Demographic and relational variables and service quality in banking

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ABSTRACT

This paper seeks to complement the body of research on services quality in banking by studying the possible influences of individual characteristics and mode of banking on bank customers’ expectations and performance perceptions. Relationships between the individual customer characteristics of gender, age, income, educational attainment, and customer expectations of service as well as perceptions of service performance by banks were studied, as were influences of frequency of interaction and mode of interaction on customer expectations and performance perceptions of banks. This study utilized a survey sample of 250 bank customers drawn from the general population and a survey instrument derived from the well-established SERVQUAL scale. Findings revealed: older customers tend to rate banks higher on tangibles and empathy than younger customers; high-income customers have a higher expectation of empathy from banks; customers with lower educational attainment give higher ratings than other customers in general; no differences were found based on customer gender. Customers with higher frequency of interaction with banks showed higher expectations on tangibles; some differences were found in expectations between customers who had bank transactions with greater employee interaction and those who had bank transactions with less employee interaction.

Keywords: Service quality, service expectations, bank customers, bank service quality, service performance evaluation.
INTRODUCTION

Over the past three decades, topics related to services and service quality have engendered vigorous research within the disciplines of marketing and management. With the recognition of the role of the service sector in the economies of post-industrial societies, and calls for recognizing a service-dominant logic for businesses in general (Vargo and Lusch 2004), it can be said that delivering quality service is indisputably considered a *sine qua non* of business today. Banking and financial services, like other services, have received their fair share of research in various aspects of services management, services marketing and service quality. However, in spite of a plethora of research on services marketing and service quality, there remain a few lacunae, among which is the understanding of the influence of customer characteristics, and mode of service delivery, on service expectations and perceptions. This paper aims to expand our understanding of the relationship between key aspects of service quality and customer characteristics within the banking industry. A report based on the American Consumer Satisfaction Index (ACSI), Bryant and Cha (1996) observed that certain demographic characteristics (age, gender) influence consumer satisfaction across industries, whereas such an influence is not equivocally clear for other characteristics (socioeconomic status). A better understanding of customer characteristics such as demographics would allow marketers to engage in better segmentation and allows for the creation and offering of appropriate market offers to the resulting segments (Gurau and Ranchhod, 2002). Utilizing a survey methodology with respondents drawn largely from urban areas, and a parsimonious survey derived from the well-established SERVQUAL instrument of service quality, we sought to ascertain whether and how bank customers’ individual characteristics and their mode of contact with banks influence their expectations and their evaluation of banks’ service performance. By understanding how customer demographics and transaction mode (the ways in which customers transact with the bank) affect customer expectations and perceptions of performance, banks can customize their service and potentially enhance customer satisfaction. The study has implications for banks that wish to improve their understanding of customers’ expectations, and to align their efforts in service delivery with expectations.

LITERATURE REVIEW

The field of services marketing and service quality has evidenced considerable research efforts and publication in both academic and industry settings. Here, we review the relevant research on the influence of the variables being considered – consumer characteristics and mode of transaction, and consumer expectations and service performance evaluations – on consumer decision-making, satisfaction in general and, where available, in services.

Customer Expectations in Services

The role that customer expectations play in consumer behavior has long been recognized in the customer satisfaction/dissatisfaction literature, beginning with Oliver (1980). Expectations not only serve as the benchmark against which product/service performance is evaluated, but also affect the satisfaction from the product (Oliver 1980; Oliver and DeSarbo, 1988). The service quality literature acknowledges the importance of customer expectations, recognizing the difference between expectations and service performance perceptions as one of the antecedents.
to the evaluation of the quality of a service (Parasuraman, Zeithaml and Berry, 1985). Further, Zeithaml, Berry and Parasuraman (1993) explicated the nature of customer expectations in services. Customer expectations of service play a key role in both these streams of literature: in the former, expectations form part of the “disconfirmation of expectations” paradigm, whereas in the services marketing literature, expectations play a similar role – as the customer’s basis of comparison for evaluating service providers’ performance. Significant research has been conducted with the goal of improving our understanding of expectations (e.g., Boulding et al. 1993, Spreng, Mackenzie and Olshavsky 1996, Tse and Wilton 1998); however, with a few exceptions (e.g., Pitt and Jeantrout 1994; Prugsamatz, Heaney and Alpert 2007), much of this work concerns itself with refining the theoretical understanding of expectations in general, and not service expectations per se. In services, researchers have investigated the antecedents and consequences of expectations in specific contexts e.g., higher education (Scott, 1999; Blasco and Sauru, 2006), hospitals (Ford et al, 2013), nursing (Stenhouse, 2013), therapy (Andrews et al., 2013), information systems (Kettinger, 1997), and pharmacies (Renberg et al., 2010). Understanding of service expectations in the context of banks remains limited, especially where it concerns differing expectations and evaluation of performance among differing market segments and groups targeted/served by banks. For example, while Lewis (1992) studied U.S. and U.K. consumers’ expectations of and evaluation of their banks and found some interesting insights, these were not broken down by individual consumer characteristics.

