Based on prior research (Alford and Sherrell 1996; Smith and Bolton 2002), affective response (emotion) was expected to have no direct effect on overall satisfaction or repurchase intentions. This was tested by comparing two models with or without direct paths from emotion to overall satisfaction and repurchase intentions. The result showed that the effect of affective response is mediated through the influence of transaction-specific satisfaction and that there is no direct effect of affective response on overall satisfaction or repurchase intentions. This finding supports previous studies suggesting that affective responses make unique contributions to the explanation of the variances in behavioral intentions (albeit indirectly) and they should be measured and treated differently from cognitive responses. Even though many researchers (Dube 1990; Liljander and Strandvik 1997; Smith and Bolton 2002) recently started investigating the role of emotion in satisfaction judgment, very little is known about its differential influence on transaction-specific satisfaction, overall satisfaction, and behavioral intentions. The finding of this study unravels the interesting characteristics of affective response in its relationship with different types of satisfaction and behavioral intentions.

Managerial Implication

Consistent with previous studies (Alford and Sherrell 1996; Smith and Bolton 2002), this study showed differential effects of cognitive and affective (emotion) responses on overall satisfaction and repurchase intentions and affective response having a greater effect on transaction-specific satisfaction than on overall satisfaction. The finding that the effect of emotion on overall satisfaction or repurchase intentions is mediated through transaction-specific satisfaction suggests that companies may have an opportunity to recover and furthermore retain emotionally stridden customers when the company recovers well from the penalty incident. Companies' recovery efforts should entail proper handling of these emotional customers so that the effect of their negative emotion does not permeate through the behavioral consequences (e.g., switching). Unlike emotion (affective response), disconfirmation, a cognitive response, has a direct effect on repurchase intentions in addition to its indirect effect through transaction-specific satisfaction and overall satisfaction. The significant direct effect of disconfirmation suggests that companies should manage customer expectations. In order to manage and adjust customers' expectations, it is necessary for companies to review their penalty policies carefully and reduce the prevailing gap, if any, between what the penalty policy entails and what customers know about the policy. Oftentimes, ineffective communication involving the use of fine prints in print materials or fast talk on TV or radio commercials is the major blame for the gap.

The study shows differential effects of transaction-specific evaluations and overall satisfaction on repurchase intentions exist for different types of customers. The results suggest that rebellious customers are more sensitive to a negative penalty episode than cooperative customers are and effective management of penalty experiences for these customers is crucial for customer retention. For example, one (rebellious) customer in this study mentioned in response to an open-ended question that:
"It was my first offense. I am always on time with my payments and have been a loyal customer for several years. Life happens. I'm going through a lot of personal challenges to include taking care of my grandfather with Alzheimer, finishing a nasty divorce hearing, looking for a place to live, taking 7 courses to complete my masters and working 2 part time jobs. Everything happened at once. I graduated and left for a quick trip and forgot to mail my bill. I tried to call the company after I returned a day after the due date, but he just said there was nothing he could do. So, I am cashing in my flyer miles and closing a 6 year account because of $30."
This upset customer refused to modify his behavior that brought about the penalty and made a decision to terminate the relationship, becoming a rebellious (defecting) customer.

On the other hand, cooperative customers exhibit a higher level of resistance to the effect of one negative penalty experience as they tend to rely more on accumulated positive experiences they have had over time. For example, one cooperative customer mentioned in the study:

"*The bank's policies are simple--pay on time and you don't get charged. My loan payments are quite large and this fee is only a small fraction of my payments. I borrowed a large amount of money to run my business and the bank deserves to have that money repaid promptly. I love my bank and this incident would not change my attitude. I will be better next time"*

As shown in this quote, some customers who have had a great relationship with a company would not let one penalty episode change their opinion or attitude toward the company. Thus, it is deemed necessary for companies to adapt their strategies based on the type of customers especially with regard to customer education and communication messages. It will be advantageous for companies to center customer education programs such as "how to avoid penalties in the first place" around rebellious customers because these customers seem easily affected by a penalty episode. Yet, weighing the benefits of serving vs. churning these customers is important (depending on the company's purpose of using penalties) because rebellious customers tend to continue their course of action even after a penalty incident. Based on the finding that rebellious customers have little desire to modify their behaviors even after frequent punishment events, it is reasonable to assume that punishment alone does not keep these crime-prone customers from engaging in another crime. In addition to the education program, offering positive incentives (rewards as opposed to punishments) for good behaviors could be beneficial for this type of customers. For example, some rental companies offer a financial incentive (discount) for returning the rental before the due date to promote good customer behavior.

The study shows that rebellious customers tend to be younger than their counterparts and put themselves in a penalty situation more frequently. Interestingly, these customers exhibit low level of intent to comply with the company's rules in the future and they will probably remain as repetitive offenders without the company's involvement. Thus, in order to help rebellious customers break away from recidivism, companies may want to proactively offer a marketing program that helps customers avoid a penalty situation in the first place. In the banking industry, for example, many companies offer a program that prevents customers from facing an overdraft penalty situation by linking a savings account to a checking account so that a fund is transferred automatically from the savings account to the checking account when a non-sufficient fund situation arises. The efforts to promote this type of marketing program should be addressed more heavily to rebellious customers.

CONCLUDING COMMENTS

This study examined different types of antecedents and their influences on different types of satisfaction judgments and behavioral intentions. It also examined how customers respond to penalties differently based on their relationship with the company. Using cross-sectional survey on customers of various service organizations, the study found that customers weigh transaction-specific and global evaluations differently based on their relationship with the company. Cooperative customers tend to weigh overall satisfaction (global evaluation) more heavily than transaction-specific evaluations. On the other hand, rebellious customers weigh transaction-specific evaluations more heavily than overall satisfaction. The findings suggest that companies should be more careful with dealing with rebellious customers because they are more easily affected by a negative incident than their counterparts are. This has an implication for market segmentation strategy since customers exhibit different responses to penalties.

Even though using multiple-item scales is desirable, it is sometimes unavoidable to use single-item scales due to the constraint in the length of questionnaire. This study used a single-item measure for overall satisfaction as well as the measures for customer compliance intent and repurchase intent. Future studies may want to develop and use multiple-item scales for these constructs. This study found the differences between cooperative and rebellious customers in terms of their evaluations of the penalty and the company. An interesting question that needs to be answered is what makes some customers cooperative versus rebellious (e.g., personal trait). Qualitative study may be helpful for delving into this issue.

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BIOGRAPHY

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SERVICE QUALITY IN THE PUBLIC SERVICE

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ABSTRACT

The purpose of this paper is to obtain a better understanding of the extent to which service quality is delivered within the Mauritian public service by drawing on front-line employees (FLE) and customer perceptions of service quality. The paper investigates how closely customer expectations of service and FLE perceptions of customer expectations match. SERVQUAL is used to measure service quality amongst FLE and customers in a major public sector department in Mauritius. The survey captures customers' expectations of an excellent public service and compares these with their perceptions of the service delivered by a particular public service department in Mauritius. The paper also reports on a parallel SERVQUAL survey of FLE to examine how well they understand their customers' expectations and how well its internal processes support the delivery of top quality public services.

The findings reveal that while there is a significant shortfall in meeting customer expectations, the FLE appears to have a good understanding of what these expectations actually are. The FLE should focus on those dimensions which receive lowest ratings and attributes with high gap scores. This research adds to the body of knowledge relating to public service quality management. It will also be of interest to strategic and operational public service managers and to academics investigating the reliability and value of service quality assessment tools. It addresses key relationships between service dimensions and service quality within the Mauritian public service.

JEL: M31, M12

KEYWORDS: Service quality, SERVQUAL, Front-line employees, Customer expectations, Public sector, Mauritius

INTRODUCTION

The service industry plays an increasingly important role in the economy of many countries. In today's global competitive environment delivering quality service is considered as an essential strategy for success and survival (Parasuraman *et al.*, 1985; Reichheld and Sasser, 1990; Zeithaml *et al.*, 1990). Even the public sector organizations have come under increasing pressure to deliver quality services (Randall and Senior, 1994) and improve efficiencies (Robinson, 2003). Customer needs and expectations are changing when it comes to governmental services and their quality requirements. However, service quality practices in public sector organizations is slow and is further exacerbated by difficulties in measuring outcomes, greater scrutiny from the public and press, a lack of freedom to act in an arbitrary fashion and a requirement for decisions to be based in law (Teicher *et al.*, 2002).

Since Mauritius has gained independence in 1968, the public sector has undergone a number of transformations. In 2006, the Government has introduced the Public Service Excellence Award for the public department which excels in all spheres of its operations in order to increase productivity and efficiency (Government of Mauritius, 2006). The public sector is under increasing pressure to demonstrate that their services are customer-focused and that continuous performance improvement is being delivered. The purpose of this paper is thus to examine the service quality concepts and their application in the public service sector in Mauritius. The study uses the SERVQUAL approach to examine the gap between customers' general expectations of a service and their perceptions of the service received by a specific service provider. This paper investigates how closely customer expectations of service and front-line employees (FLE) perceptions of customer expectations are matched. This approach has been used extensively to assess the quality of private sector services but fewer applications of the approach have been reported in public services.

This paper is organized as follows: the introductory section gives a brief description of the service quality and a background of the Mauritian public service sector. This is followed by relevant literature review pertaining to service quality. The methodology of the research paper is explained, followed by the results of the empirical analysis. Conclusions and managerial implications are noted, and limitations and future directions are discussed. Finally, recommendations for improving service quality within the public service sector of Mauritius based on the findings of the study are provided.

LITERATURE REVIEW

According to Parasuraman *et al.* (1988), service quality can be defined as an overall judgment similar to attitude towards the service and generally accepted as an antecedent of overall customer satisfaction (Zeithaml and Bitner, 1996). Parasuraman *et al.* (1988) have defined service quality as the ability of the organization to meet or exceed customer expectations. It is the difference between customer expectations of service and perceived service (Zeithaml *et al.*, 1990). Perceived service quality results from comparisons by customers of expectations with their perceptions of service delivered by the suppliers (Zeithaml *et al.*, 1990). If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman *et al.,* 1985; Lewis and Mitchell, 1990).

Services unlike tangible products are produced and consumed at the same time in the presence of the customer and the service producer. The presence of the human element during the service delivery process greatly increases the probability of error on the part of employees and customers. This error is due to intangible behavioral processes that cannot be easily monitored or controlled (Bowen, 1986). However, although a substantial amount of service quality research has focused on service customers' perceived service quality (Parasuraman *et al.,* 1988; Carman, 1990; Parasuraman *et al.,* 1991; Babakus and Boller, 1992; Cronin and Taylor, 1992; Babakus and Mangold, 1992), relatively little attention has been paid to exploring the factors that impact on service employees' behavior with regard to delivering service quality.

More than two decades ago, Surprenant and Solomon (1987) stated that service encounters are human interactions. They suggested that customers and service providers have roles to play during and possibly after service encounters and that these roles are based on "interpersonal interactions" between organizations and customers. Service quality in all service encounters is thus intrinsically affected by the perspectives of both the service provider and the service receiver. Similarly, Czepiel (1990) concluded that research on service quality must always include the perspectives of both the provider and the receiver. However, most research on the service quality construct has been restricted to one perspective: that of the service receiver (Parasuraman *et al*., 1988; Guerrier and Deery, 1998). A few have applied dual perspectives and considered interactive features of service quality in service encounters (Tam and Wong, 2001; Chow-Chua and Komaran, 2002; Dedeke, 2003; Svensson, 2004, 2006).

Because service delivery occurs during the interactions between contact employees and customers, attitudes and behaviors of the contact employees can influence customers' perceptions of service quality (Schneider and Bowen, 1985). Moreover, Beatson *et al.* (2008) found that perceived employee satisfaction, perceived employee loyalty, and perceived employee commitment had a sizable impact on perceived product quality and on perceived service quality. According to Zeithaml and Bitner (1996), contact employees represent the organization and can directly influence customer satisfaction, they perform the role of marketers. Whether acknowledged or not, service employees perform marketing functions. They can perform these functions well, to the organization's advantage, or poorly, to the organization's detriment. According to Bettencourt and Gwinner (1996) FLE has the opportunity to tailor in real-time not only the services the firm offers, but also the way in which those services are delivered. Customer actions, reactions and other characteristics can have a profound influence on the actions and mannerisms of front-line service personnel (Solomon *et al*., 1985; Matzler *et al.*, 2004). Customers largely establish their impressions of the organization's level of service provision based on their encounters with FLE. Therefore employees involved in the delivery of front-line services can provide valuable information for improving service. FLE are knowledgeable about the strengths and weaknesses of the service through their contact with customers and this is an important form of feedback that can be used by organizations in decision-making to better serve customers. Research has established a positive correlation between the attitudes of employees and those of customers, including employee and customer perceptions of service quality (Schneider and Bowen, 1985).

The SERVQUAL Model

The SERVQUAL model proposes that customers evaluate the quality of a service on five distinct dimensions: reliability, responsiveness, assurance, empathy, and tangibles. The SERVQUAL instrument consists of 22 statements for assessing consumer perceptions and expectations regarding the quality of a service. Perceived service quality results from comparisons by consumers of expectations with their perceptions of service delivered by the service providers (Zeithaml *et al.*, 1990). It can be argued that the factor underpinning the delivering of good perceived service quality is actually meeting the expectations of the customers. Thus, excellent service quality is exceeding the customers' expectations. Zeithaml and Bitner (2000) suggested that customer expectations are beliefs about a service that serve as standards against which service performance is judged.

Parasuraman *et al.* (1988) suggested that customer expectations are what the customers think a service should offer rather than what might be on offer. Zeithaml *et al.* (1990) identified four factors that influence customers' expectations: word-of-mouth communications; personal needs; past experience; and external communications. A gap is created when the perceptions of the delivered service is not as per the expectations of the customer. This gap is addressed by identifying and implementing strategies that affect perceptions, or expectations, or both (Parasuraman *et al.*, 1985; Zeithaml *et al.*, 1990). Parasuraman *et al.* (1988) stated that SERVQUAL had been designed to be "applicable across a broad spectrum of services" and the format could be adapted to fit specific needs, and that it would be most valuable when used to track service quality trends periodically. They proposed that the SERVQUAL model could be extended to measure gaps in quality and could therefore be used as a diagnostic tool to enable management to identify service quality shortfalls. The gap score is calculated by the perception statements being deducted from the expectation statements. If any gap scores turn out to be positive then this implies that expectations are actually being exceeded. This allows service managers to review whether they need to re-deploy resources to areas of under performance (Wisniewski, 2001). The SERVQUAL instrument ascertains the level of service quality based on the five key dimensions and also identifies where gaps in service exist and to what extent (Table 1).

Table 1: Definition of the SERVQUAL Gaps

Gap 1 (the positioning gap)	managers' perceptions of consumers' expectations and the relative importance consumers attach to the quality dimensions
Gap 2 (the specification gap)	the difference between what management believes the consumer wants and what the consumers expect the business to provide
Gap 3 (the delivery gap)	the difference between the service provided by the employee of the business and the specifications set by management
Gap 4 (the communication gap)	the promises communicated by the business to the consumer do not match the consumers' expectations of those external promises
Gap 5 (the perception gap)	the difference between the consumers internal perception and expectation of the services

Table 1 presents the five SERVQUAL gaps as generally defined by (Zeithaml et al., 1990).

The lower the mean score, the larger the gap in service quality and conversely the higher the mean score, the smaller the gap in service quality. Gaps 1 to 4 are within the control of an organization and need to be analyzed to determine the causes and changes to be implemented which can reduce or even eliminate Gap 5, which is the gap reflecting the difference between customers perceptions and expectations of the firm's level of service. Surveying of employees can help to measure the extent of Gaps 2 to 4 (Zeithmal *et al.*, 1990). This may reveal a difference in perception as to what creates possible gaps.

Criticisms of SERVQUAL

The SERVQUAL instrument for measuring service quality has been subjected to a number of criticisms. Most research studies do not support the five-factor structure of SERVQUAL put forward by Parasuraman *et al.* (1988), and administering expectation items is also considered unnecessary (Carman, 1990; Babakus and Boller, 1992). In addition, Cronin and Taylor (1992) have developed their own performance-based measure, the SERVPERF. In fact, the SERVPERF scale is the unweighted perceptions components of SERVQUAL, which consists of 22 perception items thus excluding any consideration of expectations. In their empirical work in four industries, Cronin and Taylor (1992) found that unweighted SERVPERF measure (performance-only) performs better that any other measure of service quality, and that it has the ability to provide more accurate service quality score than SERVQUAL. They argue that current performance best reflects a customer's perception of service quality, and that expectations are not part of this concept. Despite the criticisms, SERVQUAL has been used to measure service quality in a variety of contexts, including hospitals (Bakar *et al.,* 2008), universities (Galloway, 1998), police services (Donnelly *et al*., 2006), banks (Kangis and Passa, 1997), travel agencies (Luk, 1997) and public utilities (Babakus and Boller, 1992). The wide array of application of such an instrument as SERVQUAL spells confidence in its utilization as a technique for measuring service quality in various business sectors and service industries.

Although some studies did fail to support its structure, Parasuraman *et al.* (1993) defended the use of the different dimensions, based on conceptual and practical grounds. Parsuraman *et al.* (1988) noted that even if it may be necessary to reword or modify some of the items, yet the SERVQUAL scale is applicable in a wide range of business services. However, Parasuraman *et al.* (1991) cautioned that the addition/deletion of items and/or dimensions may result in the loss of the scale's integrity.

Service Quality in the Public Service

Public sector services are responsible and accountable to citizens and communities as well as to its customers. Several researchers have dealt with service quality in public services (Wisniewski and Donnelly, 1996; Rowley, 1998; Wisniewski, 2001; Brysland and Curry, 2001). Brysland and Curry (2001) stated that the literature clearly supported the use of SERVQUAL in the public sector. According to Gowan *et al.* (2001), service provision is more complex in the public sector because it is not simply a matter of meeting expressed needs, but of finding out unexpressed needs, setting priorities, allocating resources and publicly justifying and accounting for what has been done. In addition, Caron and Giauque (2006) pointed out that public sector employees are currently confronted with new professional challenges arising from the introduction of new principles and tools inspired by the shift to new public management. Anderson (1995) also measured the quality of service provided by a public university health clinic. Using 15 statements representing the five-dimensions of SERVQUAL (Parasuraman *et al.,* 1988), she assessed the quality of service provided by the clinic at the University of Houston Health Center. Patients were found to be generally dissatisfied with the five dimensions of SERVQUAL. The highest dissatisfaction was felt with assurance. On the other hand, tangibles and empathy exhibited the lowest level of dissatisfaction. Using the SERVQUAL approach, Wisniewski (2001) carried out a study to assess customer satisfaction within the public sector across a range of Scottish Councils services. In the library service, the analysis of gap scores revealed that tangibles and reliability had negative gaps which indicate that customer expectations were not met.

On the other hand, responsiveness and assurance were positive implying that customer expectations were actually exceeded by the service provided. Furthermore, Donnelly *et al.* (2006) carried out a study to explore the application of SERVQUAL approach to access the quality of service of Strathclyde Police in Scotland. The survey captures customers' expectations of an excellent police service and compares these with their perceptions of the service delivered by Strathclyde Police. The paper also reports on a parallel SERVQUAL survey of police officers in Strathclyde to examine how well the force understands its customers' expectations and how well its internal processes support the delivery of quality services in the police department. It was found that Strathclyde Police appears to have a good understanding of the service quality expectations of their customers as represented by the responses of elected councilors in the area covered by the force. There is room for improvement in service quality performance both from the viewpoint of the customer and through police force attention to the definition of, and compliance with, service quality standards. Agus *et al.* (2007) carried out a research to identify management and customer perceptions of service quality practices in the Malaysian Public sector. It is important to note that whereas the SERVQUAL model focused on identifying "gaps" between expectations and actual delivery, their model focused only on perceptions of actual service delivery. They used nine of the ten service dimensions identified by Parasuraman *et al.* (1985). Their study looked at the perceptions of management and customers, thereby excluding the views of FLE. It is thus observed that most of the studies to date, have concentrated on service quality in US and European public service sector, while some more recent studies have looked at service quality in developing countries (Agus *et al.*, 2007).

