CUSTOMER ATTITUDE AND INTENTION TOWARDS INTERNET BANKING: A CASE OF LICENSED COMMERCIAL BANKS IN COLOMBO DISTRICT, SRI LANKA[1]

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Abstract

The banking industry in Sri Lanka has been rapidly developing and internet banking has become one of the most important and modern applications that is used as an efficient and viable tool to create customer value. The study investigates customer attitude and intension towards using Internet banking of six Licensed Commercial Banks (LCBs) in the Colombo district in Sri Lanka by employing quantitative research approach. A survey was undertaken by administering a self-structured questionnaire which was circulated to 20 customers from each bank, totaling to 120 respondents through a convenient sampling technique. The literature suggests that, there are four major factors that determine the attitude towards internet banking, namely, (i) perceived ease of use, (ii) perceived usefulness, (iii) perceived risk and (iv) subjective norms. The survey results show a strong positive influence from perceived ease of use and perceived usefulness factors on attitude towards Internet banking, and this reveals that customers search for easiness and usefulness when using Internet banking. In contrast, perceived risk and subjective norms have become unimportant factors in determining attitude towards Internet banking. The study also tests the association between attitude and intention to use Internet banking. The findings suggest that an insignificant negative relationship between customer attitude and intention. This revealed that the majority of the customers depend on traditional channels to carry out their banking operations despite positive attitude towards Internet banking.

Keywords: Customer Attitude, Customer Intention, Internet Banking, Licensed Commercial Banks

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1. Introduction

Today's business world has been dramatically changed since the beginning of the last century, especially in the areas of information technology and communication. These changes have affected many economic sectors, including banking which has been led to new concepts such as e-finance, e-money, and e-banking. Internet technology has an effect on these transformations to destroy old models of how banking services are developed and delivered. By using Internet banking (IB), financial service providers, especially banks attempt to change the mixture of financial services produced and the way they deliver these services.

For any market economy, it is essential to have an efficient and effective commercial banking and financial system for well-functioning, to maintain financial stability and ultimately to encourage economic growth. Therefore, information and technological revolution motivated banks to spend more on technology to maximize return and to attract more customers. Subsequently, banks realized the keeping up with new technology as it helps businesses to keep their ideas away from their competition and provide more value-added services to the customers. These changes included computer and communication technology to replace manual and paper operations to electronic operations. In this regard, IB plays an important role in recent periods in the banking sector.

IB refers to systems that enable bank customers to get access to their accounts and general information on bank products and services using bank's website, without any intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Thulani et al., 2009). IB offers significant benefits for both banks and customers. It provides banks additional channels to deliver products and services to customers at a lower cost while expanding the customer base and thereby IB has become a strategic resource for achieving higher efficiency. It is also noticed that IB brings additional risks to the banks such as unauthorized access to the systems.

Central Bank of Sri Lanka (2014) has revealed that the computer literacy in Sri Lanka has increased during the period of 2001-2014 along with expanded Internet connections. Therefore, the ability of customers for internet access has developed which might have an impact on the expansion of IB.