The Influence of Consumer Characteristics: Gender and Age, Income and Education

The effects of the customer’s age on customer behavior and consequently, marketing activity, were identified in the marketing literature nearly seventy years ago (Alexander, 1947). In the intervening decades, numerous researchers have studied the effect that age has on various aspects of customer behavior and marketing. While Bryant and Cha (1996) and Mittal and Kamakura (2001) report age-related differences in customer satisfaction and consumer loyalty respectively, there is little by way of unequivocal findings on the effect in banking.

Gender differences have received considerable attention in several areas in marketing – see Caterall and Mclaran (2002) for a thirty-year review of research on gender and consumer behavior. Some notable studies include Dawson (1997), who found gender-based differences in ethical beliefs of salespeople; Moutinho and Goode (1995) found differences in consumer satisfaction; Stern, Rao and Gould, (1990) found both age and gender differences in the use of media; Meyers-Levy and Maheshwaran (1991) found differences in information processing strategies between men and women. Among other studies, Frank, Enkawa and Schaneveldt (2015) found differences between men and women on some factors that influence customer satisfaction and intent to repurchase a product, but not on others; Melnyk and van Osselaer (2012) found gender differences in response to loyalty program features; Jackson, Stoel and Brantley (2010) found gender differences in the hedonic value derived from visits to shopping malls but not in utilitarian shopping value; Porter, Donthu and Baker (2012) found gender to influence the formation of trust in an online environment, as did Riedl, Hubert and Kenning (2010); Mittal and Kamakura (2001) found older women to be more loyal to a business than other demographics.

The role of gender in influencing aspects of services marketing and service quality has also been studied to some extent. Some studies that have addressed the influence of gender of service quality and services marketing variables include: Melnyk, van Osselaer and Bijmolt
(2009), who found loyalty to service firms and individual service providers to vary by gender; Karatepe (2011), who found that among the well-established and commonly known dimensions of service quality, reliability and empathy influenced service satisfaction more among women than men. A study by Yelkur and Chakrabarty (2006), which compared the expectations of fast food restaurant service of men and women, and found that while overall service quality expectations were higher for women, gender did not influence expectations on the dimension of assurance. In a comparison of male and female users of online financial services, Maltby, Chudry and Wedande (2003) found differences in processing of online information, and appraisal of website features and design; Bhagat and Williams (2008) found gender to be an influence in the strength of professional service relationships.

**Customer Expectations and Individual Differences**

It is understood that the customer’s personal characteristics and the differences between individual customers have a significant influence on customer expectations. Individual characteristics were recognized as having a formative influence on expectations of service by Zeithaml, Berry and Parasuraman (1993). This seminal work, which continues to serve as a reliable framework of service expectations, identified two major personal determinants of service expectations: “Enduring Service Intensifiers” and “Personal Needs”. Enduring service intensifiers were further broken down into “derived expectations” and “personal service philosophies”. It is therefore known that expectations differ among service customers: some of the antecedents of expectations have been identified (for example, Willis and Kennedy 2004 identified the factors affecting the initial formation of expectations as well as changes in those expectations over time in higher education).