DATA AND METHODOLOGY

Research Design

The SERVQUAL instrument was adopted to measure the quality of customer service as it demonstrated the "gap" between the customers' expectations and the perceptions of FLE of the customers' expectations. The survey questionnaire was thus administered to these two distinct groups of respondents. Each group had a disparate view of the quality of service. The questionnaire used in this study comprised of two parts: Part A contained questions about personal profiles of the respondents including gender, educational level and age. Part B included expectations (E) and perceptions (P) of respondents according to five dimensions and these were tangibles, reliability, responsiveness, assurance and empathy. The items in the questionnaire were measured on a five-point scale ranging from "1 = strongly disagree" to "5 = strongly agree" and the respondents were asked to rate their expectations and perceptions of the various items for the public service. The developed questionnaire was pilot-tested by 15 customers and 5 FLE. It was observed that respondents were confused with the wording of some questions and two questions were repeated. Given that the SERVQUAL instrument can be modified to fit specific research needs, the required wordings were changed and the 22 statements were shortened to 20. Question 5 and question 8, as "promise to do something by a certain time" and "provide its services at the time it promises" have more or less the same meaning, therefore the former one was omitted. Also, statement 18 and 20, as "individual" and "personal" share the same meaning, hence, statement 18 was removed.

Research Sample

This research is carried out in one of the public sector departments in Mauritius. The major function of that public department is to ensure that laws regulating road transport are enforced in order to sustain the social and economic activities of the country. This public department has sub-branches all over the island, and its Head Office is found in Port Louis, the capital of Mauritius. The department provides a range of "at-cost" services. According to Donnelly *et al*. (1995), public sector caters for both customers who pay for the provision of a service and for those who do not pay for the provision of a service. It is pointed out by Robinson (2003) that public services that charge customers are more likely to be in competition with services offered in the commercial sector, thereby offering the customer a choice. The public department chosen for this study charges customers for its service provisions, but this service is not offered by another commercial sector and thus not in direct competition with other service organizations. However, the customers demand a better service for which they are paying. On the other hand, it can also be argued that public services that are free of charge are less inclined to adopt service quality practices unless pushed by customer demands and government legislations. The survey questionnaire was self-completed by the customers, with assistance available if required. Non-probability convenience sampling was used for data collection purposes. Customers who were leaving the public department were intercepted and those who were willing to participate in the survey were given a questionnaire to fill. Finally, during the second and third weeks of August 2008, a sample size of 250 was targeted and 202 questionnaires from the customers were judged usable for data analysis for this study, giving a response rate of 81%. Furthermore, following discussions with the staff as to the purpose of the research, FLE were given the same survey questionnaire as the customers for self-completion on an individual basis. Of the 30 FLE, 28 returned completed and usable questionnaires resulting in a response rate of 93%.

The Statistical Package for the Social Sciences version 14.0 was employed to analyze the data. Descriptive statistics analysis was used to measure respondents' expectation and perception scores. Paired t-test was carried out to test the significant difference between the two means of expectations and perceptions. To compare customers' expectations with their perceptions of the service delivered by the public FLE, a gap score analysis was performed, thus revealing important managerial issues.

RESULTS

The findings of the survey revealed that the sample of customers consisted of 77% of male and 23% of female. More than 57% of the respondents were between the ages of 26-41. Approximately 67% have either School Certificate or Higher School Certificate as highest level of education.

The sample of FLE shows that the gender distribution was 43% of males and 57% of females. With respect to age, the highest proportion of the respondents (43%) fell into the 26-33 year age group, followed by the 18-25 year age group. The question on the educational level of employees showed that 54% of the respondents hold a Higher School Certificate and regarding the employees' year of service, 71% have been in service for less than 5 years.

To test the reliability of the SERVQUAL scale and the internal consistencies of the five dimensions as suggested by Parasuraman *et al.* (1988), the research instrument was analyzed using Cronbach's α values for each dimension using data on perceptions, expectations and the differences between the perceptions and expectations. The reliability scores for the public service department customers and its employees are shown in Table 2. Thus, the SERVQUAL instrument is reasonably satisfactory to be used for the public service department, as Nunnally (1994) suggested that a modest reliability range from 0.5 to 0.6 would suffice. The result of Cronbach's α values ranging from 0.515 to 0.929 for customers and 0.437 to 0.855 for FLE fulfils the minimum requirement level of reliability. Therefore the values of the Cronbach's α show that these measures are reliable.

SERVQUAL Analysis

Table 3 displays the gap scores for each service quality attribute of the customers and FLE at the public service department. The table contains the mean ratings, corresponding standard deviations and the t-test results that indicate the level of agreement among customers and FLE, for each attribute. The gap scores for each attribute were calculated by subtracting the expectation means from the perception means. A negative service quality gap indicates that customer expectations are greater than their perceptions, based on the service provided. Positive service quality gaps result when customer perceptions exceed customer expectations. In this study all service quality gaps were found to be negative and they were statistically significant at 5% levels. Knowing what consumers expect is an essential process in delivering quality service at any level of an operation. Any differences between customer expectations and the organization's perception of customer expectations of quality are important to identify and determine the level service quality provided.

Table 2: Reliability Scores of SERVQUAL Scale for Customers and FLE

Dimensions	**Customers**			**FLE**		
	Perception (P)	**Expectation (E)**	**Gap (P - E)**	**Perception (P)**	**Expectation (E)**	**Gap (P - E)**
Tangibles	0.695	0.584	0.648	0.772	0.793	0.752
Reliability	0.836	0.515	0.777	0.659	0.521	0.517
Responsiveness	0.864	0.716	0.855	0.458	0.574	0.437
Assurance	0.680	0.575	0.642	0.581	0.585	0.544
Empathy	0.749	0.713	0.710	0.614	0.691	0.566
Overall (20 items)	0.929	0.851	0.915	0.855	0.539	0.735

Table 2 presents the reliability scores for the customers' and FLE perceptions, expectations and gap respectively. According to Nunnally (1994) reliability coefficients greater than or equal to 0.50 are considered sufficient for exploratory studies.

From Table 3, the highest average gap between customer perceptions and expectations exists in the reliability dimension. Among the four items in the reliability dimension, customer responses indicated that the greatest gap existed in the area of FLE 'Provide services at the promised time'. Customers perceived a gap in this area measured at -2.28, the biggest gap among all items. The next greatest gap existed in the area of 'Perform the services right the first time'. The third largest gap was observed in the area of 'Show sincere interest in solving customers' problems', followed by 'Maintain error-free records'. The employees, on the other hand, have a slightly similar perspective. They indicated that the greatest gap in their view was in the area of 'Provides services at the time promised', followed by 'Show sincere interest in solving customers' problems', 'Performs the service right the first time' and 'Maintains error-free records'. These similarities in opinion indicate that it is advisable for the public service department to conduct surveys among its customers and employees to identify the most important areas for improvement. If an organization is not aware of its customers' and employees' requirements, it cannot devote resources effectively to improving those areas that may have the most significant impact on customer satisfaction. Therefore to reduce these gaps, the public service department needs to make improvements in these areas.

According to customer opinion, the second largest gap existed in the responsiveness dimension, and even for employees this dimension has resulted in negative gaps. Among the four items in the responsiveness dimension, both customers and FLE indicated the greatest gap was related to whether the item 'Offers prompt services to customers'. FLE perceived a gap in this area measured at -2.04, the biggest gap among all items. This clearly shows that this public department needs to give more support to FLE so that they can improve the quality of the services they are required to provide to customers. The second largest gap was found to be in the area of 'Inform customers when services will be performed' for the customers and employees; the second most important gap for employees was also observed for 'Always willing to help customers'. The third most important gap perceived by customers was in the area of 'Always willing to help customers.

Table 3: Gaps between Perceptions and Expectations (P-E) for Customers and Employees

Statements	Customers' Gap Scores (P-E)		FLE' Gap Scores	
	Mean	t-value	Mean	t-value
Tangibles				
Have up-to-date equipment	-1.36 (1.49)	12.98	-2.00 (1.36)	7.78
Physical facilities are visually appealing	-1.81 (1.41)	18.17	-1.79 (1.45)	6.52
Employees are well dressed and neat in appearance	-1.17 (1.46)	11.40	-0.86 (0.80)	5.65
Visually appealing materials associated with the service	-1.68 (1.30)	18.46	-1.50 (1.17)	6.78
Reliability				
Show sincere interest in solving customers' problems	-1.98 (1.29)	21.81	-1.75 (1.04)	8.90
Performs the service right the first time	-2.11 (1.29)	23.22	-1.71 (0.94)	9.68
Provides services at the time promised	-2.28 (1.23)	26.21	-2.04 (1.14)	9.47
Maintains error-free records	-1.92 (1.32)	20.67	-1.68 (0.90)	9.82
Responsiveness				
Inform customers when services will be performed	-1.86 (1.34)	19.75	-1.79 (0.96)	9.88
Offers prompt services to customers	-2.09 (1.28)	23.33	-1.89 (0.96)	10.48
Always willing to help customers	-1.85 (.124)	21.19	-1.79 (1.03)	9.16
Readily respond to customers' request	-1.77 (1.35)	18.61	-1.46 (1.10)	7.01
Assurance				
Able to instill confidence in customers	-1.68 (1.23)	19.33	-1.57 (1.26)	6.60
Customers feel safe in their transactions	-1.43 (1.21)	16.77	-1.46 (0.74)	10.41
Employees are courteous at all times	-1.58 (1.19)	18.91	-1.71 (0.98)	9.30
Have the knowledge to answer customers' questions	-1.70 (1.15)	21.03	-1.82 (0.72)	13.33
Empathy				
Have convenient operating hours to all	-1.19 (1.52)	11.10	-1.21 (1.03)	6.23
Employees given personal attention to all	-1.58 (1.46)	15.45	-1.61 (0.79)	10.82
Employees have customers best interests at heart	-1.68 (1.32)	18.13	-1.64 (0.78)	11.14
Employees understanding customers' needs	-1.81 (1.29)	19.94	-1.71 (1.05)	8.65

The value in parentheses indicate the standard deviations for each attributes; all the attributes indicate significance at 5 percent levels. Table 3 presents the gap scores for both the customers and FLE. All the items measuring the customers' and FLEs' perceptions revealed negative gap scores.

For assurance, the greatest gaps perceived by both FLE and customers were in relation to the statement 'Have the knowledge to answer customers' questions'. The second customers' largest gap was related to 'Able to instill confidence in customers', the third most important gap for employees. The third largest gap for customers was in the area of 'Employees are courteous at all times', the second most important gap for employees. It was very interesting to note that the employees themselves knew that they were not being courteous enough to customers. Therefore this is another important aspect that can be improved upon.

According to customer opinion, the fourth largest gap existed in the tangible dimension. Among the four items in the tangibles dimension, customers indicated the greatest gap was related to whether the 'Physical facilities are visually appealing', however second largest gap for employees. The second largest gap was found to be in the area of 'Visually appealing materials associated with the service' for the customers; the third most important gap for employees. The most important gap perceived by employees was in the area of 'Have up-to-date equipment' and the third largest gap for customers. However, both customers and employees perceived 'employees are well dressed and neat in appearance' to be the area of least importance.

Both the customer and employees perceived negative gaps for empathy. Surprisingly among the four items for empathy, the customers as well as the employees have the largest gap for 'Employees understanding customers' needs', followed by 'Employees have customers best interests at heart', 'Employees given personal attention to all' and 'Have convenient operating hours to all'. This shows that employees do not understand customers' needs and are not able to respond to those needs. All the gap scores were negative indicating shortfall in meeting customers' expectations across all dimensions.

Summary of Statistics

Table 4 depicts the service provider gaps based on FLE perceptions and customer expectations. Service provider gaps were calculated by subtracting customer expectations from employee perceptions on each of the individual service dimensions. Previous researchers (Parasuraman *et al*., 1988, 1991) have successfully used this method for calculating difference scores. A negative service provider gap indicates that customer expectations are higher than FLE perceive them to be. A positive service provider gap indicates that customer expectations are lower than FLE perceive them to be. In this study all the service provider gaps were found to be negative and they were statistically significant at 5%. Customers rated the importance of the attributes as reliability, assurance, responsiveness, tangibles and empathy, while the FLE ranked the importance of the attributes as assurance, tangibles, empathy, reliability and responsiveness. The results indicated that FLE believed they were not doing a good job in meeting the customers' expectations. The largest gap was observed for the "reliability" (-1.88), followed by the 'responsiveness" dimension (-1.79) and the attributes under these dimensions were related to the performance of the FLE in providing the service right the first time, solving customers' problems, maintaining error-free records, delivering prompt service, readily responding to customers' request and informing customers when services will be performed. These attributes were the major shortfalls and will require significant attention by public service providers in terms of making improvement efforts.

Knowing what customers expect is an essential process in delivering quality service at any level of an operation. Any differences between customer expectations and the organization's perception of customer expectations of quality are important to identify and determine the level of quality of service provided. Management needs to recognize the importance of the behavioral aspects of service as customers place great emphasis on FLE response to their needs that can vary according to the occasion or purpose for the service. Management needs to ensure that there is appropriate selection and training of FLE so that they are able to perform and display the qualities of responsiveness and reliability regarded by customers as being important.

Table 4: Employees Perceptions and Customers Expectations of Service Dimensions

Dimensions	FLE Perceptions	Customer expectations	Service Provider Gap	t-value
Tangibles	2.87 (0.88)	4.44 (0.45)	-1.42 (1.02)	-7.36
Reliability	2.85 (0.62)	4.74 (0.37)	-1.88 (0.76)	-13.18
Responsiveness	2.82 (0.50)	4.66 (0.44)	-1.79 (0.66)	-14.27
Assurance	2.97 (0.49)	4.70 (0.35)	-1.63 (0.77)	-11.11
Empathy	2.87 (0.41)	4.40 (0.57)	-1.56 (0.67)	-12.43

All dimensions are significant at 5 percent levels. Table 4 shows the service provider gaps based on FLE perceptions and customer expectations. The values represent the mean scores measured on a five-point Likert scale and the values in brackets measured the standard deviation. A negative gap indicates that FLE believed their service delivery did not meet customers' expectations while a positive gap indicates that FLE perceived that their service delivery exceeded customers' expectations

CONCLUDING COMMENTS

From a practical aspect, the study attempted neither to test existing theory nor to develop new research instruments. The study tried to present the findings of assessing the expectations and perceptions of service quality for customers and FLE in a public service context in Mauritius. The assessment of service quality expectations and perceptions investigated in this study has proved to be reliable in the public service setting. The service quality gaps indicated that the public service department was failing to meet the expectations of their customers. The results of this analysis provide evidence that service provider gaps must be reduced. An important step in minimizing service provider gaps is to measure customer expectations and communicate these expectations to FLE. If FLE do not fully understand the needs of customers, they cannot be expected to meet or exceed these needs. The larger the gap, the more serious the service quality shortfall. In fact, the service quality shortfalls in the public service in Mauritius are related to a number of constraints, such as inadequate internal systems to support the FLE and insufficient capacity for quality service delivery. Because of these constraints, FLE are unwilling or unable to perform the service at the level required by customers.

In order to bridge the gap between customers' perceptions of service delivery in the public service in Mauritius, the public service department needs to provide more training to the FLE to enhance their customer service skills. The training should focus on FLE ability to help customers resolve their queries and problems quickly. In the process of resolving such problems, they should show a caring, courteous attitude and a sincere interest in helping customers. Furthermore, FLE should improve their knowledge and skills so that they can provide a fast and reliable service to their customers. When they promise to do something for the customer within a certain time, they must fulfill that promise. More importantly, service enhancement through customer orientation will provide the public sector with an opportunity to gain confidence from the tax-paying public.

Using the SERVQUAL instrument, this study was able to help this public organization identify important areas for improvement in its service delivery. The findings revealed that employees and customers did not have significant differences in opinions in terms of the gaps between their perceptions and expectations of that public organization. The findings are congruent with the studies of Bitner *et al*. (1994) and Schneider and Bowen (1985) where both employees and customers have common perceptions regarding the level of service quality delivered in an organization. This study was therefore able to highlight how important it is for an organization, be it a public sector organization, to conduct a survey and consider the opinions of its customers and its employees in identifying areas for service quality improvements. It is therefore very important for them to know how customers evaluate service quality and what they can do to measure and improve service quality. Therefore, to exceed customer expectations, it is necessary for even a public sector organization to continually improve the quality of service provided to its customers.

Limitations and Future Research

There were limitations in this study that need to be acknowledged. First, the study was limited to one public sector department, therefore the reliability of the results restrict the extent to which the findings can be generalized across the Mauritian public service. Secondly, this study looked at the perceptions of FLE and customers, thereby excluding the views of management. Given the financial and resource constraints under which public sector organizations operate, it can be argued that it is crucial to measure management perceptions of organizational service quality practices so that they can also understand customer expectations. Such information will then assist management in identifying cost-effective ways of closing service quality gaps and of prioritizing which gaps to focus on, a critical decision given the scarcity of resources. Thirdly, Parasuraman *et al*. (1991) original argument that SERVQUAL's five dimensions are transportable to other service sectors remains to be verified in the other Mauritian public sector. This study provides public service quality researchers with useful guidelines for future research.

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THE RELATIONSHIP BETWEEN SALES SKILLS AND SALESPERSON PERFORMANCE: AN EMPIRICAL STUDY IN THE MALAYSIA TELECOMMUNICATIONS COMPANY

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ABSTRACT

The objectives of this paper are to understand the influence of sales skills dimensions namely: interpersonal skills, salesmanship skills, technical skills and marketing skills on salesperson performance in Telekom Malaysia (TM) Berhad, a major Malaysian telecommunication corporation. Data was gathered based on quota sample of 114 salespersons in the company, and the findings show that effects of interpersonal skills positively influenced salesperson performance. However, unexpectedly, the findings also revealed that salesmanship skills, technical skills and marketing skills do not influence salesperson performance.

JEL: M3

KEYWORDS: Sales skills, salesperson performance, telecommunication, Malaysia

INTRODUCTION

The telecommunication services industry in Malaysia has undergone tremendous change - deregulation, new competition, and rapidly changing customer base from the late 1980s. Since then there are six new operators or service providers who have entered the market (International Telecommunications Union (ITU) Report, 2002; 2004). However, the industry consolidation in 2002 had resulted in only four key players in the industry, which are DiGi Telecommunications (DiGi), Maxis Communications (Maxis), TIME dotcom (TIME) and the incumbent, TM Berhad (TM) (ITU, 2004). As a result of the consolidation, there has been more intense competition than ever before among these key players in order to retain or gain market share. Moreover, the competition becomes even more severe when the Malaysian Communications and Multimedia Commission (MCMC) continuously issues new licensees to smaller or niche players. As of 31 December 2005, there were 395 Applications Service Provider (ASP) licensees, 85 Network Facilities Providers (NFP) individual licensees and 94 Network Services Provider (NSP) individual licensees (MCMC Industry Performance Report, 2005). Competition will be further intensified when the domestic market is further liberalised to allow participation of ASEAN registered companies in 2010 once the telecommunication agreement rectified under the AFTA commence (TM Annual Report, 2005).

With respect to market share, TM Berhad continued to maintain its lead in market share with revenue of RM13.9 billion and had some 59% of total market share in 2005, compared to 62% and 61% in 2003 and 2004 respectively. Meanwhile, Maxis improved its market share to 27% from 26% in 2004 and 25% in 2003. Similarly, DiGi had also increased its market share to 12% from 10% in 2004 and 9% in 2003. However, TIME lost another 1% market share to 2% in 2005. As depicted in the statistics above, TM's market share had shrunk by 1% and 2% in 2004 and 2005 respectively, and TM also turned into modest 5% revenue year-on-year growth in 2005, as compared to 12.3% in 2004 (MCMC Industry Report, 2004; 2005; TM Annual Report, 2004; 2005).

At a glance, the latest statistics on market share and business indicate that intense competition has influenced TM's business performance. The company can no longer rest on its laurels as competition is intensifying and will be getting stiffer in the future. The existing and future competitive market outlooks for the company have created great pressure to the company market its products or services so that the company not only can retain but also further improve its market share. Moreover, selling products or services is the most important component of a business. With respect to this, sales groups are forced to work harder in order to provide the revenue streams that support all of TM's business activities. Furthermore, advances in technology results in organisations facing environments that are extremely complex and dynamic. Moreover, consumers are getting smarter and expect the best from sellers to fulfill their demands and satisfy their needs (Atuahene-Gima & Micheal, 1998). Therefore, salespersons in sales groups are perhaps the most important individuals in the firm's marketing communication process since salespersons occupy a boundary position within the organisation. They represent the organisation to customers, interact with them, underpin transactions, ands serve as a mechanism to scan and monitor the external environment (Sohi, 1996). The need to increase market share and be the preferred service provider or seller have motivated management to understand the factors underpinning salesperson performance. Meanwhile, sales performance has been one of the commonly used variables to gauge the salesperson performance (Morris et. al, 1991).

There are many factors that contribute to salesperson performance. Nonetheless, it has been acknowledged that sales skills possessed by salespersons plays a pivotal role in relation to sales performance. Sales skills are one of the key individual–level determinants that contribute to salesperson performance (Churchill et. al., 1985; Churchill et. al., 2000). Ingram et. al., (2004) added that turbulent business environments even forced sales departments to headhunt highly skilled salespersons so as to ensure successful sales.