The turnover of the banking, insurance and finance sector was the highest compared to other 19 business sectors in Sri Lanka which was 31.71 per cent of the total turnover of all business sectors. The net profit of the banking sector has increased by 17.9 per cent in 2014 in comparison to 9.8 per cent in 2013. Additionally, the net loans and advances portfolio has increased by 13.7 per cent in 2014, whereas the same was of 8.8 per cent in 2013, reflecting increased business activities during the year 2014 (Central Bank of Sri Lanka, 2014).
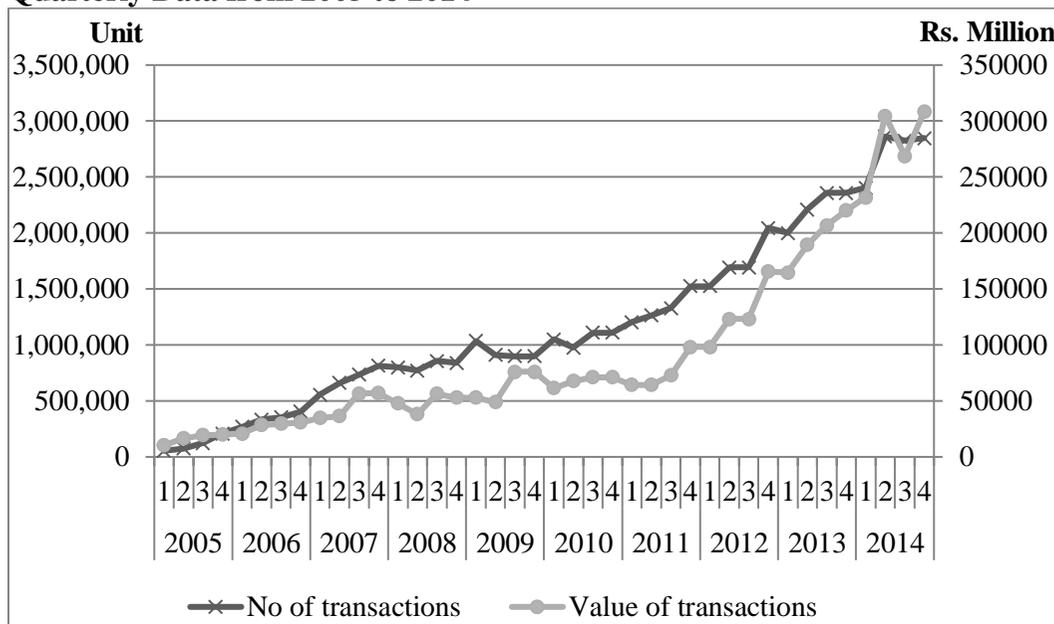
Sri Lankan banking sector includes both Licensed Commercial Banks (LCBs) and Licensed Specialized Banks (LSBs). The total banking network includes 25 LCBs, and 9 LSBs (Central Bank of Sri Lanka, 2014). LCBs have the highest industry share on both assets, and gross loans and advances which were 84.6 per cent and 89 per cent, respectively in 2014. In contrast, LSBs have assets, and gross loans and advances only 15.4 per cent and 11.2 per cent, respectively in 2014 (Central Bank of Sri Lanka, 2014). This shows that LCBs play an important role in the banking sector of Sri Lanka.

Since there were no special reporting requirements, it was found that gathering complete information on IB activities is a challenging task. Therefore, an attempt has been made to explore the present situation of IB provided by LCBs by accessing their websites. It was revealed that all LCBs provide IB facility to their customers which suits today's competitive market environment.

2. Research Problem

According to the Central Bank Annual Report (2014), the adoption of IB by LCBs has increased during the past years (see Figure 1). This can be attributed to the motives to achieve a competitive position and respond to the customer needs at a faster speed and lower cost. According to Figure 1, it was clear that the number and the value of LCB transactions undertook through IB have dramatically increased over the period from 2005 to 2014. There might be several factors that have caused this increasing trend in IB usage in LCBs. The existing literature shows attitude towards IB can be a major factor that influences the customer behaviour towards the use of IB.

Figure 1**: Number of IB Transactions and Value of IB Transactions – Quarterly Data from 2005 to 2014**

Source: Authors' construction based on data from Payment Bulletin, Central Bank of Sri Lanka (Various Issues from 2005-2014)

On contrary, Jayasiri and Weerathunga (2008) stated that although the majority of Sri Lankan customers were aware of e-banking facilities, most of them have not made much effort on those facilities and pay their attention on traditional ways of doing transactions at bank counters to a larger extent.

Suraweera et al. (2011) stated that although at present IB is changing its position from desktop PC to mobile phone, Sri Lankan customers still resist to use IB as the majority of them are not technology savvy. The study revealed that by 2010, only 1% of bank customers use online banking, telephone banking, mobile banking and Internet payment gateway which was not at a satisfactory level. This further shows that attitude and intention seem to be critical factors that can influence the customers to use IB. Hence, it is vital to understand customer attitude and intention towards IB in LCBs through a detailed analysis.

3. Research Objectives

Figure 1 shows that the usage of IB has increased in LCBs over the period from 2005 to 2014. However, the former studies have indicated a resistive attitude of customers towards IB. In this backdrop, it is important to identify the factors influencing the customers' attitude towards IB and to understand the relationships between those factors and attitude.

Therefore, the primary objective of the study is to investigate the factors that influence the attitude towards IB and their relationships.