**Customer Evaluation of Service Performance and Individual Differences**

Customers’ evaluation of the performance of services is an important metric for any market-oriented-organization, whether its primary product is a tangible good, and especially so if its primary product – like a bank’s – is a service. The service evaluation of a bank and the quality of its relationship with customers has been identified as an antecedent of consumers’ attitudinal loyalty to the bank (Radomir, Plaia and Wilson, 2015). In the Gaps model (Parasuraman, Zeithaml and Berry, 1985), a number of gaps have been identified as plausibly leading to the evaluation of services, including expectations created through marketing communications. It is also conceivable that, due to differences in processing of such communications due to individual differences, expectations would vary among individuals. Extant research has demonstrated differences in evaluation of goods and services due to differences in individual characteristics. For example, Schmidt, Zayer and Calantone (2012) found gender differences in the evaluation of motion pictures, and Iacobucci and Ostrom (1993) found that women are more likely to focus on relational aspects of a service in their evaluation of services than to core aspects.

**Banking Mode, Customer Expectations and Evaluation of Service Performance**

The way banks interact with their customers has changed considerably with the adoption of technology. Few of today’s consumer banking transactions follow the classic mold of a personal interaction of the customer with a bank employee in a physical branch facility. While
the adoption of self-serve technologies such as ATM banking has existed for a while, the introduction of e-commerce as a banking interface has expanded exponentially in the past two decades. However, while self-service technology (SST) based customer interfaces have become ubiquitous in the U.S. and much of the world, they have not been universally adopted (Dabholkar, 1996; Meuter et al. 2003). A number of factors have been identified as responsible for customers’ preference for a personal transaction over an SST transaction: technological anxiety and customer demographics (Meuter et al. 2003), technological readiness (Liljander et al., 2007; Lin and Hsieh, 2007), characteristics of the SST, and a need for interacting with a service employee (Dabholkar 1996). While bank customers may choose to transact with their bank through one mode or another, there remains a gap in understanding whether there are differences in expectations of service quality and evaluation of service performance between these modes. Lewis (1991) found that while service delivered through technology-based interfaces was generally viewed positively, this feeling was not universal among consumers surveyed, and a significant minority of customers were dissatisfied with the SST modes of banking.

**RESEARCH QUESTIONS**

In light of foregoing discussion on the extant body of literature and gaps of understanding therein, the present study sought to improve understanding of customer expectations and performance evaluations in banking by assessing the influence of select customer characteristics and mode of banking. A number of research questions were formulated for empirical investigation in the banking industry. Considering the studies of gender differences in consumer behavior and the limited studies in services marketing, the following research questions regarding customer expectations and ratings of service performance were proposed:

RQ$_{1a}$: Does customer gender affect customers’ expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?

RQ$_{1b}$: Does customer gender affect customers’ perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

Regarding other customer characteristics, the following questions were proposed:

RQ$_{2a}$: Does customer age affect customers’ expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?

RQ$_{2b}$: Does customer age affect customers’ perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

RQ$_{3a}$: Does customer income affect customers’ expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?

RQ$_{3b}$: Does customer income affect customers’ perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

RQ$_{4a}$: Does customers’ educational attainment affect customers’ expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?
RQ₄b: Does customers’ educational attainment affect customers’ perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

Bank customers vary in terms of their frequency of transactions with banks. Since more frequent visits to a bank would lead to the accumulation of experience, it is plausible that this personal experience could make a difference in customers’ expectations and performance evaluations of banks. Thus,

RQ₅a: Does customers’ frequency of bank interaction affect their expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?
RQ₅b: Does customers’ frequency of bank interaction affect their perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

With the growth in non-traditional forms of banking, customer contact with banks may take one or more forms. While the traditional walk-up or drive through transactions remain significant, other forms of banking experience (based on SSTs, discussed earlier) that do not involve contact with bank employees (ATM, internet or mail) are becoming increasingly popular and prevalent. In light of this development, it is important to ascertain whether customer expectations remain constant through the range of banking modes offered by banks. Thus,

RQ₆a: Does banking mode affect customers’ expectations of service quality for a bank? Further, which of the dimensions of service quality are affected?
RQ₆b: Does banking mode affect customers’ perceptions of service performance for a bank? Further, which of the dimensions of service quality are affected?