For many companies, salespersons are the most important marketing tools in the interface between the companies and their customers. Operating at the interface between the organisation and its environment, salespersons perform important boundary-spanning roles (Baldauf & Cravens, 2002). Good salespersons may offer substantial performance improvements in today's increasingly competitive business environment. A top-quality salesperson who maximizes revenues from current existing customers and systematically identifies and manages new prospects well will allow a business entity to grow faster than its competitors (Futrell, 2006). Such efforts are particularly important in an environment where valuable customers have many more options and choices then ever before. Considering the pivotal role played by salesperson in ensuring continued growth of sales, therefore, hiring highly skilled sales personnel organisations becomes critical (Churchill et al., 2000; Ingram et al., 2004; Futrell, 2006). Moreover, many researchers have emphasized the importance of salesperson's skills level on salesperson performance (Churchill et. al., 1985; 2000; Rentz et. al., 2002).

Salespersons' selling skills have long been identified as a determinant of salesperson performance (Churchill et al., 1985; 2000). Churchill et al. (1985) and Ford, Walker, Churchill, and Hartley (1988) who are credited with seminal work in this area found that besides aptitude, role perception, motivation, personality and organizational factors, sales skills also affect salesperson performance. Moreover, in another study, Rentz et al. (2002) categorized selling skills into three dimensions namely interpersonal skills, salesmanship skills and technical skills. These sales skills dimensions had been found to be useful predictors of salesperson performance. Furthermore, Ahearne and Schillewaert (2000) introduced marketing skills as other predictors to a salesperson performance.

With regard to this, although these sales skills dimensions have long been recognized as predictors of salesperson performance, unfortunately ever since TM Berhad's privatization, there have been so far no empirical research conducted to ascertain the individual-level skills factors that contribute to the performance of salespersons. Furthermore, most previous studies examining the influence of sales skills dimensions on salesperson performance have been conducted in advanced Western economies. Thus, there is a remaining gap in the literature – as no such research has been conducted within a specific telecommunication company i.e. TM Berhad or indeed in the telecommunications industry in Malaysia which is a developing economy and one of the 'tiger' economies of South east Asia. Therefore, this is the first study in company, industry, and the country that attempts to explore this particular relationship.

The remainder of the paper is organized as follows. First, literature review of previous studies that relevant to the topic under study is discussed. Issues discussed include the salesperson performance measure, determinant of salesperson performance, sales skills and its dimensions namely interpersonal skills, salesmanship skills and technical skills. The chapter also describes the research framework and hypotheses. Secondly, the data and methodology section explains the research methodology used in this research. Thirdly, results and discussion sections presents the findings and its analysis. Finally, the concluding remarks section concludes the study by summarizing the major findings, discuss the limitation of the paper and provide suggestion for future research.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Several studies have identified a great number of independent variables that influence salesperson performance (see Churchill et al., 1985; Baldauf and Cravens, 1999; 2002; Piercy et. al., 1997; 1998; Baldauf et. al., 2001; Babakus, et. al., 1996; Barker, 1999; Rentz et. al., 2002). Churchill et al. (1985) found that in terms of the average size of their association with salesperson performance, the determinants were ordered as follows:

(1) role variables, selling skills, motivation, personal factors, aptitude, and organizational factors; and

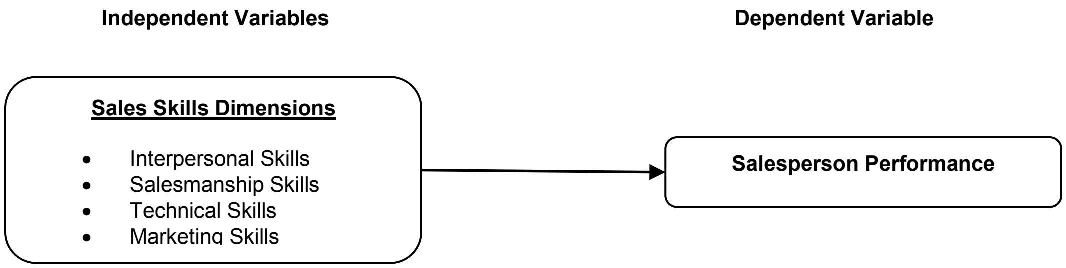
(2) when ordered according to real variation (i.e., not attributable to sampling error), the determinants were ranked as: personal factors, selling skills, role variables, aptitude, motivation, and organizational/environmental factors.

The results of Churchill's et. al. (1985) research indicated that selling skills were the second most important of the five variables, both in terms of average size association with performance and in terms of real variation. Nevertheless, Churchill et. al. (1985) and Rentz et. al., (2002) observed that fewer studies on individuals' characteristics related to selling skills dimensions of salespersons had been conducted before Churchill's et al. (1985) meta-analysis studies. Nonetheless, since the remarkable meta-analysis studies, a considerable amount of research had focused on specific aspects or micro-skill stream of selling skills which focused on individual sales skills (Rentz et. al., 2002). These micro-stream selling skills could be divided into three dimensions which are: interpersonal, salesmanship and technical skills.

With respects to this, the present research attempts to continue from Churchill's et. al's, (1985) remarkable work to examine the influence of sales skills on salesperson performance. Specifically, the present study will investigate the influence of four sales skills dimensions on salesperson performance. The three sales skills dimensions are namely interpersonal skills, salesmanship skills, and technical skills have been adopted from Ford et al. (1988; cited in Churchill et al., 2000), and the other dimension of marketing skills has been derived from Ahearne and Schillewaert (2000).

The present study examines the relationship between selling skills dimensions (interpersonal skills, salesmanship skills, technical skills, and marketing skills) and salesperson performance. The relationships among the variables are shown in Figure 1.

Figure 1: Theoretical Framework



The present study examines the relationship between selling skills dimensions (interpersonal skills, salesmanship skills, technical skills, and marketing skills) and salesperson performance.

Interpersonal Skills and Salesperson Performance

Interpersonal skills refer to mental and communication algorithms applied during social communication and interaction to reach certain effects and results. According to Rentz et al. (2002), the dimensions of interpersonal skills are listening, empathy, optimism and perceived observation skills. These dimensions had been operationalised and empirically tested independently to represent interpersonal skills measures in predicting salesperson performance. Thus, these dimensions are likely to collectively realise effective interpersonal skills and, in turn, salesperson performance as achieving high selling performance apparently requires salespeople with strong interpersonal skills. Comer and Drollinger (1999); Castleberry and Shepherd (1993); Ramsey and Sohi (1997), and Shepherd et. al., (1997) found that effective listening skills was a valuable communication skill for successful salespersons. Meanwhile, Comer and Drollinger (1999) pointed out that empathetic skill contributed to salesperson performance. McBane (1995), Pilling and Eroglu (1994), and Plank et. al., (1996) supported this. Additionally, Rich and Smith (2000) found that individuals possessing high responsive characteristics seem to have greater identification or perceptive observation skills concerning the social style of others which were critical traits for successful salespersons. Jane and Dawn (2002, 2003) also suggested that empathetic and perceptive others' emotion could well explain salesperson performance. Rapisarda (2002) in her research on the impact of emotional intelligence on work performance reaffirmed that empathic competency strongly correlated with performance. In sum, previous empirical studies demonstrated a positive relationship between the four dimensions of interpersonal skills on salesperson performance. Hence, we expect the similar relationship to occur among our sample frame of salespersons in the present study. Thus, the first hypothesis is as follows:

H1: There is a significant positive relationship between interpersonal skills and salesperson performance.

Salesmanship Skills and Salesperson Performance

The dimensions of salesmanship skills can be generally categorized into five subcategories that are: adaptability, consultative selling, negotiation and questioning, and salesperson cues and communication style skills. Previous studies had utilized each dimension independently to represent salesmanship skills in testing its relationship with salesperson performance (Rentz et. al., 2002). Adaptive selling is defined as the salesperson's ability to alter her/his sales behavior when interacting with customers (Weitz, 1981). Adaptive selling is important because it shows the amount of customization a salesperson is employing. Babakus et al., (1996) found a positive association between adaptive selling and salesperson performance and sales organizational effectiveness measures. Boorom et al., (1998) also reported a positive relationship between adaptive selling and several sales outcomes. Besides that, Sujan et al. (1988a) also found a positive relationship between working smart (a dimension of adaptive selling) and salesperson performance. Negotiation is another important process of selling (Futrell, 2006; Ingram et. al., 2004). Goolby et. al., (1992), and Schuster and Danes (1986) posited that negotiation skills possessed by a salesperson contributed to the salesperson's success. Meanwhile, Morgan and Stoltman (1990) found that there was a positive relationship between adaptive personal selling and questioning, listening, and non-verbal behavior. They stated that a salesperson's perceptual abilities, including probing, asking questions, listening, and detecting verbal and nonverbal clues, provide the basis for adaptive selling. Goolby et. al., (1992) and Schuster and Danes (1986) confirmed these findings when they posited that negotiation and questioning ability possessed by a salesperson contributed to the salesperson's success. Additionally, communication style played a critical influence on a salesperson's ability to close sales (Stafford, 1996; Whittler, 1994; Williams et. al., 1990; Futrell, 2006). Williams and Spiro (1985) found that successful salespersons would be the ones who could adapt their communication styles appropriately to interact with customers. Similarly, William et. al., (1990) also suggested that salespersons who varied their communication styles in relation to the customers might significantly increase the potential to close the sale. Furthermore, one person's nonverbal cues could influence another person's behavior (Cho, 2001). Salesperson nonverbal cues have emerged as a critical component of the successful selling (Leigh and Summers, 2002; Futrell, 2006; Stafford, 1996; Whittler, 1994; Williams et. al., 1990). William et. al., (1990) posited that employing four nonverbal symbolic expressions such as voice qualities, nonverbal vocalization, body movement, and spatial distances might result in likelihood of a sale. Likewise, Peterson et. al., (1995); Schul and Lamb (1982); and Gabbot and Hogg (2000) found that certain voice characteristics correlated highly with output sales performance. Consultative skills are another aspect of salesmanship factor which influence salesperson performance (DeCormier and Jobber, 1993; Goolsby et. al., 1992). Therefore, any conscious effort on the part of the salesperson to adjust the sales environment based on cues from the buyer, and coupled with other complementary salesmanship skills namely consultative selling practices, ability to be an excellent negotiator, skill in probing and questioning customer needs, and possessing commendable communication skills either verbal or nonverbal; should give the seller a positive feeling in terms of their performance as a salesperson. Therefore, the discussion above suggests the second hypothesis which reads as:

H2: There is a significant positive relationship between salesmanship skills and salesperson performance.

Technical and Marketing Skills Influence on Salesperson Performance

Technical knowledge refers to behavior of salespeople in providing information about the design and specification of products and the applications and functions of products and services, On the other hand, salespersons possess knowledge about the industry and trends in general such as customer's market and products; competitors' products, services, and sales policies; knowledge of competitors' product line and knowledge of customers' operations (Behrman and Perreault, 1982, as cited in Baldauf & Cravens, 2002; Futrell, 2006) and these constitute the marketing skills of a salesperson. Thus, both knowledge assets refer to the level of understanding a salesperson has about the business in which he or she operates. An extensive knowledge base is important for a salesperson, since it allows them to cope with the complex market environment. A positive relationship had been empirically supported that the use of technical knowledge results in higher salesperson performance (Babakus et. al., 1996; Cravens et. al., 1993; Baldauf and Cravens, 2002). Moreover, Churchill et. al., (2000), Schoemaker and Johlke (2002), and Ingram et al., (2004) revealed that knowledge of external and organisational environmental issues were crucial for salespersons while performing their selling tasks. Researchers have also identified that customer knowledge is critical for salesperson performance (see Donath, 1993; Smith and Owens, 1995). Ingram et. al. (2004); and Pettijohn and Pettijohn (1994) supported this when they found that customer knowledge was an important topic for salesperson training. It is also recognised that effective salesperson possesses richer and more interrelated knowledge structures about their customers than the less effective (Sujan et. al., 1988b). Moreover, Weitz (1978) posited that there was a significant positive relationship between performance and strategy formulation capabilities (i.e. which requires extensive knowledge of the market, competitors, products etc.). Additionally, in a remarkable study, Ahearne and Schillewaert (2000) confirmed that marketing skills do influence salesperson performance. Meanwhile, Sengupta et. al., (2000) found that two other individual-level variables namely strategic ability and intrapreneurial ability were significant determinants of salesperson effectiveness or performance. Likewise, Dariane et al., (2001) and Makinen (2004) found that salesperson's product knowledge was important. Complementing the two studies, Ingram et. al., (2004) added and reiterated that product knowledge that a salesperson should possessed include its benefits, application, competitive strengths, and limitations. These findings and discussion provide the basis for the third and fourth hypotheses dealing with salesperson performance. These hypotheses read as:

H3: There is a significant positive relationship between technical skills and salesperson performance.

H4: There is a significant positive relationship between marketing skills and salesperson performance.

DATA AND METHODOLOGY

Data Collection, Population and Sample

The unit of analysis in the present study is individual. The subjects of analysis were salespersons in TM Berhad. Information and database pertaining to Sales Department's organizational structures and list of salespersons were obtained from TM Berhad's Human Resource Department. It shows that there are 900 salespersons in TM Berhad. Cavana, Delahaye and Sekaran (2001) pointed out that the power of the statistical test increases with the number of subjects in the sample. Krejcie and Morgan (as cited in Cavana, Delahaye & Sekaran, 2001) suggested that for a population of 900, the sample size should be approximately 269. Thus, in the present study study, 270 respondents were selected. The data collected and the sampling procedure used was judgmental sampling.

The mode of data collection was electronically self-administrated survey questionnaire (a web/on-line survey). In this Internet-based survey, the questionnaire was posted on the designated Website. By the means of TM's Intranet e-mail, where e-mails' identification of the respondents were obtained, an e-mail that contains the Website address, username and password for access to the Web survey questionnaire was forwarded to all 270 respondents' e-mail addresses at the same time. These respondents were also supplied with unique survey identification numbers so that the researcher could track responses. Respondents were given 4 weeks, from 1 September 2006 to 30 September 2006, to complete the questionnaire, and weekly reminder was sent out to non-respondents. Moreover, the present study adopted supervisor-rating evaluation approach i.e. the supervisor (rater) rated the subordinate (salesperson (s) being rated) under his or her supervision. The survey questionnaire was divided into 3 parts, as shown in Appendix 1, which includes demographic information; sales skills namely interpersonal skills, salesmanship skills, technical skills and marketing skills; and salesperson performance.

The items used to measure interpersonal skills, salesmanship skills and technical skills were adopted from Rentz et al. (2002). While items used to measure marketing skills were adopted from Ahearne and Schillewaert (2000), salesperson performance's items were adopted from Behrman and Perreault (1982). Respondents were asked to indicate their agreement or disagreement with several statements on a seven-point Likert scale from 1=strongly disagree to 7=strongly agree. The Cronbach alpha obtained for the measures were 0.91 for technical skills, 0.87 for marketing skills, .79 for interpersonal skills, .75 for salesmanship skills and 0.81 for salesperson performance.

The sample for the empirical research consisted of 270 respondents, where each were identified as currently supervising at least one salesperson. The respondents were told that participation was voluntary and not compulsory, and thus only 114 respondents returned the completed on-line questionnaire. The demographic profile of the respondents and salespersons being evaluated are presented in Table 1 and Table 2 respectively.

RESULTS AND DISCUSSION

Respondents' Profile

Out of the 114 decision makers sampled, the majority were managers (50.0 percent), who had accumulated at least 6-10 years of sales experience (36.83 percent), which can be observed to be a large part of their working experience. As such, the main bulk of the respondents had at least 6 years of working experience (32.45 percent). This confirms that the respondents had relevant experience to rate their subordinates' performance. In addition, most of these business unit leaders were males (61.4 percent) and within the age group of 25-35 years of age (55.26 percent). This indicated the relatively new breed of youthful managers in Malaysia who were representative of TM organization's distribution of employees. The main bulk of the sample was from the Malay lineage (87.7 percent) with a minimum education of a bachelor's degree (74.68 percent). The profile of the respondents is shown in Table 1.

Table 1: Profile of Respondents

Variables	Description	Frequency	Percentage
Gender	Male	70	61.4
	Female	44	38.6
Age	< 25 years	10	8.77
	25-35 years	63	55.26
	36-45 years	33	28.95
	46-55 years	8	7.02
Race	Malay	100	87.7
	Indian	4	3.5
	Chinese	5	4.4
	Others	5	4.4
Educational Level	High School Certificate	4	3.5
	Diploma	5	4.4
	Bachelor's Degree	84	74.68
	Master's Degree	21	18.42
Position	Assistant Manager	28	24.56
	Manager	57	50.0
	Assistant General Manager	23	20.17
	General Manager and Above	6	5.27
Sales Experience	<1 year	7	6.14
	2-5 years	38	33.33
	6-10 years	42	36.83
	11-15 years	17	14.9
	>15 years	10	8.8
Working Experience	<1 year	1	.88
	2-5 years	9	7.89
	6-10 years	37	32.45
	11-15 years	30	26.33
	>15 years	37	32.45

Note: Table shows the profile of the respondents participated in the survey. The variables of the respondents are age, race, educational background, position in the organization, sales experience and working experience.

Salespersons' Profile

The total number of salespersons evaluated is 114, which is similar to the number of respondents being sampled. Of those evaluated the majority were Assistant Managers (52.63 percent), who had at least 6-10 years of sales experience (38.60 percent) in the organization. Moreover, the main bulk of the respondents had at least 6 years of working experience (34.21 percent). Most of these salesperson are males (52.63 percent) and within the age group of 25-35 years of age

(61.40 percent). In term of racial distribution, the main bulk of the sample was from the Malay lineage (82.46 percent) with a minimum education of a bachelor's degree (70.17 percent). The profile of salespersons being evaluated is tabulated in Table 2.

Table 2: Profile of Salespersons (N = 114)

Variables	Description	Frequency	Percentage
Gender	Male	60	52.63
	Female	54	43.37
Age	< 25 years	3	2.63
	25-35 years	70	61.40
	36-45 years	36	31.58
	46-55 years	5	4.36
Race	Malay	94	82.46
	Indian	9	7.89
	Chinese	6	5.26
	Others	5	4.4
Educational Level	High School Certificate	3	2.63
	Diploma	6	5.26
	Bachelor's Degree	80	70.17
	Master's Degree	25	21.92
Position	Assistant Manager	60	52.63
	Manager	40	35.09
	Assistant General Manager	14	12.28
	General Manager and Above	0	0
Sales Experience	<1 year	5	4.38
	2-5 years	40	45.08
	6-10 years	44	38.60
	11-15 years	14	15.79
	>15 years	7	6.14
Working Experience	<1 year	0	0
	2-5 years	10	8.77
	6-10 years	39	34.21
	11-15 years	30	26.31
	>15 years	35	30.70

Note: Table shows the profile of the salespersons being evaluated in the survey. The variables of the respondents are age, race, educational background, position in the organization, sales experience and working experience.

Goodness of Measures

Factor Analysis: Survey-based research is constantly being plagued and questioned over the quality of their measures. However, statistical procedures to a certain extent can ascertain the validity and reliability of these measures, assuming sound theoretical assessment had been considered in advance. Referring to the former, a validation procedure utilized in this study was the factor analysis. The procedure allowed the researchers to ensure whether the reduced sets of items were similar to number of concepts that were initially modeled.

In the present study, three factor analyses (see Table 3 – Table 4) were run to verify the postulated dimensionality of the independent and dependent variables respectively by utilizing the Varimax rotation. It should be noted that all factor analyses were diagnosed to have met their underlying assumptions based on their Kaiser-Meyer-Olkin measure of sampling adequacy, and the diagonals of the anti-image correlation matrix to be above .5. Sufficient unique loadings (for more than 1 extracted factor) and ability for each item to account for a minimum of 50 percent of its variation were conditions set in retaining the items.

The examination of the 4-factor solution of the independent variables revealed a combined total variance explained of 69.96 percent. The majority of the variation was taken up by Technical Skills (22.78 percent), followed by Marketing Skills (17.86 percent), Interpersonal Skills (17.51 percent) and finally, Salesmanship Skills (11.82 percent).

Reliability Analysis

Once the variables were validated, they were subjected to a test of internal consistency. This was done determine the extent of agreement between respondents for each dimension, such that a higher score would indicate a higher reliability. The computation of the Cronbach's Alpha being well above the cut-off value of 0.70 (as suggested by Nunnally and Bernstein, 1994) indicated that all measures were reliable. The lowest Alpha registered a value of 0.75 (Salesmanship Skills) and the highest 0.91 (Technical Skills). The Alpha coefficients for all dimensions are reported in the bottom sections of the factor analyses tables (see Table 3-Table 4).