As a secondary objective, the study investigated to what extent attitude is associated with the intention to use IB. Finally, the study provides policy recommendations to the decision makers in LCBs to promote IB in Sri Lanka. Consequently, the findings will be useful for professionals and all the stakeholders in LCBs, especially for developers of information systems to enhance the IB facility to motivate customers to increase the usage of IB.

4. Literature Review

The purpose of the literature review is to identify the factors that determine the customer attitude and intention towards using IB. Section 4.1 presents the theoretical review while empirical review is undertaken in section 4.2. Finally, the conceptual framework will be presented in section 4.3.

4.1 Theoretical Background

This section is devoted to understand how theoretical models explain the factors that determine customer attitude and intention towards the use of IB. From the existing literature, it is clear that there are several theories and models that can be used to explain the determinants of customer attitude.

4.1.1 *Theory of Reasoned Action (TRA)*

Fishbein and Ajzen (1975) proposed this theory and it has been built on three guidelines; Behavioural intention, attitude and subjective norms. This theory recommends that the behavioural intention of a person is subjective by the attitude of that person (i.e., the person's valuation of a positive or negative result derived by the behaviour) and subjective norms (such as the perceived social pressure to perform or not to perform the behaviour).

4.1.2 *Technology Acceptance Model (TAM)*

Davis et al. (1989) established the TAM as a development of TRA. TAM predicts the use and acceptance of an information system by individual users. It describes two major factors that determine the attitude towards the use of an information system i.e., perceived usefulness and the perceived ease of use. Then, the model says that the attitude determines the intention to use (Davis et al. 1989). TAM is one of the most utilized models in studying IB acceptance (Al-Gahtani, 2001; Venkatesh and Davis, 2000).

Eriksson et al. (2004, p.203) identify TAM as the highly suitable model to study the IB usage. The present study is mainly based on TAM. At the same time, this study approaches TRA as well since it is the base for TAM. Apart from TAM and TRA, scholars have introduced two models to explain technology acceptance namely, Theory of Planned Behaviour (TPB) and

Unified Theory of Acceptance and Use of Technology (UTAUT). Ajzen (1991) introduced TPB and Venkatesh et al. (2003) constituted UTAUT, which were drawn on TRA and TAM.

4.2 Empirical Review

American Bankers Association (2010) has stated that IB facilitates consumers to pay much concentration on their financing activities than before. Further, this study has disclosed that IB helps consumers to manage their financing activities to a greater extent.

Attitude is considered as one of the most important concepts in consumer behavior studies. Hence, it attracts a considerable attention among researchers to probe the relationship between the behavior of bank customers and their attitude.

4.2.1 *Customer Attitude*

Fishbein and Ajzen (1975, p. 5) define attitude as "an individual's positive and negative feelings about performing the target behavior". The attitude theory suggests that the more favourable attitude a person has towards a given product or service, the more likely that the person is to buy or use the product or service (Fishbein and Ajzen, 1975). Attitudes develop over time through a learning process affected by reference group influences, past experience and personality (Assael, 1981).

4.2.2 *Perceived Ease of Use*

TAM explains the impact of Perceived Ease of Use (PEU) on attitude. Davis et al. (1989, p. 985) define PEU as "the degree to which the prospective user expects the target system to be free of effort". Venkatesh and Davis (2000) have stated that PEU as a construct tied to an individual's assessment of an effort involved in the process of using the system. Kolodinsky et al. (2004), Al-Sukkar and Hasan (2005), Ravi et al. (2007) and Vatanasombut et al. (2008) have supported the effect of PEU with a positive impact on attitude.

4.2.3 *Perceived Usefulness*

According to TAM, Perceived Usefulness (PU) is the other factor that has an impact on attitude towards IB. According to Mathieson (1991, p. 174) PU is "the level by which a person relies on the possibility of the use of a system that will add to his or her activity". In other words, PU is "the extent to which the system will enhance his/her job performance" (Doll et al., 1998 as cited in Eriksson et al., 2004, p. 204). Many empirical studies have identified a significant positive impact of PU on customers' attitude towards IB (Venkatesh et al., 2002; Chen and Barnes, 2007; Gao et al., 2012). When customers observe perceptible benefits derived from IB, they tend more to

possess a positive attitude towards IB. If a customer believes that a certain application will help him to perform the work better, there will be a motivation to adopt IB (Davis et al., 1989). Venkatesh and Davis (2000) have recognized a strong positive effect of PU on the usage of an application.