Descriptive Analysis

Items representing their underlying factors were then aggregated. The mean was applied as a measure of central tendency, which indicated that all variables were above their midpoint level as indicated in Table 5. It offers a general picture of the data without unnecessary inundating one with each of the observations in a data set. Out of the four independent variables, Salesmanship Skills was the highest in rating (M = 5.57), while Interpersonal Skills was the lowest (M = 5.37). The dependent variable's (Salesperson Performance) mean value was also within the range of 5 to 6 in the 7-point Likert scale. In other words, all variables exhibited a standard deviation of less than 1.

Predictive and Discriminant Validity

One-tailed Pearson correlation tests were employed to assess predictive validity of the variables (please refer to Table 6 for the results of correlation). All independent variables were found to be significantly correlated with the dependent variable of Salesperson Performance, indicating the achievement of predictive validity. It is also important to note that all the independent variables were not highly correlated, as this is a necessary condition to ensure that strong multi-collinearity effects are not present in the present study.

Regression Analysis

In order to test the hypotheses developed for this study, regression was used. The predictor or independent variables (Interpersonal Skills, Salesmanship skills, technical Skills and Marketing Skills) were entered into a simultaneous regression model predicting Salesperson Performance. Table 7 shows that sales skills dimension significantly explain salesperson performance (R^2 =0.46). R^2 is the proportion of variance in the dependent variable (Salesperson Performance) which can be predicted from the independent variable (Interpersonal Skills, Salesmanship skills, technical Skills and Marketing Skills**)**. The table also indicates that only interpersonal skills significantly (significance levels well below than 0.01) explain salesperson performance whereas salesmanship skills, technical skills and marketing skills did not (significance levels far over than the minimum accepted level of $p<0.05$ in business and social research as suggested by Cavana, Delahaye and Sekaran (2001)). Thus, the finding indicates that 46% of the variance in Salesperson Performance can be predicted from the variable Interpersonal Skills. Hence, it is concluded that only H1 that was posited as there is a significant positive relationship between interpersonal skills and salesperson performance is fully supported in the present study.

Table 3: Factor Loadings for Independent Variables

Items	Factors			
	I	II	III	IV
I. Technical Skills				
Knowledge product development	**.81**	.32	.14	.09
Knowledge product performance	**.82**	.16	.21	.18
Understand product specifications	**.85**	.11	.23	.07
Knowledge delivery process	**.79**	.33	.04	.21
Knowledge product features	**.64**	.13	.24	.43
II. Marketing Skills				
Real time information	.37	**.76**	.25	.00
Is an excellence resource of competitive information	.32	**.72**	.37	.14
Has a lot information on industry trends	.20	**.79**	.16	.25
Is well-informed about important events in our industry	.10	**.80**	.20	.32
III. Interpersonal Skills				
Ability to express	.06	.26	**.76**	-.01
Ability in general speaking	.09	.23	**.70**	.25
Awareness & understanding non-verbal	.43	-.00	**.70**	.03
Ability to control & regulate emotion	.32	.21	**.42**	.21
Ability to influence	.15	.33	**.61**	.32
IV. Salesmanship Skills				
Ability to get buy-in	.23	.27	.44	**.51**
Ability in sales presentation	.30	.11	.46	**.68**
Ability to service account	.15	.2	.02	**.80**
Eigenvalue	3.87	3.04	2.98	2.01
Percentage Variance Explained (69.96)	22.78	17.86	17.51	11.82
Reliability (alpha)	.91	.87	.79	.75
KMO Measure of Sampling Adequacy	.88			
χ^2 (d.f)	1210.24 (136)			

Note: Survey-based research is constantly being plagued and questioned over the quality of their measures. Statistical procedures of factor analysis was utilized to ascertain the validity and reliability of these measures. The procedure allowed the researchers to ensure whether the reduced sets of items were similar to number of concepts that were initially modeled. Sufficient unique loadings (for more than 1 extracted factor) and ability for each item to account for a minimum of 50 percent of its variation were conditions set in retaining the items. The analysis revealed a combined total variance explained of 69.96 percent. The majority of the variation was taken up by Technical Skills (22.78 percent), followed by Marketing Skills (17.86 percent), Interpersonal Skills (17.51 percent) and finally, Salesmanship Skills (11.82 percent). Test of internal consistency was done to determine the extent of agreement between respondents for each dimension, such that a higher score would indicate a higher reliability. The computation of the Cronbach's Alpha being well above the cut-off value of 0.70 indicated that all measures were reliable. The lowest Alpha registered a value of 0.75 (Salesmanship Skills) and the highest 0.91 (Technical Skills).

Table 4: Factor Loadings for Salesperson Performance (Dependent Variable)

Items	Factor I
Salesperson Performance	
Effective contribute market share	.89
Generate high level of sales	.93
Effective in exceeding sales target	.90
Eigenvalue	2.47
Percentage Variance Explained	82.16
Reliability (alpha)	.89
KMO Measure of Sampling Adequacy	.73
χ^2 (d.f)	198.431 (3)

Note: Survey-based research is constantly being plagued and questioned over the quality of their measures. Statistical procedures of factor analysis was utilized to ascertain the validity and reliability of these measures. The procedure allowed the researchers to ensure whether the reduced sets of items were similar to number of concepts that were initially modeled. Sufficient unique loadings (for more than 1 extracted factor) and ability for each item to account for a minimum of 50 percent of its variation were conditions set in retaining the items. Test of internal consistency was done to determine the extent of agreement between respondents for each dimension, such that a higher score would indicate a higher reliability. The computation of the Cronbach's Alpha being well above the cut-off value of 0.70 indicated that all measures were reliable. The Alpha registered a value of 0.89.

Table 5: Characteristics of the Variables

Variables	Minimum	Maximum	Mean	Std. Deviation
Interpersonal Skills	3.20	7.00	5.37	.63
Salesmanship Skills	3.00	7.00	5.57	.71
Technical Skills	3.00	7.00	5.48	.80
Marketing Skills	2.00	6.75	5.39	.84
Salesperson Performance	3.33	7.00	5.54	.83

Note: The mean was applied as a measure of central tendency, which indicated that all variables were above their midpoint level as indicated in the table. It offers a general picture of the data without unnecessary inundating one with each of the observations in a data set. Salesmanship Skills was the highest in rating (M = 5.57), while Interpersonal Skills was the lowest (M = 5.37). The dependent variable's (Salesperson Performance) mean value was also within the range of 5 to 6 in the 7-point Likert scale. In other words, all variables exhibited a standard deviation of less than 1.

Table 6: Correlation between Variables

Variables	1	2	3	4	5
1. Interpersonal Skills	1				
2. Salesmanship Skills	.64**	1			
3. Technical Skills	.55**	.57**	1		
4. Marketing Skills	.62**	.59**	.58**	1	
5. Salesperson Performance	.63**	.54**	.51**	.52**	1

*Note: ** Correlation is significant at the 0.01 level. Interpersonal skills, Salesmanship Skills, Technical Skills and Marketing Skills are the Independent Variables. Salesperson Performance is the Dependent Variable. Correlation tests employed to assess predictive validity of the variables. All independent variables were found to be significantly correlated with the dependent variable of Salesperson Performance, indicating the achievement of predictive validity. All the independent variables were not highly correlated, as this is a necessary condition to ensure that strong multi-collinearity effects are not present.*

Table 7: Regression Analysis

Independent Variables (Sales Skills)	Salesperson Performance		
	β	t	p
Interpersonal Skills	.40**	3.952	.000
Salesmanship Skills	.12	1.234	.220
Technical Skills	.15	1.655	.101
Marketing Skills	.11	1.111	.266
R^2	.46		
F change	22.83**		

*** $p<0.01$. Interpersonal skills, Salesmanship skills, Technical Skills and Marketing Skills are the Independent Variables. Salesperson Performance is the Dependent Variable of the present study. The table shows the β, t-statistics, and the significance levels of each independent variable against the Salesperson Performance. Sales skills dimension significantly explain salesperson performance (R^2 =0.46). Only interpersonal skills significantly (significance levels well below than 0.01) explain Salesperson Performance whereas Salesmanship skills, Technical skills and Marketing skills did not (significance levels far over than the minimum accepted level of $p<0.05$). The results indicate that only Interpersonal Skills influences the Salesperson Performance.*

Relationship between Interpersonal Skills and Salesperson Performance

This study found that there is a positive relationship between interpersonal skills and salesperson performance ($\beta = .40$, $p < .01$, $\Delta R^2 = .46$). This finding is consistent with those of previous research which have demonstrated that interpersonal skills significantly predicted salesperson performance (for instance, Ford, Walker, & Churchill, 1988; Pilling & Eroglu, 1994; Anselmi & Zemanek, 1997; Rozell, Pettijohn & Parker, 2006). Another investigation, that was by Lockeman and Hallaq (1982) found that interpersonal skills were the main predictor of sales success. In a similar account, many previous studies have identified interpersonal skills as the single strongest predictor of performance rating dimensions of task performance, job dedication, and interpersonal facilitation, as well as for an overall rating of performance (for instances, Ferris, Witt, & Hochwarter, 2001; Riggio & Taylor, 2000; Morgeson, Reider & Campion, 2005; Payne, 2005). Meanwhile, Hill and Petty (1995) revealed that interpersonal skills were the strongest predictor of employability. Additionally, in a different research context, Jiang, Klein, Slyke, and Cheney (2003) also established that interpersonal skills of information system's staff significantly related to information system success (proxy of job performance). Moreover, Algae et al. (2002) affirmed that interpersonal skills were positively related to job performance in their study of operators in a public service organization.

The present study demonstrates a similar finding in that interpersonal skills do show a positive relationship with salesperson performance. Interpersonal skills reflect an individual's ability to interact successfully with others and generally foster positive interpersonal relationships (Gibson, Ivancevich & Donnelly, 1997). Hochwarter, Kiewitz, Gundlach, and Stoner (2004); and Churchill et al. (2000) stated that interpersonal skills were reflected in term of effective persuasion, explanation, and other influencing mechanisms, which reveal the ability to persuade and control others. Thus, it is expected that performance of those who had a high level of interpersonal skill would be better. Further, being socially astute may allow individuals to successfully navigate around obstacles that may derail subsequent performance. In this regard, it is plausible that those who possess high levels of interpersonal skills report the highest levels of performance.

The result from the present study demonstrates the importance of interpersonal skills as a means to improve salesperson performance. This result implies that salesperson performance can be enhanced by employing salesperson with high levels of interpersonal skills. Having a choice, most sales organization will expect to have salespersons with higher interpersonal skills so that it can lead to superior sales performance or meet the sales objectives of an organization (Ingram et al., 2004; Futrell, 2006). Furthermore, by hiring salespersons with a higher level of interpersonal skills, would more likely to result in sustaining and building customer loyalty, intention to repurchase, and teh salespersons would be more be more likely to develop long lasting relationships with their customers in accordance with Manning and Reece (2004); and Weitz, Castleberry, and Tanner (1998). This finding is in agreement with one of the deliverables in the current TM's Key Business Plan milestones of TM Berhad whereby the Sales Division is directed to strengthen its sales team in term of salesperson's skills and competence in order to drive revenue or sales (TM Malaysia Business Performance Initiative Plan 2006 Report).

Relationship between Technical Skills and Salesperson Performance

Surprisingly there was no significant relationship in the present study between technical skills and salesperson performance. This is an unexpected finding due to the volume of previous evidence supporting the fact that technical skills influence salesperson performance (for instances, Baldauf, Cravens & Piercy, 2001; Grants & Cravens, 1999; Katiskea & Skarmeas, 2003; Cravens, Ingram, LeForge & Young, 1993). Nonetheless, this finding is consistent with Ahearne and Schillewaert (2000); Barker (1999); and Piercy, Cravens, and Morgan (1997) who established that high technical skills levels possessed by salesperson did not necessarily lead to positive effects in term of salespersons performance.

The absence of significant relationship between technical skills and salesperson performance found in the present study may be explained from three perspectives. First, a technically skilled salesperson sometimes suffers from the problem of transforming their technical knowledge into a manner which is understandable and comprehensive for their customer bases (Baldauf & Cravens, 2001). Given the fact that the salespersons may have to sell diverse product ranges to diverse customers and markets, it is a reasonably expectation that salespersons may face difficulties in effectively applying their technical skills when performing sales activities in such complexity. In addition to that service products sold are often high technology-related that of necessity undergo continuous and rapid innovation from time to time which may result in a salesperson's technical skills become easily obsolete.

Second, the insignificant relationship is due to the nature of the industry structure, products sold by the salesperson, and also the complexity of sales organizational structure adopted by the corporation where the subjects were drawn from. Subjects of the present study were drawn from service industry which sells intangible products, i.e., provide telecommunication services to diverse customers ranges from institutions to individuals.

With respect to the products, it has been recognized that selling intangible products is much more challenging when compared to selling tangible goods because service products cannot be seen, tested, felt, or heard before they are purchased (Manning & Reece, 2004). Because of service inherent intangibility, consumers are often faced with not knowing what to expect from a service until they have consumed it, and hence perceive services as risky (Coulter & Coulter, 2002). Hence, it would very hard to establish a correlation between technical skills and salesperson performance if salespersons with lower technical skills were tasked to sell such services as revealed in the present study. In this respect, due to diverse kinds of services offerings i.e. more than 50 services, and also diverse range of markets or customers being served may compel companies to designate an engineering support team in each sales unit (either based on market, customers, product or sales regions). The engineering support team has to support the sales team on every aspect of technical matters pertaining to the products during pre-sale, sale and post-sale initiatives. Such arrangements thus reduce the necessity for salespersons to possess sound technical skills or indeed hone these. Therefore, it can be implied that most successful sales are mainly due to the capability of service engineers from the engineering support team to influence customers. Conspicuously, previous research has revealed that service salesperson needs to possess commendable skills and knowledge about the service product they sell in order to influence the customers to buy the service (Coulter & Coulter, 2002).

Third, the insignificant relationship may also be enlightened from the industry structure perception. Being the first telecommunication operator in Malaysia allows the organization the advantage of owning a vast infrastructure nationwide and to monopolizes most available resources that underpin a wide range of telecommunications services product to be offered to the markets. Moreover, the organization is the market leader with 59% of market share of telecommunications industry in Malaysia (MCMC Industry Performance Report, 2005). These early entrant advantages enable the organization to realize and offer extensive telecommunication service products the markets may possibly need as compared to what its competitors could offer. Obviously, this means customers have few options to switch to other service providers since alternative providers may be unable to offer similar service products. Moreover, migrating to alternative telecommunication service providers may cause high switching costs such as incurring costs, a service reliability and performance effect, and less after sales support, and all negative consequences to customers.

These viewpoints imply that technical skills become less crucial for salesperson operating in such an oligopolistic environment, and it implies that technical skills at least according to salespersons' supervisor in the present study have little or no influence on their salespersons performance.

<u>Relationship between Salesmanship Skills and Salesperson Performance</u>

The present study also found no relationship between salesmanship skills and salesperson performance. This means that a high level of salesmanship skills did not correlate with high performance. There was mixed support for hypotheses concerning the main effect of salesmanship skills on salesperson performance. While some prior studies indicated a positive association between salesmanship skills and salesperson performance (for instances, Ford, Walker, & Churchill, 1988; Baldauf, Cravens & Piercy, 2001; Babakus, Cravens, Grant, Ingram & LaForge, 1996; Katsikan & Skarmeas, 2003; Baldauf & Cravens, 1999), other studies have found no association (for instance, Ahearne & Schillewaert, 2000; Grant & Cravens, 1999; Piercy, Cravens & Morgan, 1997); the results of the present study, with respect to the second hypothesis, indicate that salesmanship skills did not influence salesperson performance. This finding does not support the proposition that management can increase salesperson performance by having or recruiting salespersons with high salesmanship skills. Thus, it implies that programs such as training and development of selling skills and having salespersons with longer sales experience which possibly will increase salesmanship skills of salespersons do not seem have much bearing on improving salespersons performance.

The absence of a significant relationship between salesmanship skills and salesperson performance found in the present study may be attributed to similar arguments given to why technical skills did not positively relate to salesperson performance which are: the nature of the industry structure, the diversity of service product offerings and markets served, and the complexity of sales the organizational structure from where subjects were drawn from.

Besides to these arguments, there is one unique reason why the present study reveals no significant relationship between salesmanship skills and salesperson performance. The very healthy financial position of TM Berhad (TM Annual Report, 2005) has allowed the organization to embark on multi-pronged promotional strategies and initiatives to generate product awareness. MCMC's Industry Performance Report 2005 reports that TM Berhad spent RM148.3 million (USD42.37 million) on advertising alone in 2005, making them the top advertiser amongst all telecommunications companies. It is a well-known fact that extensive promotional activities generate better awareness and well-informed customers about product lines offered and consequently underpin generation of more sales to the organization (McDaniel, Lamb & Hair, 2006). Apparently, the promotional initiatives facilitate easier pre-sale, sale and post-sale efforts required by the salespersons. Therefore, with regards to this rationale, it suggests that the need to have high salesmanship skills becomes less crucial to the organization since salesmanship skills provide less influence on improving salesperson performance.

Relationship between Marketing Skills and Salesperson Performance

Market knowledge reflects a salesperson's knowledge about the industry in general (e.g., competition, trends). An extensive knowledge base is important for salespersons, because it allows them to cope with complex market environments. It is expected that salespersons with commendable marketing skills will produce good performance (Leigh & McGraw, 1989; Sujan et al., 1988b). Nonetheless, the result of the present study does not support Ahearne and Schillewaert's (2000) finding that marketing skills have a significant relationship with salesperson performance. The finding of the present study implies that salespersons need not be knowledgeable about the market they served in order to achieve sales objectives.

With regards to the reasons of an insignificant relationship between marketing skills and salesperson performance, similar arguments given to insignificant findings of salesmanship and technical skills are also applicable here in which industry structure (monopolistic industry), extensive promotional activities through advertisement, trade show etc., and complexity of sales organizational structure with clear distribution and demarcation of works between sales and marketing personnel and where the subjects were drawn from have significant impact in disapproving the hypothesis that marketing skills influence salesperson performance. It may also be that TM Berhad is strongly sales oriented, and the relative decency of marketing's potential ascendancy and superiority may be perceived negatively by sales supervisory personnel.

CONCLUDING COMMENTS

The context of the present research has set out to examine the sales skills dimensions namely interpersonal, salesmanship, technical and marketing skills influence on salesperson performance. Based on an extensive literature review, four hypotheses with regards to sales skills dimensions and salesperson performance relationship were posited. The subjects or respondents of the study were salespersons in TM Berhad. A total of 114 respondents from the sample size of 270 participated in the survey. Out of the four hypotheses being examined, support was found for only one hypothesis which demonstrated that there was a significant relationship between interpersonal skills and salesperson performance.

Despite some unusual findings, the results from this study suggest that salespersons that possess excellent interpersonal skills can significantly boost sales performance. Additionally, this study shows that in a monopolistic business environment, interpersonal skills play a pivotal role in salesperson performance. Furthermore, to have a chance making sales, every interpersonal contact must have an objective and every effort must be made to avoid creating win-lose transactions whenever possible. Recognizing the importance of interpersonal skills, sales organizations should give emphasis and efforts to develop improved methods of training and development to enhance their salespersons' interpersonal skills. Training and development initiatives have been proven by many previous empirical studies which can lead to improved interpersonal skills of salespersons (Hunt & Baruch, 2003). Additionally, sales organizations should now treat interpersonal skills as a critical skill component in salesperson recruitment and selection exercises, and also in formulating rewards and recognition policies. In conclusion, the findings thus offer substantive benefits for further academic research and managerial practice. Future studies may serve to highlight and enhance the need for salespersons to either have, or need to develop interpersonal skills as the key determinant of effective selling.

With regards to the limitations of the paper, several limitations of the present study suggest potential direction for future research. First, the present study was confined to salespersons in single organization. Although these were suitable for testing the framework, the use of sample from single organization restricts the generalizability of the findings. While this allows the researcher to control for inter-industry differences, there are limits in our ability to apply these findings to other industries and organizations. A comparative study involving multiple organizations or sample from multiple organizations of similar industry would be useful to test the framework, and thus provide better generalizability of the findings.

Second, the dimensions of salesperson skills in the present research confined to four dimensions which are interpersonal, salesmanship, technical, and marketing skills. Future research should investigate the possibility of adding additional dimensions to salesperson skills that may also influence salesperson performance that have been left out such as general management and financial management skills.

Third, the choice of the respondents i.e. supervisor as evaluator of all sales skills dimensions may also imply some limitations. Ideally, a more diverse group should evaluate salesperson performance. Moreover, the argument can be made that the since salespersons are fronting and dealing with customers, it is suggested that salesperson is best assessed by customers. Customers could rate the salesperson better on those aspects that impact customers' attitudes and their purchase. Furthermore, evaluation from customers may add more meaningful and convincing results.

Finally, the present study was conducted merely using subjective measures of salesperson performance. Therefore, the results of the present study are exposed to some degree of biases and should be interpreted carefully. Studies using both measurements, the objective and subjective measurements; and also adopting supervisor-ratings approach would allow for a richer understanding of the sales performance construct.

APPENDIX

Appendix 1: Survey Instruments

SECTION A:

SALES SKILLS: Sales skills refers to the salesperson's learned proficiency at performing the necessary sales tasks and it includes learned abilities such as interpersonal skills, salesmanship skills, technical skills and marketing skills.

Please indicate your assessment of your salesperson's interpersonal skills, salesmanship skills, technical skills and marketing skills by circling the number in the appropriate column based on the following scales:

1	*2*	*3*	*4*	*5*	*6*	*7*
Highly unskilled	**Unskilled**	**Slightly unskilled**	**Neutral**	**Slightly skilled**	**Skilled**	**Highly skilled**

1.1 Interpersonal Skills

A-1	*Ability to express non-verbally (message without words such as through facial expression, professional appearance, handshake, posture and body movement, eye contact, etc.)*	*1*	*2*	*3*	*4*	*5*	*6*	**7**
A-2	Ability in general speaking skills (such as effective use of words, voice quality or characteristics for example speech rate, loudness and articulation: vocal clarity, and verbal expression, etc.)	1	2	3	4	5	6	7
A-3	Awareness and understanding the non-verbal communication of others (such as facial expression, professional appearance, handshake, posture and body movement, and eye contact, etc.)	1	2	3	4	5	6	7
A-4	Ability to control and regulate non-verbal displays of emotion (such as anger, anxiety, joy, and delight, etc.)	1	2	3	4	5	6	7
A-5	Ability to exercise influence over others.	1	2	3	4	5	6	7

1.2 Salesmanship Skills

A-6	*Ability to get buy-in from customers*	*1*	*2*	*3*	*4*	*5*	*6*	**7**
A-7	Ability to communicate the sales presentation clearly and consistently.	1	2	3	4	5	6	7
A-8	Ability to service customers' account.	1	2	3	4	5	6	7

1.3 Technical Skills

A-9	*Skills and knowledge concerning how the company's products were developed.*	*1*	*2*	*3*	*4*	*5*	*6*	**7**
A-10	Skills and knowledge concerning the performance data on the company's products.	1	2	3	4	5	6	7
A-11	Ability to understand product general specifications of the company's products.	1	2	3	4	5	6	7
A-12	Skills and knowledge about the delivery process of the company's products.	1	2	3	4	5	6	7
A-13	Skills and knowledge about products features and benefits.	1	2	3	4	5	6	7

1.4 Marketing Skills

A-14	*Ability in obtaining real time information about changes in customers' needs*	*1*	*2*	*3*	*4*	*5*	*6*	**7**
A-15	Is an excellence resource of competitive information.	1	2	3	4	5	6	7
A-16	Has a lot of information about industry trends.	1	2	3	4	5	6	7
A-17	Is well-informed about important events in our industry.	1	2	3	4	5	6	7

SECTION B

SALESPERSON PERFORMANCE: Salesperson performance refers to the extent to which a salesperson's contribution to achieving the organizations' sales objectives. This performance constructs considers the results that can be attributed to the salesperson rather then factors (e.g. market potentials, intensity of competition, brand image etc.).

Please indicate your assessment of your salesperson performance by circling the number in the appropriate column based on the following scales:

1	***2***	***3***	***4***	***5***	***6***	***7***
Strongly disagree	**Disagree**	**Slightly disagree**	**Neutral**	**Slightly agree**	**Agree**	**Strongly agree**

B-1	*Effective in contributing to the company's market share.*	*1*	*2*	*3*	*4*	*5*	*6*	**7**
B-2	Effective in generating high level of sales revenue.	1	2	3	4	5	6	7
B-3	Effective in exceeding annual sales target and objectives.	1	2	3	4	5	6	7

SECTION C: BACKGROUND OF RESPONDENT

C-1	*Age*	○ Under 25 years ○ 25 to 35 years ○ 36 to 45 years ○ 46 to 55 years
C-2	Gender	○ Male ○ Female
C-3	Race	○ Malay ○ Indian ○ Chinese ○ Others
C-4	What is your highest educational level?	○ Higher School/Certificate ○ Diploma ○ Bachelor's ○ Master's ○ PhD
C-5	What is your level in the organization?	○ General Manager and above ○ Assistant General Manager ○ Manager ○ Assistant Manager
C-6	How many years sales experience do you have in all?	○ Less than 1 year ○ 2 to 5 years ○ 6 to 10 years ○ 11 to 15 years ○ Over 15 years
C-7	How long you have worked for Telekom Malaysia?	○ Less than 1 year ○ 2 to 5 years ○ 6 to 10 years ○ 11 to 15 years ○ Over 15 years

SECTION D: BACKGROUND OF SALESPERSON

D-1	*Age*	○ Under 25 years ○ 25 to 35 years ○ 36 to 45 years ○ 46 to 55 years
D-2	Gender	○ Male ○ Female
D-3	Race	○ Malay ○ Indian ○ Chinese ○ Others
D-4	What is the salesperson highest educational level?	○ Higher School/Certificate ○ Diploma ○ Bachelor's

		o Master's o PhD
D-5	What is the salesperson level in the organization?	o General Manager and above o Assistant General Manager o Manager o Assistant Manager
D-6	How many years sales experience do the salesperson has in all?	o Less than 1 year o 2 to 5 years o 6 to 10 years o 11 to 15 years o Over 15 years
D-7	How long the salesperson has worked for Telekom Malaysia?	o Less than 1 year o 2 to 5 years o 6 to 10 years o 11 to 15 years o Over 15 years

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INNOVATION AND THE VALUE OF FAILURE

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ABSTRACT

Innovation is a difficult phenomenon to evaluate. Innovation impacts the firm in a variety of ways. It is difficult to analyze the full impact of innovation because there is no single set of metrics that can capture its full significance. The metrics that have been traditionally used only capture a fraction of the true benefit derived by the firm. In addition, since the circumstances, values, structure and strategies vary greatly between industries and firms within industries, the efficacy of specific metrics fluctuates from application to application. An unmeasured and often neglected area of innovation deals with the ideas that, for a variety of reasons, fall by the wayside. This paper examines the uncounted valuation aspects of innovation that occur independent of the market success or failure of the innovation product. These are benefits to the organization that may accrue from discarded or abandoned ideas or innovation products that failed in the marketplace. The sources of innovation valuation error are discussed as well as strategies for maximizing the value of failure and reevaluation.

JEL: O31, O32

KEYWORDS: innovation, value of failure, market success, innovation valuation error

INTRODUCTION

The search for metrics to accurately and comprehensively evaluate the value of innovation has occupied researchers and managers since Schumpeter (1934) identified it as an engine of organizational growth. The ability to quantify this value was limited for decades to direct monetary values (profit increases or cost reductions) and those related to R&D (R&D expenditures, R&D assets, patents, copyrights, etc.). While the limitations of these metrics were well known, there were limited alternatives. As a greater body of theoretical and empirical research developed on the impacts of innovation on the firm, a focused search began for an understanding of the underlying mechanisms and way to measure them in the organization. This exploration led to an understanding that innovation's value to an organization manifested itself in different ways. Observational and theoretical work identified several classes of innovation in an organization that all produced value. Empirical research found that the value of innovation varied based upon other contextual criteria, such as industry sector, markets, customer relationship and previous performance.

This paper will examine the techniques available to measure the full benefit of innovation activities for the firm. The specific application of organizational benefits generated by innovations not introduced or successful in the marketplace will be examined. Finally, recommendations will be made for capturing these benefits and the implications for management praxis.

REVIEW OF THE LITERATURE

The underlying assumption of most empirical research on innovation is that the benefit or utility that accrues to a firm occurs from successful innovation acceptance. Studies relate innovation success to firm performance (Zahra and Das, 1993; Calantone *et al*, 1995; Yeoh and Roth, 1999; Zhan and Doll, 2001). The measurement of potential benefits from innovation activities are correlated to new product or service success. The concept that unsuccessful innovation activities may generate organizational benefit is largely unexamined.

As the understanding of the relationship between innovation and value evolves to a more contextually driven model, so too do the metrics used to capture it. There is a progressively greater understanding of the range of value that innovation provides to the firm and increasingly sophisticated ways to capture it. The strict reliance upon cost reduction and R&D related metrics as the sole evaluative techniques has past. Empirical research confirms this gap between the aggregate value of innovation and the value assessed through traditional measurement. Monteiro-Barata (2005) reports an often-discovered statistic in the analysis of innovating firms from two surveys of Portuguese manufacturing firms. Both the INDINOVA and SOTIP innovation research projects identified that only a fraction of the firms generating product and process innovation engaged in R&D. While the percentage of firms producing innovations were fairly consistent between these studies (36% process innovation and 27% product innovation for the INDINOVA project, and 25.2% process innovation and 20.7% product innovation for the SOTIP project) the number of companies engaged in internal R&D activities is 3.1% according to the SOTIP survey (p.305). R&D metrics, as with most input metrics, fail to capture most of the innovation occurring in both manufacturing and service industries.

Innovation is a localized phenomenon, defined within very specific contextual boundaries in an organization. Innovation valuation models do not necessarily transfer outside of the context in which they are found. This makes it difficult to establish a generalizable framework that can be abstracted and applied to other environments. An interesting statistic reported by Hipp and Grupp (2005) from the 1999 Mannheim Innovation Panel of German firms, reflects the localized nature of much innovation. Of the 1405 firms reporting an innovation in the past 3 years, 34% of manufacturing firms launched innovations that were new to the market and 57% produced innovations that were only new to the firm. This disparity in the level of novelty was even more pronounced in the services sectors. From the 1080 services sector firms with an innovation in the past 3 years, 16% created an innovation new to the market, while 77% produced an innovation new to the firm (p.525). While market novelty is often perceived as a sign of significant innovation for the firm, it may be that the more mundane incremental innovation producing new products for the firm, but not the industry, is where the bulk of the benefit lies.

Models of output performance used as a measurement of the value of innovation are ineffective in capturing the true benefit to the firm. Calantone, et al (2006) found that product innovativeness has no direct effect on product profitability. When controlling for product advantage and customer familiarity, the degree of novelty of a product does not affect its profitability. This confirms the concept that innovation, in and of itself, does not directly result in profitability. Indeed, we can all cite examples of significant technological breakthroughs products that languished in the marketplace when they were first introduced. Many times it is not the inventor of a technology that reaps the profitability rewards from the innovation, but later adopters of the technology that find new customer utility in new markets or applications of the technology. Calantone, et al (2006) approach this by differentiating between product innovativeness, product advantage and customer familiarity. Product innovativeness relates to profitability through two indirect mechanisms, customer familiarity and product advantage.

The product advantage refers to the superiority of a new product to existing products in the marketplace. This factor captures the substitution effect that a new product or service brings about in the marketplace. It is a measure of the new product as a substitute for well understood utility values of existing products by the consumer. The second indirect mechanism impacting product profitability is customer familiarity. This concept captures the utility assessments made by consumers that are outside of the existing product comparisons. Customer familiarity includes an assessment of the product value from the consumer's standpoint. Choosing a new product where there are no close substitutes requires a different set of assessments by the customer. This evaluation includes adoption risk and behavioral changes required for the customer to adopt the new product. Garcia and Calantone (2002) propose that product innovativeness and newness to the customer are positively related. However, it not at all clear that newness to the customer is positively correlated to profitability. Calantone, et al. (2006) test this hypothesis and find it not significant. Customers base their evaluations of innovativeness on the degree to which a product requires a change in mental models and behaviors. These factors are tempered by an assessment of the risk associated with making such adjustments. This determination by the customer may not result in a positive decision to accept the innovation. While other aspects of innovativeness may positively relate to market success, it is not apparent whether this factor will contribute positively or negatively to innovation profitability in any given set of circumstances.

Pavitt's (1984) work studying the sources of 2000 British technological innovations during the time period 1945-1980 revealed that an organization's industrial sector was a significant determinant in the type of innovations that a firm pursued. Firms in industries that were strongly customer-centric realized more new product or service based innovation, while firms in more production intensive sectors increased cost cutting process related technological innovation. While this reinforces the idea that there is no single set of innovation measurement metrics that can be applied to all firms, it may be related to an underlying flaw in managing the application of the metrics. The sectoral variance in capturing different classes of innovation may be caused by only applying those metrics that have direct relevance to a current operational strategy. The concept that an organization should examine innovations in light of their current strategic plans and competencies misses all but the most trivial of incremental changes. Innovation, whether product or process based, brings about change. While the potential value of an idea may not outweigh the cost of the required organizational change, to eliminate the possibility completely eliminates the ability to recognize and capitalize upon disruptive innovation. If Orville and Wilbur Wright had a board at their Dayton bicycle shop that was evaluating their new transportation concept, we could expect one or all of the following answers:

> "Its not part of our current core competencies."
> "Its not aligned with our strategic plan to expand into the tricycle market."
> "We don't have the funds available to explore this idea due to recent input cost increases in bicycle seats."

The former director of Xerox's Palo Alto research center confirms this phenomenon:

> "Scientists there came up with such breakthroughs as the computer mouse. But back at Xerox's home office, upper management's focus was its basic photocopying business, recalls John Seely Brown, a former director of the center. "We would invent all sorts of things that didn't fit into the core business," he says, "so then they would sit on the shelf or eventually be spun out or licensed to other companies." (McConnon, 2008, p. 86)

While we all may agree on the cost savings/revenue enhancement evaluation metrics for evaluating an innovation vs. the current *status quo*, we must at least ask the question, "What is the cost of *not* adopting this innovation?" How does rejecting an innovation impact my organization's ability to sustain a competitive advantage, or assist my competitors or change my relationships with employees, customers or suppliers? Asking these questions requires the use of different metrics than the simple direct dollar value realized.

INNOVATION AND THE VALUE OF FAILURE

The concept of failure has several connotations in the context of innovation value measurement. There are failures in adequately capturing the value of the innovation by due to inadequate or incomplete application of the valuation metrics. Chesbrough (2004) discussed the need to measure and manage "false negatives" in the innovation process. He discusses "false negatives" as innovation efforts that have been terminated or abandoned by an organization which later show renewed value. The termination may be because the innovation relates to markets outside of those that the organization currently pursues. It may be because the innovation relates to a market that is currently undeveloped. In both cases, the organization finds renewed value in the "false negative" at a later point in time. Chesbrough highlights the need to regularly revisit the knowledge base created by terminated innovation to reevaluate the internal and external value of these ideas and to develop strategies to capitalize upon them.

There is another implication to innovation measurement that can be drawn from this work. By discussing the nature of error in valuation metrics for innovation and the need to revisit these evaluations, Chesbrough highlights the fact that almost all valuation metrics for innovation are static measures. The value of an innovation is made based upon an assessment at a specific point in time. This point in time assumes that an organization's markets, structure and strategies are parametric. The possibility, even probability that these circumstances will change over time is obvious. Labeling an innovation as a failure and discarding it from our organizational knowledge base precludes any possibility of reaping value from its application in another day.

Another type of failure in innovation valuation is the failure to use appropriate measures that capture all aspects of value to the firm. The literature on the social shaping of technology addresses technological innovation from a sociological standpoint as being generated and shaped by competing interest groups. These interest groups each have a vision of the potential of a technology and vie for the resources and acknowledgement of their point of view. Pinch & Bijker (1984) or MacKenzie & Wajcman (1999) are examples of a literature that accents these dynamics in the selection and implementation of innovations. The significance of this theory is twofold. First, that it identifies that users appropriate technology and use it in way unforeseen by the inventor and second, that an innovation's value is determined by a user group who has a vision of what it can do for them. This perspective reinforces Danneels & Kleinshmidt (2001) and Calantone, et al. (2006) contentions that accurate valuation is a function of a consuming group's assessment of utility and not that of the producing organization.

When we relate these societal perspectives to an organization, the contextual nature of innovation's utility becomes clear. Those who bring the innovation to the specific organizational context are primarily responsible for determining and advocating the value metrics for its efficacy. While the originating organization may not find value, the circumstances existing in another organization may find immediate value. Independent of its intended application or original value measurement, it is the evaluative framework that a champion or user group applies to the idea from within their own context that proves determinant. This not only confirms the distinct nature of the valuation configuration between firms, but also that the valuation configuration within a firm may vary over time, group dynamics and other circumstances.

We are faced with the conclusion that an organization's valuation of an innovation may not be determinant or the last word. Innovations should not be discarded, since it is inevitable that they will find value in some context. The issue for managerial practitioners is to find the correct context through which to capitalize on this value.

FAILURE HAS VALUE

There are a variety of reasons why an innovative idea never becomes realized in the marketplace. There is innovation that is missed because an employee never expresses the idea or shares his insight. This may be caused by perceived or actual penalties associated with a failure. There is some evidence that anonymous methods of contributing ideas in an organization may enhance participation and contribution levels. By reducing the perceived risk to participants of offering ideas that might be seen negatively, anonymity increases their willingness to participate. Valacich, et al. (1994) found that anonymous submission might increase the willingness to participate by reducing the perceived risk of offering ideas that might be seen negatively.

Anecdotal evidence supports the impact of fault tolerant environments on the production of innovation. In a Forum on Innovation, conducted by the U.S. Department of Commerce (2006), William Zollars the Chairman of YRC Worldwide discussed his firm's innovation management policy. YRC Worldwide, formerly Yellow Freight, combines a fault tolerant environment with strong decentralized decision-making. This provides for a more direct hypothesis-testing context at the point closest to where the innovation is generated. This leads to effective exploration of the idea and responsibility for its evaluation. Not only does YRC Worldwide not punish failures, but celebrates them. Zollars elaborates on an occasion when it was clear that an innovation implementation was failing;

> "…but we did it anyway, even though I knew it was going to be a mess, because it was more important for us to say, 'Look we're trying stuff even though we're not sure its going to be successful," than it was to say, "No, that's a stupid idea, we're not going to do it." (p. 11-12)

Creating a failure-tolerant environment for innovation hypothesis testing and experimentation does not do as much to guide the behavior of an employee with an insight as it does to remind us that all ideas have value. This approach informs us on how processes that capture value should be structured. When we create an internal climate that encourages individual creativity and openness, whom are we really talking to? The greatest affect of such an organizational change may not be our employees, but the organization's culture and value system. Damanpour (1991) found that support for innovation is found in the norms adopted by management. These attitudes include expectations, approval and practical support of attempts to introduce new ways of doing things. McAdam and Keogh (2004) find additional empirical support for the modification of the systems of innovation measurement into more fault tolerant processes. One of the benefits they find is in overcoming past disillusionment from rejected ideas. When such approaches are successful is it because more innovative ideas are developed and presented by employees, or is it because we are sensitizing ourselves toward hearing the stream of ideas already flowing there? Increases in the innovation output may be caused more by changes to the organizational receiver rather than the sender.

Failure of the processes and techniques used within an organization to resolve problems may serve as a significant source of innovation. Thomas Kuhn (1962) describes that the pressure for change in the prevailing assumptions and conceptual framework in a discipline comes from an increasing accumulation of anomalies that are inconsistent with them over time. Many times the pressures for change that generates or brings innovations to the surface are generated from Kuhnian disfunctionality in how the current technology and processes meet the needs of the specific circumstances in the organization. The organization finds that the attempt to solve problems with existing processes and approaches is less and less functional. The developing realization that the current systems are increasingly dysfunctional opens the organization up to the possibility of alternative solutions. It is the energy behind this increasing level of discomfort that motivates the search for new and innovative solutions. This pressure also focuses the attention of value measurement upon the "goodness of fit" criteria as a solution to a specific set of problems.

The results found in the academic literature of the 1980's and 1990's with organizational prescriptions for generating innovation through the construction of nurturing and participative environments to elicit and develop ideas has been tepid, at best. On the other hand, the somewhat disturbing data from organizational creativity studies finds that many times innovations from the shop floor find their birth in anger, frustration and desperation. Canner & Mass' (2005) contend that innovation is motivated by desperate acts needed to keep operations running rather than by a creative environment. In this case, desperation reduces the risk of having an idea be perceived negatively. This motivates the innovator and makes them more willing to share their insights. More significantly, desperation may change the perspective of managers making them more receptive and attentive to innovative solutions being presented to them.