4.2.4 *Subjective Norms*

TRA explains Subjective Norms (SN) as a factor that determines the intension to use the information systems. Customers' behaviour can be influenced by various social entities including friends, family, neighbours, colleagues, superiors, etc. According to Ravi et al. (2007, p. 65), SN can be described as "the social influences that may influence a person's intention towards the IB use". It denotes the belief of consumers about how the people whom they esteem perceive their acceptance of IB. Davis et al. (1989) has emphasized the significance of SN in user acceptance of information technology when they examine that in certain situations people use technology to comply with commands or expectations of other persons in contrary to their own feelings and beliefs. According to Ravi et al. (2007), it is evident that social pressure to use IB has a positive and significant impact on customer's attitude towards IB.
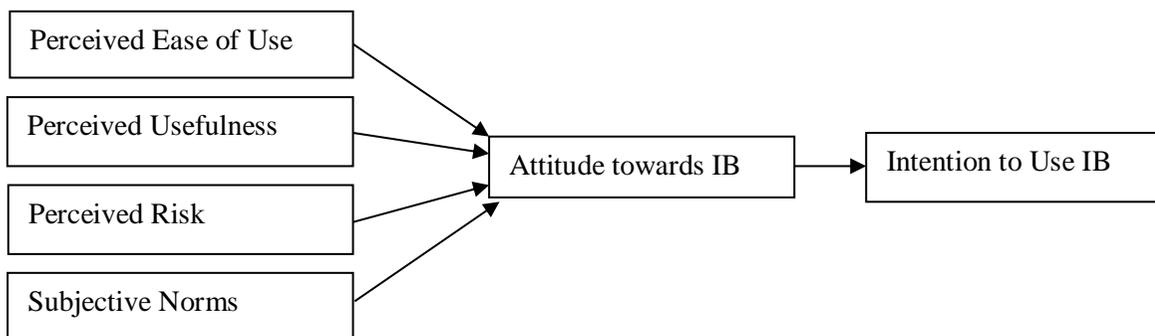
4.2.5 *Perceived Risk*

The use of IB involves many types of risks. These include financial risk, performance risk, physical risk, social risk, psychological risk, and time risk (Gan et al., 2006). Jarvenpaa et al. (1999), Bhatnagar et al. (2000), Liao and Cheung (2001), Ruyter et al. (2001), Featherman and Pavlou (2003), Kolsaker et al. (2004), Park et al. (2004), and Pavlou (2003) have identified consumer risk perceptions as a major obstacle that can slow down the growth of online commerce and e-services. Bauer (1960) define risk in terms of uncertainty and consequences associated with consumer's actions. Perceived Risk (PR) increases with uncertainty and/or the magnitude of associated negative consequences (Lu et al., 2005). Chan and Lu (2004) identified that the degrees of risk that consumers perceived and their own tolerance of risk taking are factors that influence their purchase strategies.

5. Conceptual Framework

Figure 2 shows the conceptual framework developed for the study. Variables for analysing the customer attitude towards IB were identified based on TAM model, TRA model and review of the former research articles. These variables are Perceived Ease of Use, Perceived Usefulness, Perceived Risk and Subjective Norms. The influence of those factors on customer attitude towards IB was studied firstly and secondly the association between attitude and intention towards IB was given focus.

Figure 2: **Conceptual Framework**

Source: Constructed by authors based on TRA, TAM, and previous research studies (Jarvenpaa et al., 1999; Bhatnagar et al., 2000; Liao and Cheung, 2001; Ruyter et al., 2001; Featherman and Pavlou, 2003; Kolsaker et al., 2004; Park et al., 2004; Pavlou, 2003)

6. Methodology
This section illustrates the research design, means of sample selection, method of data collection and techniques used in analysis.

6.1 Research Design
The research approach is quantitative which is planned to get an in-depth understanding of how identified four factors influence on attitudes towards IB. Additionally, the secondary objective of the study, i.e., to study how attitude is associated with intention to use IB, also address using a quantitative approach.

6.2 Population and Sample Selection
LCB customers in Colombo district is considered as the population. In selecting customers to the sample, all LCBs were ranked in ascending order based on the turnover for the year ending on 31st March 2014. Only 6 LCBs were selected which earned nearly 75% per cent of the total turnover of LCBs in Sri Lanka (see Table 1).

Table 1: **Selection of LCBs for the Study**

Sample	Turnover (Rs. Millions)
Bank of Ceylon	13,574
Commercial Bank of Ceylon PLC	11,180
Hatton National Bank PLC	9,005
People's Bank	14,219
Sampath Bank	4,914
Seylan Bank	3,078
Total	55,970
Total Market Turnover	75,175
Market Share %	75

Source: Authors' construction using the data from annual reports of LCBs (2014)
For the survey, one branch from each LCB was selected based on convenient sampling method. From each bank, 20 customers were interviewed on the basis of convenient sampling totaling 120 respondents. There were only 42 per cent of IB users and the majority, i.e., 58 per cent of respondents had not still adapted IB.

6.3 Data Collection Method
A structured questionnaire was used to collect data. The first section of the questionnaire was to collect demographic information such as age, sex, experience, professional status, marital status and position while the second section contained questions regarding the ability of accessing internet. The third section attempted to collect information, which is related to customer attitude towards IB under the four factors of PEU, PU, PR and SN.

6.4 Variables and Data Analysis Procedure
The factors, PEU, PU, PR and SN, were considered as independent variables and customer attitude towards IB has been considered as the dependent variable for factor analysis which is being conducted to address the primary objective. Behavioral intention was incorporated to study the association between intention and attitude under the secondary objective.
      The coefficient of Cronbach's alpha was used to test the reliability of the variables. Then, data analysis was undertaken using the Microsoft Excel software employing factor analysis technique.

7. Findings and Analysis
7.1 Reliability Test
Cronbach's coefficient alpha was used to ascertain the reliability of the instruments while testing the internal consistency of the scales used in measuring the variables. The coefficient of above 0.5 for individual test

variables was accepted (Nunnally, 1978). The analysis of the consumer attitudes towards IB consisted of 25 items and Cronbach's alpha values for the IB items were 0.787 which is an acceptable level (see Table 2).

Table 2: **Reliability Test**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.787	0.806	25

Source: Survey data (2015)

7.2 Analyzing the Customer Attitude towards Internet Banking

As the primary objective, the study examined the relationship between the four factors and customer attitude towards IB. To build a relationship between independent and dependent variables, the study conducted a factor analysis. Before conducting the factor analysis, the suitability for the factor analysis was checked. Kaiser-Mayer-Olkin measure of sample adequacy (KMO value) was 0.659 which exceeded the minimum value of 0.6. Therefore, sample adequacy was at a satisfactory level. Bartlett's test was significant at 5 per cent level (0.000 < 0.05) revealed the suitability of sample for the application of factor analysis.

According to the correlation matrix (see Table 4) there were 0.203, 0.396, 0.216 and 0.729 correlations between PEU, PU, PR and SN, respectively with customer attitude towards IB (A). Moreover, through the factor analysis (using the extraction method of principal component analysis with Varimax rotation), two factors were identified with eigen values which are greater than 1.0 and the cumulative total variance explained is 68.16%. According to the initial eigenvalues, the association between PEU, PU and customer attitudes towards IB have strong associations than the other two factors; PR and SN (see Table 5).

Table 3: **Kaiser-Meyer-Olkin and Bartlett's Tests**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.659
Bartlett's Test of Sphericity	Approx. Chi-Square	145.774
	Df	10
	Sig.	.000

Source: Survey data (2015)

Table 4: **Correlation Matrix**

		PEU	**PU**	**PR**	**SN**	**A**
Correlation	PEU	1.000	.269	-.080	.361	.203
	PE	.269	1.000	.116	.465	.396
	PR	-.080	.116	1.000	.218	.216
	SN	.361	.465	.218	1.000	.729
	A	.203	.396	.216	.729	1.000

Source: Survey data (2015)

Table 5: **Total Variance Explained**

Component	Initial Eigen values			Extraction Sums of Squared		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.317	46.346	46.346	2.317	46.346	46.346
2	1.091	21.818	68.164	1.091	21.818	68.164
3	.695	13.903	82.067			
4	.648	12.962	95.029			
5	.249	4.971	100.000			

Extraction Method: Principal Component

Source: Survey data (2015)

7.3 Test of Association between Customer Attitude towards IB and Intention to Use IB

Table 6: **Correlation between Attitude and Intention to Use IB**

		A	**BI**
A	Pearson Correlation	1	-.085
	Sig. (2-tailed)		.385
	N	120	107
BI	Pearson Correlation	-.085	1
	Sig. (2-tailed)	.385	
	N	107	107

Source: Survey data (2015)

As Table 6 indicates, there is a negative relationship between customer attitude towards IB and intention to use IB. However, that relationship was found to be insignificant. However, Al-Somali et al. (2009), Lee (2009), Karjaluoto et al. (2002), Pikkarainen et al. (2004) and Al-Sukkar (2005) emphasized the central role of attitude in determining behavioral intention towards electronic banking services.