EVALUATING THE SECONDARY EFFECTS OF INNOVATION

The secondary effects of innovations upon an organization may be greater and more profound that those related to their immediate application. By secondary effects, we mean those impacts that innovation has upon the firm that are not directly related to the immediate reflection of value in a product, process or service. These may be impacts on value derived from changes to the organization, its structure, culture, markets, other innovations, and client or supplier relationships.

Risk becomes an important consideration in the innovation evaluation process. As the element of risk becomes a more significant factor in the valuation of an innovation, the precision and likelihood of an accurate evaluation of the idea's benefit to the organization becomes smaller. The concept that increasing uncertainty for estimates of cost reductions or profit potential leading to a lowered expected value and reduced valuation of the idea is straightforward. However, when we turn to measuring other value returns on an innovation, such as the secondary effects, uncertainty plays a greater role. An example of a significant secondary effect is the value to a firm of introducing a new product that gives it "first mover" status in the marketplace. While we may accurately estimate our product sales in a new market, rarely is the more significant factor of the value to the firm of being able to shape the market with it innovation quantified. Indeed, a firm's ability to define the taxonomy and salient factors of a new market will generate value to the firm long after the value of the specific product being introduced has passed. Think of the value generated for an IBM or Microsoft through defining a market that continued long after their initial product introductions had faded from the marketplace. In hindsight this value is clear, yet *a priori,* it is rarely included in the valuation of an innovation. When we are unable to quantify the impact due to uncertainty, we tend to negate it and ignore it completely. Unfortunately, ignoring what we can't quantify leads to the same set of assumptions as if it had no value.

Whenever a value assessment is made outside of the current context, risk plays a part in that process. However, this does not mean that we discard all concepts of value that contain a level of uncertainty. Risk is quantified and incorporated into the value assessment. These risk quantification techniques provide a window into methods that may be able to more completely capture the full value impacts of innovation.

An additional secondary effect is the chaining effect that innovation takes. One idea leading to another. In and of itself, an innovation may not prove valuable enough to pursue. Yet it may lead to a stream of one or more related ideas and innovations, which may prove valuable. The potential for this chain of events may or may not be apparent at the time an innovation is evaluated. Anecdotal evidence of these events is prevalent, however, unfortunately only apparent in retrospect. Such examples are strong enough to inform our actions to not preclude their possibility.

INNOVATION AND SYNERGY

The impact of synergy on an organization was identified by Cooper and Kleinschmidt (1987). This synergy refers to the firm's ability to produce new products with existing knowledge and skills. These aspects of synergy fall into three main areas; technical, process and administrative. Technical synergy exists where the new product or services falls within the current knowledge base and competencies of the firm. Process synergy is created when the new product or service can be delivered with a minimum of modification to the manufacturing methods and techniques currently used by the firm. Finally, administrative synergy relates the similarity in organizational structure, distribution, marketing and personnel needed to deliver a new product.

An innovative product or service may create new capabilities, knowledge and skills quite independent from the market success that the innovation realizes. These new capabilities in process, technology and administration create synergies that allow subsequent product introduction to generate value independent of their innovativeness. While an innovative product may fail in the marketplace, the technical, process and administrative innovations that it brought about within the firm remain. Indeed, these innovations may contribute more to the enhanced value and performance associated with subsequent product introductions than the innovations attributable to the product itself.

Organizations learn. The enhanced capabilities within a firm that are a result of a failed innovation product introduction may be of a technical, process or administrative nature. New products that take advantage of existing technical knowledge and skills may be developed and brought to market faster resulting in better market performance. The technical capabilities developed as a result of a failed innovation product may form the knowledge base necessary to contribute technical synergies to the next product. New manufacturing processes brought about through an innovative product development effort may result in enhanced efficiency and productivity growth not only for future product releases, but also for the manufacture of the existing product mix. Administrative innovations created to support a failed innovation may provide the flexibility and new structure necessary to pursue previously unfeasible alternative products and strategies. While many studies have examined the contributory relationship between technical, process and administrative factors upon innovation, the empirical evidence relating to measuring synergies is sparse. Those studies that have examined these relationships (Danneels & Kleinshmidt, 2001; Calantone, et al., 2006; Tatikonda & Montoya-Weiss, 2001) posit causality from measures of technical synergy to product innovativeness, not the reverse. Additionally, there is no attempt to address the impact of the innovation product's failure on the subsequent role of synergy in product profitability and organizational performance. The contribution of innovation, whether or not a market success, to organizational performance, learning and growth, remains largely unexamined.

The Ford Edsel introduced in 1957 was an innovative vehicle for its time (Ervin, 2008). It is also a classic example of a market failure. Several factors contributed to its failure, however, technological, process and administrative changes brought about in Ford that were caused by the innovativeness of the Edsel, became the synergies on which future product development and organizational change rested. New features introduced on the Edsel, like self-adjusting brakes and self-lubricating chassis, became technical synergies as they were introduced into all Ford models in 1962. The inability to control quality at Ford division based manufacturing plants producing the Edsel led to a reorganization of all Ford manufacturing under a single manufacturing organization. While this does little to enhance the tale of the Edsel, it does reflect benefits that Ford realized, even from this icon of innovation market failure.

PRESERVING THE VALUE OF INNOVATIONS NOT PURSUED

There is an extensive body of literature on innovation measurement metrics that discusses the need to align the measurement and valuation process with the organization's strategy (Vossen, 1999; Neely, et al. 2000). While this approach has value in the static and immediate timeframe, it misses a much more important aspect of valuation of an innovation over time. Following this strategy we can conceive of innovations being abandoned for a variety of reasons bound to the immediacy of the criteria that are used to evaluate them. There are innumerable examples from almost any firm engaging in R&D where important innovations were abandoned because of a lack of immediate resource availability to develop them. This is understandable from an operational standpoint, but should this necessarily lead to an abandonment of the innovation and the forfeiture of all the value that it can produce? A number of management approaches can be used to derive and preserve the value potential. Internal strategies may find it beneficial to develop an innovation at a lower level of funding, allowing progress and evolution while preserving resources. External strategies may realize value from external partnerships or licensing revenues. Many times significant innovations that are not related to current operational or strategic plans can find a home in a spin-off organization or joint venture.

CONCLUSION

The establishment of the value of innovation to a firm is difficult to quantify. As our understanding of the full impacts of innovation on the firm evolves, the methods that we use to capture this value changes. There are four significant implications to management practice from these results. The promotion of fault-tolerant innovation systems brings more innovations to light. This may be the result of increased managerial focus, an increased desire to present innovative ideas within the organization or culture changes that do not punish innovation attempt. In any case, tolerance or even celebration of failed innovation trials leads to an increased flow of innovation possibilities and greater probability of success.

The second managerial implication is that the measurement tools that are utilized determine the innovations that are selected and implemented, not visa versa. When the only tool that you have is a hammer, everything looks like a nail. When the only innovation metrics that we use focus on cost reduction exclusively, the only innovations you will identify are those incremental and process innovations that reduce cost. Care should be given to the evaluative techniques implemented because they will, in large part, determine the character of the results.

Another significant implication for managerial praxis is that the value of an innovation to an organization, even an unsuccessful one, is underestimated. Innovation valuation metrics must be selected that take into account the secondary impacts of an innovative idea. The implications of not pursuing an idea or of the longer-term value of an idea must be measured. These impacts on value to the firm may be much greater in scale than a static evaluation.

Finally, innovation ideas that the organization decides not to pursue, for whatever reason, should not be abandoned. Additions to the firm's knowledge base, process evolutions or administrative adaptations, may lead to other synergistic developments. As circumstances, markets and strategies change over time, the value of an innovation to a firm may change dramatically. For this reason, the knowledge base of unimplemented innovations should be periodically and systematically revisited.

This study is limited due to the fact that there is virtually no empirical research that measures unsuccessful innovation. Research has assumed that value is only generated by innovation activities when the new product or service is successfully introduced to the marketplace. While this article describes clear areas of benefit of unsuccessful innovation, more research needs to be conducted to measure the value generated by all innovation activities not just those that generate successful outcomes.

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EVIDENCE ON THE CHARACTERISTICS OF WOMEN ENTREPRENEURS IN BRAZIL: AN EMPIRICAL ANALYSIS

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ABSTRACT

Interest in women entrepreneurs from various backgrounds and perspectives have led to increased publication in the literature about women entrepreneur issues. However many questions remain unanswered. This article aims to answer some of these questions by providing another perspective on women entrepreneurs. Specifically this study examines women entrepreneurs from Brasil, using a sample across racial lines. The article examines the characteristics of women entrepreneurs across three key categories: human capital, network structures as well as financial capital. The impact of various factors on the economic success of the women entrepreneurs is also analyzed.

JEL: M12: M13; M21

KEYWORDS: International Business Administration, New Firms, Start ups, Business Economics

INTRODUCTION

The burgeoning development of entrepreneurship studies in general and women entrepreneurship studies in particular has resulted in an increasing body of literature (De Lourdes, 1994; Gilbertson, 1995; Godody et al, 2000; Heriot and Campbell, 2003; Peterson, 1995; Robles, 2004). The current dynamics for women entrepreneurs from various backgrounds requires that their stories be told from individualistic perspectives, focusing on each set of women's unique contribution in their own society. Telling the story of women entrepreneurs en masse using a broad brush to sweep across women entrepreneurs of various countries and with various backgrounds is not appropriate or indicative of the true picture that exists (Reynolds et al, 2002; Allen et al, 2008). This paper is important at this pivotal period as it represents a contribution to the literature from the perspective of South American, albeit Brazilian women entrepreneurs.

Brazil has made great strides since its independence in 1822 (Alvarez, 1990; Dias, 1995). Independence sought to achieve, among other things, advancement for women in various sectors of the society. While during the 1940s women represented only 13% of the labor force in Brazil, their participation increased to 21% during the 70s and to 42% during the 90s. In 2001 53% of Brazilian women were economically active (Madalozzo and Martins, 2007).

Today, Brazil is seen as a fertile and viable option to study entrepreneurship in general and women entrepreneurship in particular, since in addition to being seen as a leader in entrepreneurism (Allen et al, 2006), it is also described as having the world's fourth largest economy with a Gross Domestic Product (GDP) of 812 billion dollars (Allen et al, 2006). The Total Entrepreneurial Activity (TEA) is said to be approximately 13.4 % of the population with almost half (46%) of this number being women (Allen et al, 2006). It is ranked very high on the Global Entrepreneurship Model (GEM) list of countries with the highest entrepreneurial activity. An international study by Babson college shows that 19.95% of the women in that population are business owners, with 25.4 3% of the males in the country being business owners (Allen et al, 2008).

However, South American countries such as Brazil are still primarily patriarchal structures (Moghadam, 2005; Patai, 1988). While the wage differential between the genders has decreased in Brazil over the last few decades, recent research shows that a wage gap (see Jacobsen, 1998) still exists. The wage gap is highest for women with higher educational and income levels (Madalozzo and Martins, 2007). Thus, any look at the position of women in such an environment has to be examined with this backdrop in mind.

To this end, this paper analyzes the characteristics of women entrepreneurs in Brazil. The paper examines why women entrepreneurs display some characteristics and how these characteristics impact their economic success. In doing so, the paper contributes to the current literature on women entrepreneurs from a differing perspective than that often taken in studies on women entrepreneurs. The focus here is an examination of women entrepreneurs in South America, more specifically Brazil and with the incorporation of a look across racial lines.

The rest of this paper is organized as follows. Next, the relevant research is examined. The discussion continues with a presentation of the research methodology and sample used, highlighting three key areas of focus. The results section is extensive, organized into six subcategories, namely general characteristics, human capital characteristics, network structure characteristics, financial capital characteristics, a regression analysis and a qualitative analysis. The paper concludes with a section that provides for, among other things, directions for future research.

LITERATURE REVIEW

Few English-based studies on Brazil women entrepreneurs exist. Thus, a broad focus for the literature on women entrepreneurs in Brazil could include four legitimate sub-categories: Latina women entrepreneurs in the United States, Latina women entrepreneurs in the Caribbean or Latin American countries, women entrepreneurs in other South American countries and finally women entrepreneurs in Brazil.

One study that looked at the broader perspective of women in the Brazilian society painted a picture of Brazil women entrepreneurs showing for the most part, that they have struggled to overcome gender discrimination to pursue their own businesses. An earlier study by Telles (1994) chronicled the changes in race relations over the past century that impact the current occupational distribution (Telles, 1994). The author looked at seventy-four Brazil metropolitan areas and concluded that industrialized areas have lower occupational inequality when compared to rural areas, where racial inequality is greater (Telles, 1994).

A more recent study completed by the National Foundation for Women Business Owners in 1999 chronicles various issues that are critical to the operation of their businesses (National Foundation of Women Business Owners /NFWBO, 1999). Critical issues identified included: cyclical patterns of the national economy; access to financial capital including bank credit and the desire for additional business training and education (NFWBO, 1994). Improving network structures with other business owners, particularly women, was also a concern for these women business owners (NFWBO, 1999).

Interest in Spanish related Caribbean entrepreneurial ventures has been sporadic over the last two decades, where working for pay and profit by multiple household members is a fact of life. When women are unsuccessful in obtaining work in the mainstream labor market, they are forced to pursue entrepreneurial ventures, such as owing their own business or self-employment in order to earn an income. Such a pursuit is said to offer women from such countries increased autonomy in household decision-making (Grasmuck and Espinal, 2000) and a sense of liberation that involves them in their society's political economy (Weiling et al, 2001). Overall, women in such countries also occupy a less favorable position when compared to their male counterparts (De Bowman, 2000).

Studies that assess entrepreneurship in South American countries have been completed, with a few exploring the state of women entrepreneurs in specific countries, namely: Argentina, Peru and Columbia. One study on women business owners in Argentina took a predictable path of comparing women to their male counterparts. The study found that women entrepreneurs were mainly concentrated in the industries of retail trade and personal services. Older women from the sample (ages 41 to 50) were extensively concentrated in these industries (NFWBO, 2000). In addition, women were noted as being younger and operating smaller businesses with fewer employees and less sales revenue than their male counterparts (NFWBO, 2000).

Another South American study on women entrepreneurs, focused on Peruvian women, looking specifically at middle-class mothers, struggling to make ends meet by engaging in entrepreneurial ventures as an alternative to obtaining other sources of income. This study is critical to an understanding of women in the patriarchal structures of South American countries and their struggle for independence in a society that has categorized (because of their class status) as not needing assistance from programs that help more impoverished women entrepreneurs. Yet, they are not affluent enough to avoid all forms of assistance, mainly financial (De Bowman, 2000).

A report completed by the Inter-America Development Bank (IADB), looked at women business owners in Brazil, Argentina and Mexico and confirmed previous findings (Smith-Hunter, 2006; Moore and Buttner, 1997). These findings indicate that access to financial capital was a key concern for women business owners in various countries (Weeks and Seiler, 2001). However, the report cautioned that overcoming such an obstacle was not the sole catalyst for women to become successful in their entrepreneurial ventures. Instead, the report indicated that programs are also needed to supplement this access, by linking women to support systems that provide them with the training and technical assistance needed (Weeks and Seiler, 2001).

RESEARCH METHODOLOGY AND SAMPLE

The results from this study are comprised of information obtained from thirty-three Brazilian women entrepreneurs, surveyed during the months of July and August 2007. The questionnaire was prepared on the basis of a questionnaire used in a similar study in the United States in 2005 (see Smith-Hunter, 2006). The questionnaire is presented in the Appendix of this paper.

Women entrepreneurs were contacted through a variety of sources, including entrepreneurship membership organizations and professors at the University of Sao Paulo who work with women entrepreneurs. The surveys were then emailed to the women entrepreneurs who completed the questionnaire and emailed them back. Approximately, twenty percent of the women (six in total) who completed the survey were contacted and further interviewed in person, in or near the city of Sao Paulo, Brazil. These latter personal interviews were conducted during the period August 13-23, 2007. The interviews were conducted at either the entrepreneurs' place of business, home, or at a mutually agreeable location. The justification of targeting twenty percent of the sample is based on the precedence used in pilot studies.

Women entrepreneurs who participated in this latter open-ended questionnaire, face-to-face interview portion of the study varied in the type of businesses they operated. Consideration was given to the inclusion of women entrepreneurs operating different types of businesses, different size of businesses, and variety in the number of years in operation. Both women who operated businesses with a partner and women who operated businesses as sole proprietors were included in the sample. This varied perspective was intentional in order to capture how different sectors of the sample of Brazilian women entrepreneurs would view the same questions. These six women entrepreneurs operated the following types of businesses: Ecology Store and Restaurant (medium sized business, in business for approximately three years), Beauty Salon (partnership, large business, in business for sixteen years), Arts and Crafts (small business, in business for six years), Manufacturing (medium sized business, in business for 9 years) and a Publishing Magazine Business (small business, in business for approximately one year).

The women entrepreneurs in the current sample indicated that they were at least part owners of a registered company in Brazil. Thus, this study does not include women in the informal sector of the economy. Due to the sources of this sample, the Brazilian women entrepreneurs in this sample may not be indicative of the entire population of women entrepreneurs in Brazil.

The data from the study was prepared and stratified based on six key categories. Each of these six categories are discussed in turn.

*General Characteristics :*The overall characteristics of the businesses were analyzed. They include: the types of businesses, the obstacles the business owners faced, the factors that motivate the women entrepreneurs, whether or not they started the businesses themselves, the number of employees of the business, the number of years in operation, the location of the business, the age and race of the business owners and whether they have children.

Human Capital Characteristics : Human capital has been defined as the propensity of a person or group to perform a behavior that is valued from an income earning perspective by an organization or a society. Human Capital also refers to the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being. This definition of human capital extends beyond those capital assets linked directly to productivity, to encompass factors that reflect the broader values associated with a well-educated population (Becker, 1993).

Network Structures: Network structures are defined as the formal and informal connections of overlapping organizational, family and social memberships that accounts for our level of success, the resources we have available to us to satisfy our needs and obligations and expectations (Hogan, 2001; Easter, 1996; Aldrich, Reese and Dubini, 1989; Coughlin and Thomas, 2002). It has been described as the "hidden hand of influence" that impacts the development of business markets (Hogan, 2001; Choi and Hong, 2002; Chung and Gibbons, 1997).

Financial Capital:While there are different ways to measure financial success for business owners (Begley and Boyd, 1987), possible sources of financial capital include liquid assets (checking and saving accounts), credit lines, loans, capital leases (mortgages and motor vehicle loans), financial management services (transaction and cash management), owner loans, credit cards and trade credits (Bitler, Robb and Wolken, 2001).

Success Factors: Factors that impact the success of businesses for women range from previous work experience (Brush and Hisrich 1991; Cuba et al, 1983; Schwartz, 1976; Christopher, 1998; Gimeno et al, 1999 and Model, 1985), educational levels (Christopher, 1998; Gimeno et al, 1997; Model, 1985; Maysami and Goby, 1999) and assistance from family and friends (Model, 1985; Maysami and Goby, 1999; Smith-Hunter, 2006. Other factors that impact the financial success of women entrepreneurs include: membership in organizations (Moore and Buttner, 1997; Smith-Hunter, 2006), new innovation (Lerner and Almor, 2001), knowledge of the culture, communication and human relation skills and knowledge and quality of the product or service they offer (Maysami and Goby, 1999).

Qualitative Studies: An open-ended style of one-on-one of interviewing was used for the qualitative section of this research project. The same questions were asked of all six candidates chosen for the in-depth interviews (See Appendix B). The questions focused on subject areas such as: the business owners' desires for the long-term progress of their business, and what changes they would make. In addition, questions focused on what societal and governmental policies should be addressed to assist women entrepreneurs in the Brazil. Also, the level of assistance obtained from organizations and whether membership in any organization or women's groups are helpful? Any advice they would give to other women entrepreneurs? And How being a female impacts their entrepreneurial position?

Overall, the questions on the qualitative portion of the study provided expansion, exploration and clarification of the quantitative questions and help to explore how the quantitative questions truly reflected the women entrepreneurs' true feelings.

Qualitative questions and the answers to them allowed the women space to describe their business experiences. Qualitative answers also provided information on the how, why and who of what was asked. Another benefit of qualitative research is that it aided in the examination of how women entrepreneurs' human capital potential interacts and intersects to impact their network structures and key issues related to accessing financial capital and economic success.

RESULTS

The results from the study of the Brazilian women entrepreneurs are presented in four main categories below, namely: general characteristics, human capital characteristics, network structure characteristics and financial capital characteristics.

General Characteristics

Table 1 reports some general statistics on the types of businesses engaged in. Brazilian women's companies specialize in different areas of economic activity, but are found to be primarily in the services industry. These businesses included: cosmetics distribution, computer sales, event planning, beauty salon, hotel owner, publisher for a magazine and an ecology store/restaurant (see also table 1). The other areas of activity included: manufacturing and shipping. The manufacturing sector consisted mainly of: furniture, arts, and crafts and bathroom tiles. The results regarding the dominance of women entrepreneurs in the service industry has been confirmed repeatedly in other studies. NFWBO (2000) found women entrepreneurs distributed in the following industries: business (22%), service (20%) and surprisingly construction (10%), while Instituto APOYO (2000) found women entrepreneurs distributed in the following industries: retail (44%) and services (9%). NFWBO (1999) found women entrepreneurs distributed in the following industries: services (46%), goods producing (19%) and communications (14%).

Additional data on the survey participants are provided in Table 2. The top three principal motivations for the Brazilian women entrepreneurs to start their own businesses were: "to be my own boss, always wanted to start my own business and family responsibilities." Other motivators that rounded out the top five reasons were: "to make more money and a good way to find employment." These results are similar to those by the Instituto APOYO report (2000) and the report by NFWBO (2000), which also saw the personal fulfillment of owning their own business as a key motivator for the Argentinean and Latin American women entrepreneurs analyzed in those studies. In identifying the main obstacles or problems they face as business owners, the Brazilian women saw their top problems to be: state and federal regulations, competition and finding good employees. The results here are somewhat similar to others, which also cited cash flow and government regulations as serious obstacles (Weeks and Seiler, 2001; NFWBO, 2000; NFWBO, 1999; Instituto APOYO, 2000). Specifically, Seiler and Weeks (2001) and Instituto APOYO (2000) found access to cash and government policies as the top two problems for women entrepreneurs, while NFWBO (1999) and NFWBO (2000) saw government regulations and finding good employees as the top two obstacles.

Table 1: Types of Businesses

Type of Businesses	%
Shipping (Manufacturing)	3.0
Arts and Crafts	21.2
Dentist	3.0
Computer Sales	6.1
Cosmetic Distribution	6.1
Design and Make Furniture	3.0
Event Planning	6.1
Ecology Store and Restaurant	3.0
Clothing Boutique	15.1
Jewelry Manufacturing	9.0
Beauty Salon	12.1
Manufacturing Tiles	3.0
Publishing Magazine	3.0
Hotel Owner	3.0
TOTAL	100.0

This table shows the types of businesses of the study's participants.

The women in the current Brazilian study also played an important role as creators of new companies, with 54.5% started their own businesses. This is followed in popularity by starting with a partner (39.4%). NFWBO (2000) and Instituto APOYO (2000) also found that women entrepreneurs were often the original creators of their businesses. Most of the businesses in the current study remain primarily owned by the women, with(51.5% operating sole proprietorships, followed by partnerships at 30.3%. It should be noted that most partnerships were with other women (80%), as opposed to men (20%).

One factor that can be used to estimate the size of a business is the number of employees. Most of the women entrepreneurs (84.8%) had less than 50 employees, with the average number of employees for the thirty-three business owners being nineteen. This relatively high value for average number of employees is based on a larger than expected business size from four firms that owned: a hotel chain, beauty salon chain and a shipping manufacturing business, all having a disproportionately large number of employees. As expected, other studies have shown much smaller average number of employees for women (NFWBO ,1999 and Instituto APOYO, 2000). One study with results similar to those reported here was completed by NFWBO (1999), incidentally another Brazilian women entrepreneurs' study that also found the average range of employees as existing between 10-50 employees.

Companies owned by women entrepreneurs were young, with most (52%) owning their businesses for less than five years and 27% owning their businesses for 6 to 10 years. Weeks and Seiler (2000) and Instituto APOYO also found that the women entrepreneurs in their study had been in business for less than ten years, while NFWBO (2000) sample of women entrepreneurs showed an average tenure of twelve years in business.

The GEM report labeled entrepreneurs who started a business to exploit a perceived business opportunity as opportunity entrepreneurs and referred to those entrepreneurs who were pushed to start a business because all other options for work are either absent or unsatisfactory as necessity entrepreneurs (Allen et al, 2008). That same report indicated that 58% of Brazilian women entrepreneurs were opportunity entrepreneurs and 41% were necessity entrepreneurs (Allen et al, 2008). The current study's results are an almost exact replica of those studies, finding that 57.6% f the women entrepreneurs were opportunity entrepreneurs and 42.4% of the women entrepreneurs classified as necessity entrepreneurs.

Most of the women located their businesses outside the home (57.6%). These numbers echo results by NFWBO (2000) and Instituto APOYO (2000) which also found similar results. Most women entrepreneurs in the current study had children, on average with two children. This result has also been confirmed in other research studies (NFWBO, 2000 and NFWBO,1999). Most of the women entrepreneurs were in the 31-40 age group (39.4%) and the 41-50 age group (24.2%), with the average age of the women business owners being 42 years. Again, these results are similar to other studies. (NFWBO, 2000 and Weeks and Seiler, 2000). However the results here differ from NFWBO (1999) who found the women be between 45-54 years old on average. As expected, most of the women entrepreneurs were Latinas (51.5%). However, the sample included other races such as Whites (24.2%), Blacks (21.2%) and Asian (3.0%).

Table 2: Profile of Study's Participants

Problems faced By Business Owners	**Means**
State and federal regulations	2.54
Too much competition	2.38
Finding good employees	2.24
Rising cots of business	2.09
Not enough time for business and personal life	1.93
Cash flow problems	1.81
Too many factors out of their control	1.34
Not enough business knowledge	0.89
Too much paperwork	0.56
Reasons For Becoming a Business Owner	**Means**
Be my own boss	2.63
Always wanted to start my own business	2.52
Family Responsibilities	2.39
To make more money	2.21
Good way to find employment	2.15
Opportunity presented itself	2.04
Needed a job	1.97
Dissatisfied with my work situation	1.85
Thought I could do a better job than others	1.67
Dead end in my job	1.22
To deliver an important service	0.65
Origins of Businesses	**%**
Start the business themselves	54.5
Start the business with a partner	39.4
Purchase the business from someone else	3.0
Inherit the business	3.0
Type of Business	**%**
Sole Proprietorship	51.5
Partnership	30.3
Corporation	18.2
Years in Business	**%**
1- 5 years	52
6-10 years	27
11- 15 years	12
>15 years	9
Age of Business Owners	**%**
20-30 years	15.2
31-40 years	39.4
41-50 years	24.2
>50 years	21.2
Race of Business Owners	**%**
Latina	51.5
White, not Latina	24.2
Black	21.2
Asian	3.0

This table shows the study's participants profile in terms of demographic and business characteristics

Human Capital Characteristics

Data on human capital characteristics are presented in Table 3. A significant number of Brazilian women business owners had university educational experience (72.7%), with a large portion pursuing graduate school (33.3%). These results are slightly higher than others that have also shown women entrepreneurs to be a highly educated group. The study showed that most of the Brazilian women entrepreneurs (60.6%) had not been employed in previous businesses. In addition, to their academic experiences, the Brazilian women entrepreneurs also detailed their other human capital experiences where school education and accounting experiences showed the largest mean values.

Table 3: Human Capital and Network Structure Characteristics

Educational Level of Business Owners	**%**
Graduate Level	33.3
College	39.4
High/Vocational Level	24.2
Elementary School	3.0
Marital Status	**%**
Married	51.5
Separated/Divorced	18.2
Single/Never Married	30.3
Other Experiences	**Means**
Job in the same field as the business.	2.09
School education directly related to the business.	2.84
Seminars, programs relevant to the business.	2.00
Hobby, personal experiences in the same field as the business.	1.61
Supervisory/management experiences	2.18
Accounting experience	2.76
Sales/Marketing experiences	2.09
Previous Self-Employment Experience	**%**
Yes	39.3
No	60.6

This table shows the study participants' profile in terms of human capital and network structure characteristics.

Network Structure Characteristics

The network structure characteristics are presented in Table 4. A good percentage of the women in the research study are married (51.5%). Followed by the second largest group being single/never married (30.3%). This relatively and surprisingly low marriage rate was also confirmed in another study by NFWBO (1999), but differed from that found by NFWBO (2000) who found a 74% marriage rate and Instituto APOYO (2000) who found a 61% marriage rate. Most of the women entrepreneurs received assistance from family (66.7%) at the start-up stage of their businesses from friends (30.3%) and other sources (18.2%). This family help continued as their businesses grew beyond the start-up stage (51.5%) at a reduced level. Assistance from family and friends in the operation of the business has also been reported in other studies (NFWBO, 2000; Instituto APOYO, 2000).

Interestingly most of the entrepreneurs' family and friends owned businesses (78.8% and 72.7% respectively). A final result was that the women belonged to few membership organizations with only 39.4% reporting that they belonged to such organizations. Part of the explanation for this lack of membership might be because there are few such organizations that exclusively cater to women in Brazil. Other studies have found even lower results for membership in organizations. Specifically, Instituto APOYO (2000) found that only 22% of the women in their study belonged to membership organization.

Table 4: Financial Figures and Assistance with Business

Assistance Received at Start-Up Stage of Business	**%**
Yes	63.6
No	33.3
Assistance at Start-Up Stage of Business	
Family	66.7
Friends	30.3
Other	18.2
Friends and Family Business Owners	
Family members who are business owners	78.8
Friends who are business owners	72.7
Family who work in the business	30.3
Friends who work in the business	27.3
Difficulty of Bank Loan Access at Start-Up Stage of Business	
Not Difficult at all	24.2
Somewhat difficult	36.4
Very difficult	39.4
Assistance Received Currently	
Family	51.5
Friends	21.2
Other	27.3
Membership Organizations	
Yes	39.4
No	60.6
Source of Start-Up Funds	
Personal savings	84.8
Gift from family/friends	15.2
Loan from previous owner	3.0
Credit card/personal loan	6.1
Bank Loan	18.2
Money from partners	27.3
Other	3.0
Financial Capital Difficulty at Start-Up Stage of Business	
Yes	63.6
No	33.3
Financial Capital Difficulty Currently	
Yes	48.5
No	51.5

This table shows the level of assistance the study's participants received in the operation of their businesses.

Financial Capital Characteristics

The financial characteristic results are presented in Table 5. A considerable challenge facing women entrepreneurs worldwide is access to financial capital. The current results serve to reinforce that difficulty. For example, sixty-three percent of the women entrepreneurs had difficulties obtaining financial capital when they started their businesses. This difficulty declined to 48.5% as they continued to operate their businesses. Access to bank loans was somewhat difficult (36.4%) or very difficult (39.4%) for a majority of the women business owners in the study. To finance their businesses, the entrepreneurs primarily relied on their savings (84.8%) for some of the start-up funds. This was followed by money from partners (27.3%) and then bank loans (18.2%). This difficulty in obtaining start-up funds for a business has also documented by others (Weeks and Seiler, 2001; Instituto APOYO, 2000; NFWBO, 2000).

The average amount of start-up funds used by the women entrepreneurs was US$34,000. NFWBO (2000) found that just over sixty-five percent of the women entrepreneurs in that study had used $50,000 or less as start-up funds.

Net profit and personal income for the businesses were mainly at the lower end (US$0-US$25,000), with the average personal income being US$38,000 and an average net profit of US$130,000. These lower financial figures also held for the sales/gross revenue figures, with most occurring in the $0-50,000 range, with average sales of $270,000.. The seemingly large averages for net profit and sales/gross revenue figures are as a result of the wide range in figures and more specifically related to the few "outlier businesses" mentioned previously. NFWBO's (2000) and Istituto APOYO (2000) also showed a wide range in their samples.

Table 5 – Financial Figures for Businesses

Net Profit ($ Amounts)	**%**
0 – 25,0000	64
25,001 – 50,000	8
50,001 – 75,000	11
75,001 – 100,000	5
>100,000	10
Personal Income ($ Amounts)	
0 – 25,0000	51
25,001 – 50,000	20
50,001 – 75,000	14
75,001 – 100,000	5
>100,000	10
Sales/Revenue ($ Amounts)	
0-50,000	35
51,000 – 100,000	24
101,000 – 150,000	16
151,000-200,000	14
>200,000	11

This table shows the financial figures of the participants' businesses.

Success Factors: Regression Analysis

The analysis continues with a regression analysis. The regression analysis performed here employed a step-wise regression method. The regression results are reported in Table 6. Net income was designated as the independent variable. As a first step, a correlation analysis was performed for net income and variables that were expected to have a high correlation with the net income variable. The Pearson correlation coefficient was calculated for the likely related variables. As a second step, the variables with the highest correlation coefficient were inputted into a regression analysis. The first step produced an R-squared value of 0.8359.

As a third step, a second step in the stepwise regression analysis was performed to remove the variables suspected of causing multicollinearity. When these intervening variables were removed, the third step in the regression analysis improved the significance values of the coefficients, resulting in an R-square value of 0.7253. In the second regression, almost all variables were significant, except for type of business, with the regression showing that: friends that work in the business, family members that assist in the business, organizations that assist with the business and previous seminar experience related to the business having a positive effect on net income. Interestingly, previous supervisory management experience and previous hobby experience related to the business had a negative impact on the net income of the business. Others have also found that previous business related experience does have an impact on the financial success for the women entrepreneurs (Brush and Hisrich, 1991; Cuba et al, 1983; Schwartz, 1999; Christopher, 1998; Gimeno et al, 1999 and Model, 1985).

The impact of family and friends on the financial success of the businesses for the women entrepreneurs was found to be positive and significant in studies by Model (1985) and Maysami and Goby (1999). Confirming the results from this study on educational levels, Cuba et al (1983), Christopher (1998) and Gimeno et al (1997) also found a positive relationship between financial success and educational levels. Membership in organizations was also found by Moore and Buttner (1997) and Smith-Hunter, 2006) to have a positive and significant effect on financial success of entrepreneurial ventures for women.

Table 6 – Regression Results

Variables	Regression 1	R-Squared = 0.8359	Regression 2	R-Squared = 0.7253
	Coefficients	P Values	Coefficients	P Values
Intercept	1224874	0.0703	958470	0.0003
Number of Employees	113	0.4828		
Previous job experience in the same field as the business	8627	0.9348		
Previous supervisory or management experience	-199403	0.1069	-200009	0.0114
Previous sales experience	-14698	0.8724		
Family Members that work in the business	103441	0.6220		
Friends that work in the business	268530	0.1023	311700	0.0167
Type of Business	-147695	0.1495	-101013	0.1651
Previous seminar experience related to business	405692	0.0014	351931	0.0000
Family members that assist in the business	190693	0.2983	285162	0.0189
School Education directly related to the business	-69075	0.5419		
Previous hobby experience related to the business	-166931	0.1283	-203563	0.0085
Assistance from other sources	89764	0.6111		
Organizations that assist with the business	433550	0.0405	226853	0.0735

This table shows the coefficient values for the linear regression analysis and the corresponding p values.

Qualitative Characteristics

Qualitatively, the in-depth interviews with the participants sought to expand on the quantitative results. The highly educated levels of the women entrepreneurs were tied to the motivational results of the study and the wage gap identified for Brazilian women. More specifically, the majority of the women entrepreneurs indicated frustration in not earning as much as their equally (and sometimes less) qualified male counterparts. Unlike other studies that identified lack of access to financial resources and finding good employees as key problems for women entrepreneurs (Smith-Hunter, 2006; Moore and Buttner, 1997; Maysami and Goby, 1999), the current study identified government regulations related to the start-up and operation of their businesses as major concerns. The women further explained that the rules that were in place for small businesses acted as a large hindrance to their start-up and development.

The qualitative responses also revealed the important finding that the women entrepreneurs were not likely to engage in multiple business ventures simultaneously. This suggests, that they preferred to engage in one particular business at a time, growing it conservatively, rather than engaging in a number of ventures simultaneously that may or may not be successful.

A review of the qualitative responses from the women regarding network structures revealed their greatest frustrations as entrepreneurs. They lamented the lack of membership organizations solely dedicated to women entrepreneurs in their country. They further revealed the lack of support they received from the current membership entrepreneurial organizations that did exist in Brazil, stating that the help they received from such organizations, though well intended was not always applicable to their circumstances as women, wives, mother and entrepreneurs and their resources. One of the strongest positive responses was to the emotional and financial support they received from family and friends. Most of the women entrepreneurs attributed their success to assistance from these sources. In addition, the more financially successful Brazilian women entrepreneurs indicated that they were exposed to entrepreneurial ventures at an early age.

The use of personal funds to start their businesses was directly tied to the difficulty they experienced in trying to access funds to start their business, resulting in heavy reliance on their personal savings. The reasoning behind this difficulty can be traced to contextual perceptions that are related to cultural and social norms of the society. More specifically, this lack of confidence in believing that women can operate a financially successful business venture is suspected to be the main reason for the difficulties. In addition, the qualitative questioning revealed that women entrepreneurs who belonged to membership organizations were more financially successful than their counterparts who did not belong to such organizations. Similarly, more financially successful women entrepreneurs in the study were more likely to demonstrate strong linkages to international network structures attending international conferences and workshops that assist them with the operation of their businesses.

CONCLUSION

This study examines women entrepreneurs in one of the top countries for entrepreneurship in the world, Brazil. The goals of the paper were threefold. First, it sought to provide a summary of the characteristics of women entrepreneurs on human capital, financial capital and network structure issues. Second, the paper rigorously investigated the factors that can impact financial success, using net income as a dependent variable. Third, it used qualitative perspectives to weave a story that clarified the quantitative data presented.

The sample was Brazilian women entrepreneurs in or near the South-eastern city of Sao Paulo. The study used a targeted sample, located through membership organizations, as well as professors at the local University of Sao Paulo, who worked with women entrepreneurs.

In examining the human capital results in this study, it was shown that women entrepreneurs were mostly highly educated, in their forties, but were less likely to be previously employed in another entrepreneurial venture. In terms of the network structure factors, the results show that the women entrepreneurs were mostly married and more likely to receive assistance from family and friends, but were less likely to belong to membership entrepreneurial organizations. The financial capital results indicate women entrepreneurs are more likely to have financial difficulties at the start-up stage of their businesses, resulting in them heavily relying on personal savings to start their businesses. One result that did not correspond to the findings of other studies related to the gross revenue, net profit and personal income figures. These results were higher than expected due to four large businesses in the sample. Despite these financial results, most of the other results are consistent with findings from other studies on Brazilian women entrepreneurs (Weeks and Seiler, 2001; Instituto APOYO, 2000; NFWBO, 1999; NFWBO, 2000).

It is clear from the evidence presented and discussed throughout this paper that certain characteristics of the women entrepreneurs in Brazil were similar to those found for other women entrepreneurs in other geographic regions of the world, reconfirming the perspective that women entrepreneurs worldwide are more alike than they are different. The evidence indicates there is a legitimate opportunity for membership organizations that cater to women entrepreneurs.

As with other studies, this one also has limitations. For example, while the study was conducted in the second largest city in Brazil, the findings cannot be generalized to other Brazilian cities or to South American cities. In addition, the non-random process of obtaining the sample of women entrepreneurs also serves as a limitation on the generalizability of the findings.

While this study addresses many questions and fills some of the gaps from prior studies, there is room for future research. Future research could repeat the current study and expand the sample size, in other Brazilian cities and/or other South American cities.