8. Conclusion and Recommendations

The study mainly focused on the analysis of customer attitude towards IB under four factors; PEU, PU, PR and SN. Attitude towards IB has strong positive relationships with PEU and PU while PR and the SN have weak positive relationships. Therefore, it can be concluded that LCB customers of Colombo district mainly search for easiness and usefulness when adopting IB.

The findings revealed that, PEU was an important factor that influence on attitude towards IB. Findings of Kasheir and Alexandria (2009) also revealed the same significant influence of PEU. Therefore, easiness of IB should be improved through user friendly and efficient bank websites.

Findings with regard to PU show a strong positive relationship with attitude towards IB. Many studies provided the same significant positive effect of PU (Chen & Barnes, 2007; Gao et al., 2012; Venkatesh et al., 2002). Hence, bank officers should evaluate and observe the usage of the IB system implemented in terms of the number of customers using IB and the frequency of usage. Information Technology Managers of banks need to obtain feedback on the technological aspects of IB and initiate steps to educate customers on the use this technology.

The results showed that PR is not a significant factor in determining customers' attitude towards IB. In contrast, the effect of PR on attitude was found significant by Eriksson et al. (2008), Jaruwachirathanakul and Fink (2005), Kolodinsky et al. (2004) and Vatanasombut et al. (2008). LCBs should build trust among their customers continuously through trust creating activities. LCBs should establish security and privacy features as customers expect that the information provided during the banking transactions is secure, and they are not disclosed to third parties.

Additionally, the study revealed a weak positive relationship between SN and attitude towards IB. The same relationship has been identified in several studies (Shih and Fang (2006); Wan et al. (2005). However, Ravi et al. (2007) found a strong positive relationship. The influence from social groups can be concluded as insignificant on customers' attitude towards IB. Hence, the promotional programmes of IB should target individual customers rather than social groups.

In contrast, the negative and insignificant relationship between attitude and intention indicates that most of the customers are reluctant to use IB facility which is consistent with the existing literature (Suraweera et al., 2011). It is worth noted that, although LCBs have invested in IB facility, if customers do not have an intention to use IB, LCBs would not be able to achieve expected returns.

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Appendix
Cronbach' Alpha- Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q_3.1	61.18	76.610	.823	.	.752
Q_3.2	61.02	77.307	.657	.	.759
Q_3.3	60.42	103.071	-.676	.	.826
Q_3.4	60.98	75.307	.846	.	.749
Q_3.5	60.40	105.528	-.716	.	.833
Q_3.6	60.50	75.128	.701	.	.754
Q_3.7	60.80	77.703	.747	.	.756
Q_3.8	60.85	78.182	.770	.	.757
Q_3.9	60.78	77.563	.808	.	.755
Q_3.10	60.80	76.472	.883	.	.750
Q_3.11	60.18	106.353	-.634	.	.840
Q_3.12	60.65	85.105	.289	.	.782
Q_3.13	61.15	82.285	.685	.	.767
Q_3.14	60.95	99.690	-.613	.	.815
Q_3.15	61.12	79.958	.744	.	.761
Q_3.16	60.68	103.815	-.660	.	.829

Appendix Continued

Q_3.17	61.00	77.231	.754	.	.755
Q_3.18	61.30	81.651	.892	.	.763
Q_3.19	60.85	93.926	-.237	.	.800
Q_3.20	60.32	102.020	-.650	.	.823
Q_3.21	61.10	82.144	.758	.	.765
Q_3.22	60.48	77.435	.759	.	.756
Q_3.23	60.42	77.225	.789	.	.754
Q_3.24	61.32	76.071	.828	.	.751
Q_3.25	60.75	75.577	.834	.	.750