APPENDIX A – QUESTIONNAIRE (QUANTITATIVE)

Questionnaire

1. What year did you become the owner of this business? __________

2. Did you:
____ Start the business yourself? ____ Start this business with a partner/partners?
____ Buy the business from someone else? ____ Inherit the business?
____ Other (Specify)? ___________________

3. Is this business owned solely by you? Yes __________No __________

4. Is this business a partnership _________ or a corporation ___________

5. How many partners, excluding yourself? __________

6. How many partners are men? _________

7. How many partners are women? ___________

8. What percentage of the business do you own? __________

9. In what State/Region (Sao Paulo, etc.) is the business located?
____

10. When you started this business, if outside capital was needed, did you have difficulties obtaining financial capital? Yes _______ No ________

11. When you started this business, where did you get your funds? (Circle all that apply and list the approximate percentages for each)

    ____ Personal Savings ____%
    ____ Gift from family and friends ____%
    ____ Loan from family and friends ____%
    ____ Loan from previous owner ______%
    ____ Credit card/personal loan ______%
    ____ Bank Loan ______%
    ____ Partners _______%
    ____ Other _______%

12. How difficult was it to get a bank loan? ____ not difficult at all ____ somewhat difficult ____ very difficult

13. Approximately, how much money did you start your business with ? __________

14. How many employees do you have (excluding yourself) ? ___________

15. How many of these employees are men? ___________

16. How many of these employees are women ? ________

17. What are the top three problems you face in your business (chose from list below)? (indicate letter)
First Choice ___________ Second Choice___________ Third Choice _________

    a. Too much competition
    b. State and federal regulations
    c. Not enough business knowledge
    d. Too many factors out of my control
    e. Finding good employees
    f. Rising costs of business
    g. Too much paperwork
    h. Not enough time for business/personal life.
    i. cash flow problems
    j. Having others take you seriously
    k. Keeping customers happy

18. Were you ever or are you self-employed in any business(es) besides this one?
Yes _______No ______

19. How important were each of the following reasons for becoming a business owner(choose from list below)? (indicate letter)
First Choice ___________ Second Choice___________ Third Choice _________

a. To be my own boss	h. To make more money
b. Always wanted to start my own business	i. The opportunity presented itself
c. Family responsibilities	j. Needed a job, wanted a job
d. Good way to find employment	k. Had hit glass ceiling or
e. Dead-end in my job	l. Dissatisfied with my work
f. Inherited the business	m. Someone else got me into this
g. I wanted to deliver an important service	n. Thought I could do better job than others

20. How much of each of the following kinds of experiences did you have before you became a business owner?

	A lot	Some	None at all
a. Job in the same field as the business	2	1	0
b. School education directly related to business	2	1	0
c. Seminars, programs relevant to business	2	1	0
d. Hobby, personal experience in same field	2	1	0
e. Supervisory/management experience	2	1	0
f. Accounting experience	2	1	0
g. Sales/marketing experience	2	1	0

21. What is the highest grade of school that you have completed? ____ None
____ Elementary School____ High School / Vocational School ____ College
____ Graduate School

22. What year were you born? ______

23. Which group best describes you: ____ Black/African American
____ White, not of Latino origin____ Latino____ Other(Specify)

24. What is your marital status?_____ married_____ separated/divorced_____ widowed
_____ single, never married

25. a) Do you have any children? Yes ______ No ______b) How many? __________

26. Did you see going into business as your only alternative (in order to obtain an income)?

Yes ______ No ______

27. When you started this business, did you obtain any assistance from (check all that apply):_____Family_____ Friends_____ Other (please specify) _____________________

28. Does your family assist you with the operation of the business? Yes_____ No _____

29. Do your friends assist you with the operation of the business? Yes _____ No_____

30. Does assistance for the operation of your business come from any other sources?
(please specify)_______________________ _________________________

31. Do you have any family members who are business owners? Yes ______ No _____

32. Do you have any friends who are business owners? Yes ______ No ______

33. Do you have family members that work in the business on a paid/non paid basis?
Yes ________ No _______

34. Do you have friends that work in the business on a paid/ non paid basis?
Yes ________ No _______

35. Do you belong to any organizations that assist you in the operation of your business ?
Yes ________ No _______

36. How many of these organizations do you belong to? _______

37. What is the approximate total sales/revenue from your business for the past year?______________

38. What is the approximate net profit or net revenue from your business for the past year? ____________

39. What was your approximate personal income from your business for the past year?________________

40. Is your business based in your home/home office? _______yes ________no

41. What type of business do you operate? _____________________________

APPENDIX B – QUESTIONNAIRE (QUALITATIVE)

Personal Interview with Women Entrepreneurs

Name of Entrepreneur_______________________________
Location____
Telephone Number__________________________________
Type of Business____________________________________

1. Why did you enter this specific type of business or industry?

2. What would you have done differently if anything, in terms of your training or experience, before starting this businesses?

3. How much assistance do you receive from individuals in your circle (friends, family, etc.)?

4. Is there someone who helps you in the business, who has significant experiences in your field /industry? How long on average have you known these individuals?

5. If you had difficulty obtaining financial capital for the business, why do you think this is so?

6. How do you define success?

7. What factors (if any) do you feel could improve your financial position?

8. What societal, governmental issues would need to be addressed to assist women entrepreneurs in your country?

9. In addition, what level of assistance obtained from organizations, whether membership organizations or women's only organizations, were most effective?

10. To and what extent being female impacted your current entrepreneurial position (financial success, etc.)?

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FACTORS THAT SHAPE THE HUMAN RESOURCE ARCHITECTURE IN THE AUSTRALIAN BUSINESS ENVIRONMENT: THE DELPHI TECHNIQUE

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ABSTRACT

A model of human resource architecture is a framework by which to distinguish employees in order to design human resource support processes. Organizations engaging in multiple sourcing modes are likely to require distinct configurations of human resource practices that facilitate the utilization and deployment of human capital for each separate employment mode. This paper applied the theoretical American human resource architecture model developed by Lepak and Snell (1999) into the Australian business environment. The Lepak and Snell model proposed that within organizations, considerable variance exists with regard to both the uniqueness and value of skills. Juxtaposing these two dimensions, they built a (2 x 2) matrix describing different combinations with their corresponding employment relationships and human resource systems. Using the Delphi Technique, this study was able to identify five key factors in the Australian business environment that were not present in the American model. They included 1) strategic focus of the organization, 2) organizational structure, 3) competitiveness of the industry, 4) type of industry and the type of worker included in the organization.

JEL: M12

KEYWORDS: core employees, contingent workers, human resource architecture, job security, Delphi technique, contractors, tacit knowledge.

INTRODUCTION

Since 1980s, the endless round of restructuring and re-engineering by corporations had transformed the new employment relationship (Kitay and Lansbury 1997; Wright 1995). Continued cost pressures and the need for fast-market responses have forced employers to build work forces that are extremely flexible and cost-effective (Oakland and Oakland 2000). As a result, the evolving model for this employment relationship took several forms. There are several different HR architecture models (Atkinson 1985; Handy 1995; Lepak and Snell 1999) that clearly advocate a differential investment strategy for different categories of employees:

First, the Atkinson labour flexibility model (1985), suggested that organizations can design their workforce proactively to meet their business needs using flexible staff arrangements. Atkinson identified three types of flexibility employment modes: (1) numerical flexibility (2) functional flexibility and (3) financial flexibility. This model recognised "core" and "peripheral" employees. Peripheral employees consist of temporary, part time or contractual workers. Traditionally these workers have been referred to as atypical workers in Europe, while the term contingent labour is often used in the American literature. However, in Australia, these employees would be referred as non permanent or casual staff (Gutherie 2001). This group of the labour force is utilized when organizations adopt numerical flexibility which involves the expansion and contraction of their employees based on market fluctuations and competitive pressures (Hall; Lesperance 2001).

Second, the Shamrock model envisioned by Handy (1995) provided an organization with the flexibility it needed to meet its operational, production and environmental demands. This model consisted of three employment components, each part representing an essential human resource base for the organization.

The first employment sector contained the organization's core professional permanent employees. The second sector consisted of the flexible workforce, or peripheral employees, and this included temporary contract holders and part time workers (Cauldron 1994a). The final component contained individuals or organizations that provided a complete non-essential work that could be done better and more cost effectively than using core and peripheral employees.

Third, in 1999, American researchers, Lepak and Snell developed the foundation of a human resource architecture that aligned different employment modes and employment relationships. This theoretical model segmented employees into four quadrants according to the value and uniqueness of their skills in relation to the "core processes" of the organisation. The four employment modes are (1) internal development (core), (2) acquisition, (3) contracting and (4) alliance. According to Lepak and Snell (1999), the Internal development employment mode represents core employees that a company will invest in, in terms of training and development, remuneration and benefits and other self enhancement HR programs that will protect their investment (Entrekin and Court 2001; Lepak and Snell 1999). The Acquisition employment mode represents to a considerable extent, autonomous professionals such as accountants, lawyers, academics, software engineers. These people have valuable skills that are not unique to a specific organization and are fairly widely distributed in the labour market. These employees have a conditional loyalty at best and are committed to their profession (Entrekin and Court 2001; Lepak and Snell 1999).

The contracting employment mode represents employees whose skills are low in value and uniqueness and essentially represent labour as a commodity which is widely available and can be purchased and disposed of as required. Staffs are usually contractual and out-sourced. Temporary relief staff in clerical and secretarial areas, call centre staff, cleaning and maintenance are jobs that fall into this category (Entrekin and Court 2001; Lepak and Snell 1999). The Alliance employment mode represents low value high uniqueness staff that the company need not directly employ. They are low in value and fail to add value to the core processes or contribute to a competitive advantage. The skills are unique in that a company does not need them often enough to justify their full time employment. An example could be an alliance between a company and a university to provide certain types of research inputs on a continuing basis where the synergistic value of the relationship exceeds the value each institution can generate on its own (Entrekin and Court 2001; Lepak and Snell 1999). Hence, this study applied the theoretical American human resource architecture model developed by Lepak and Snell (1999) into the Australian business environment and this paper presented the literature review, the research method (Delphi technique), the results and discussion of this qualitative research.

LITERATURE REVIEW

A model of human resource architecture is a framework by which to distinguish employees in order to design human resource support processes. The human resource architecture discloses two view points: the first view is that each employment mode carries with it an inherently different form of employment relationship (Allan 2002). Rousseau (1995) describes employment relationships as the "psychological contract of individual beliefs, shaped by the organisation, regarding terms of an exchange agreement between individuals and their organizations" (see p.9). As employment modes differ, so too does the nature of the psychological contracts.

The second view of the human resource architecture considers the patterns of HR practices or HR configurations to help define the employment mode maintain the employment relationship and ultimately support the strategic characteristics of human capital. Organizations engaging in multiple sourcing modes are likely to require distinct configurations of human resource practices that facilitate the utilization and deployment of human capital for each separate employment mode. Essentially, these different human resource models indicate that certain forms of human capital are more valuable to organizations and more available in the open labor market than others (Wright & Snell 1998).

Other researchers such as McLean, Kidder, and Gallagher (1998) provided a theoretical framework for understanding how perceptions of the psychological contract may differ according to employment relationships. They suggested that part-time employees who have a more tenuous relationship with the organization will focus less on relational elements than their permanent counterparts. These researchers also posit that part-time employees plan on working for a given organization for a shorter, more finite time frame, whereas, full-time core employees expect to have a longer, more indefinite relationship with the organization (Barner 1994). The formalization of employment practices is another way employers guarantee core employees a secure job future (Osterman 1999).

The extent of formalization can thus affect an employer's attitude toward employees: the higher the level of formalization, the stronger the employer's intention to protect core employees. Therefore, the attainment of employees' commitment and cooperation can be linked to the implementation of internalisation practices which usually represent the employers' intention to guarantee job security and to train core employees (Abraham 1990; Kochan and Osterman 1994; Morishima 1998; Osterman 1999).
Generally, core employees are regarded as permanent workers (Segal and Sullivan 1997). As the primary labour market, core employees become the glue that holds an organization together, and their knowledge, experience and commitment become critical to its success. However, a review of prior literature revealed that a number of researchers (Allan and Sienko 1997; Gramm and Schnell 2001; Segal and Sullivan 1997) have defined core employees abstractedly.

American researchers, Lepak and Snell (1999) describe core employees of today's organizations as high value, high uniqueness employees whose skills and knowledge are a source of competitive value to the organization. Their value and uniqueness may be based on 'tacit knowledge' that would be valuable to the competitor and these skills and knowledge are related to core processes developed internally and built up overtime (Entrekin and Court 2001; Lepak and Snell 1999). These researchers advocate the theoretical model of HR architecture that segmented employees into four quadrants according to the value and uniqueness of their skills in relation to the "core processes" of the organization. Lepak and Snell (1999) proposed that within organizations, considerable variance exists with regard to both the uniqueness and value of skills. Juxtaposing these two dimensions, they built a (2 x 2) matrix describing different combinations with their corresponding employment relationships and HR systems. As this model is only applicable in United States, this researcher decided to explore this issue further by applying it in the Australian business environment using the Delphi Technique to pose the research question

What are the factors that impact on the theoretical Human Resource Architecture in an Australian business environment?

METHOD

A Delphi technique was applied to determine factors in the Australian business environment that was not present in the American model. The objective of most Delphi applications is the reliable and creative exploration of ideas or the production of suitable information for decision making. This method has been shown to be an effective way to conduct research when the responses being sought are valued judgments rather than factual information (Dalkey and Rourke 1972). It is particularly useful for studies that call for subjective judgement rather than precise statistical analysis (Linstone and Turoff 1975; Rowe and Wright 1999).

Panelist

The 4panelists used for this study were all experts from the Australian business environment (HR practitioners, industrial psychologists and academics). All were associated with human resources management, researching, teaching or policy development. Many had contributed to the existing literature on management. The panellists' knowledge of the subject matter at hand is the most significant assurance of a quality outcome, and so participants were chosen because of their expertise related to the subject (Stone Fish & Busby, 1996). A total of 20 nominees consisting of senior academics, HR practitioners and industrial psychologists were contacted through postal mail. The nature of the study was explained and they were invited to participate. Thirteen experts accepted. The panel size of thirteen fits within the guidelines recommended for Delphi studies (Helmer 1983; Turoff 1975). The demographic data of the panel were reported in Table 1.

Table 1: Demographic Characteristics of the Delphi Panel Members

Characteristic	Number	Percentage
Invited Participants	20	100
Accepted Participants	13	66
Age		
30-40	2	15.38
41-50	4	30.77
51-60	4	30.77
61-70	3	23.08
Gender		
Male	10	76.92
Female	3	23.08
Highest Qualifications		
PhD	9	69.23
DBA	1	7.69
MBA	1	7.69
MHRM	1	7.69
M.Psych.	1	7.69
Occupation		
Senior Academics	6	46.15
HR Practitioners	4	30.77
Industrial Psychologists	3	23.08

This table provides the age, gender, qualification and occupation of the Delphi panel members.

Application of the Delphi Technique

Three rounds of questionnaires were mailed to the panel of experts. The first round provided detailed information of the Lepak and Snell Model (1999) and a set of relatively open-ended set of questions posed to identify the different factors that impact on the Human Resource Architecture in the Australian environment. Responses to the open-ended question in the first round were analysed qualitatively and categorised or grouped by frequency or similarity of response in order to reduce the number to a manageable level but yet keeping the essential meaning of the responses. The results were then grouped together under a limited number of headings and statements (eg. definitions of core employees; needs of core employees) and this was then drafted for circulation to all participants in a second questionnaire. The second round used questions developed from responses to the first questionnaire.

The participants were asked to rank each statement on a 1 to 5 scale (1 being the most important) and to optionally comment on each question. Responses to second round were analysed to determine the ranking of the items. Ranking votes (1-5) assigned to items by participants in questionnaires 2 were tallied. In the final round, participants re-ranked their agreement with each statement in the questionnaire, with the opportunity to change their scores in view of the group's responses. The re-ranking's were summarized and assessed for the degree of consensus. This resulted in the selection of five major factors (in order of importance) that impact on the Australian human resource architecture.

RESULTS

Factors Affecting the Australian Human Resource Architecture Model

Table 2 outlines the main factors affecting the Australian Human Resource Architecture model. The five key factors selected by the panel in order of its importance included 1) strategic focus of the organization, 2) organizational structure, 3) competitiveness of the industry, 4) type of industry and the type of worker included in the organization.

Table 2: Factors Affecting the Australian Human Resource Architecture Model

Rank	**Factors of the Australian HR Architecture**
1	Strategic focus of the organization (e.g. Project, Growth and Maintenance).
2	Organizational Structure (e.g. international, local franchisee).
3	Competitiveness of the industry.
4	Type of industry (e.g. mining, manufacturing, and service).
5	Types of worker included in the organization (e.g. managerial, technical, trade).

This table provides the ranked factors of the Australian HR architecture not considered in the American HR architecture model (Lepak and Snell 1999).

Majority of the panel members considered strategic focus, organizational structure, the competitiveness and type of the industry as critical in shaping the human resource architecture in the Australian business environment. However, the levels of work (worker to CEO), type of worker (managerial, technical, trade), functional expertise of worker (eg marketing, finance, computing, HR, production) have lesser impact but still relevant to the structure of the model. Moreover, the respondents noted that the human resource architecture model is only applicable for large organizations. They considered that the limitation of the model is its assumption that innovation and development can be engineered as opposed to grown. One of the respondents pointed out that people should be linked to environment with a business model that is systematic, holistic and developmental with the dominant discipline being organizational ecology (Panelist 13).

The general theme derived from the experts' comments indicated support for the Lepak and Snell (1999) Human Resource Architecture Model but it was suggested that for the model to fit into the Australian environment several factors should be considered. These factors included strategic focus, organizational structure, competitiveness and type of industry, the levels of work, type of worker and functional expertise of work.

Overall, the panel assessment of the Lepak and Snell HR architecture model highlighted several missing factors. These factors were recognised as critical for the model to be successful in the Australian business environment. The identified factors included level of work, type of worker, the occupation and type of industry. Interestingly, some panel members commented that HRM in Australia is still regarded as fragmented functional processes and struggling to be a strategic contributor. Consequently, the desire to create a more strategic and sophisticated model would be problematical (see Table 3)

DISCUSSION

A number of researchers have assessed the many changes to organizations both in terms of organisation structure and employer and employee relationships (Allan and Sienko 1997; Fierman 1994; Kitay and Lansbury 1997; Kraut and Korman 1999). The changes in the organizational structure and the decline in job security have changed the psychological contract between employer and employee (Schmidt 1999). The essence of attachment between employer and employee has changed. Nowadays employers emphasise "employability" rather than long-term loyalty in a specific job (Cappelli 1999).

Table 3: Expert Comments On Factors Affecting the Australian Business Architecture in the Lepak and Snell Model 1999

Expert comments
The Human Resource Architecture Model is only applicable for large organizations and not small businesses. In smaller businesses one person may take on several of this role (Panellists 3, 5,).
The Human Resource Architecture Model is only applicable for large organizations and not small businesses. In smaller businesses one person may take on several of this role (Panellists 3, 5,).
I am cautious of a model which places so much emphasis on competitiveness and exclusivity in an increasingly networked environment. The limitation of the model is its assumption that innovation and development can be engineered as opposed to grown (Panellist 12).
This model has some validity in Australia however it is a US model developed in the US industrial context (Panellists 7, 9).
Yes, it very much reflects the Atkinson's Flexibility Model and a practice of lot of Australian organizations, especially government organizations. It is an emerging trend in Europe and UK" (Panellists 1, 2, 10, 13). However, one of the respondents acknowledged that "this model has limitation; it is grafted on to industrial era structures and practices. The employment modes are not linked to anything- not to performance, not to customers, not to building human and intellectual capital and not to vision (Panellist 11).
It is a rational model of organization and in this sense perhaps appropriate to the Australian business mindset (Panellist 8).
People should be linked to environment with a business model that is systematic, holistic and developmental with the dominant discipline being organizational ecology (Panellist 13).
I think organizations tend to see HR as a number of processes or systems, not as a strategic contributor. Therefore they are unlikely to be as sophisticated in their thinking as required by the model (Panellist 9).
Other models could use different criteria and still provide conceptual insights into the HR Architecture. For example, levels of work (worker to CEO), type of worker (managerial, technical, trade) and functional expertise of worker (marketing, finance, computing, HR) (Panellists 4, 6, 8).

This table highlights the expert comments on factors affecting the Australian business architecture in the Lepak and Snell Model 1999.

This new form of psychological contract is more evident because businesses are increasingly using non-core and part-time workers to gain flexibility at lower cost. The increased use of non-core employees and lack of commitment to a firm is cited as a reason for decreased levels of employee loyalty and lower levels of employee productivity (even though costs may decrease in the short run) (Allan 2002). Other concerns related to the use of non-core labour and decreased employee attachment include the social costs due to lack of job security and pension, health, and other non-wage benefits (Belous 1989; Gordon 1996; Ferber and Waldfogel 1998). The decline in job security is perhaps the most radical change accompanying the restructuring of employment relationships (Cappelli 1999b; Jacoby 1998).

With the emergence of the new organizational structure of employment, it raises the questions of Australian organizations HRM systems? What are the factors that impact on the theoretical Human Resource Architecture in Australia? Do they apply "Best practices fit all "or differential HR practices for different types of employees? (eg. core, contractors, alliance, and acquisitions). How do these practitioners perceive their effectiveness? Although it may be the case that some firms manage all employees the same way, regardless of their value and uniqueness, we anticipate that most firms make significant distinctions in the methods they use for different skill sets and that these are important determinants of firm performance.

The HR architecture model (Lepak & Snell 1999) examined in this research advocated a differential investment strategy for different categories of employees. The findings of this study indicate that the shaping of these employment modes is dependent on the influence of several factors in the Australian business environment. These factors include the strategic focus of the organization, organizational structure, competitiveness of the industry, type of industry and the type of worker included in the organization.

It is relevant to note that the Delphi panel suggested that these factors were not considered in the theoretical model developed by Lepak and Snell in1999. It is suggested that the impact of these factors may be the determinants of the type of HRM systems adopted by various Australian organizations (holistic or differential). These identified factors may therefore form the framework for the Australian HR architecture model.

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