METHODOLOGY AND DATA COLLECTION

A structured survey was utilized to collect data for this study. Participants were recruited from among a general population, with no pre-specified conditions other than that they were customers of banks.

The survey instrument consisted of four parts: an expectation section, a perception ratings section, a section on prioritization of dimensions of service quality, and a section on respondent demographics and mode of bank usage.

The expectations and perception ratings section consisted of 22 items each, adapted from the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988), which has been well-tested and applied in service quality research for over two decades. The psychometric properties of the SERVQUAL scale are well-established. While questions have been raised regarding the use of the two components of the instrument (expectations and perceptions) to arrive at difference scores as an indicator of service quality, we avoid this somewhat contentious issue by not using difference scores to indicate service quality. Thus, in the present study, the expectations items are used independently of the service performance ratings items, in line with the SERVPERF philosophy espoused by Cronin and Taylor (1992). Respondents were asked to indicate the nature of interaction with their banks by allocating 100 points over five modes: bank lobby, motor bank, automated teller machine (ATM), internet and mail.

A total of 250 questionnaires were administered, with 203 responses deemed usable. The response rate was 81.2%. Data collected from the survey was tabulated and coded after verifying
completeness. The data was analyzed using various multi-variate statistical techniques using IBM-SPSS Statistics 20 software.

Analysis and Results

A demographic profile of the sample was prepared, and the breakdown of the respondents by gender, age, income and educational attainment is provided in Tables 1-4 respectively. Observation of the profiles reveals that while the sample was generally representative of the U.S. population, the age profile was skewed towards a younger group than the population. In particular, the age group of 65 and older was significantly underrepresented in the sample. In terms of income distribution, the sample over-represented the income group under $ 25,000 and slightly underrepresented other income groups. The sample also underrepresented the population with lower educational attainments (e.g., educational attainment of “less than high school” accounted for only 2.0% of the sample, while it accounts for 12.9% of the general population (U.S. Census Bureau, 2012)

The expectations and performance perceptions of banks were analyzed by the four demographic variables – gender, age, income and educational attainment. Separate analyses of variance were performed with these demographic variables as factors and the summated scores on each of the five SERVQUAL dimensions for expectations and performance, as well as total summated scores for all expectations and all performance perceptions respectively. The analyses revealed the following:

Differences by gender (RQ1a and RQ1b):

No differences were found between the genders on expectations and performances as measured by the summated scores for the five well-established SERVQUAL dimensions independently as well as total summated scores over the twenty items. Thus, it appears that in banking, expectations of men and women do not differ significantly, and neither do their perceptions of the performance of their current banks.

Differences by Age (RQ2a and RQ2b): An analysis was made to determine if there were differences among the age groups on expectations and performance ratings on summated scores for the five SERVQUAL dimensions and the total summated scores over the twenty items. Testing at the 5% level of significance, there were no differences observed. However, at a 10% level of significance, differences were detected on some dimensions. It was found that there were differences among the age groups on performance of tangibles, reliability and empathy, as well as the summated performance scores. A post-hoc analysis, using Student-Newman-Keuls test revealed that the age group 65 and above had higher performance scores on tangibles, reliability and empathy as well as the summated scores for performance. While the findings are at a weaker level, they do indicate that older bank customers tend to rate their banks higher on tangibles, reliability and empathy. Interestingly, in today’s banking scenario, there appear to be no differences among different age groups as to the expectations of their banks on the five service quality dimensions.
Differences by Income (RQ_{3a} and RQ_{3b}): 

An analysis was made to determine if there were differences among the five income groups on expectations and performance ratings on summated scores for the five SERVQUAL dimensions and the total summated scores over the twenty items. Testing revealed differences in the expectation scores on summated scores of only one dimension – empathy. A post-hoc analysis revealed the group with the largest income (over $100,000) to display higher expectations on the empathy dimension than the other income groups. There were no significant differences on the overall summated expectation scores, and neither were there any significant differences on service performance ratings for any of the five dimensions or the overall summated performance score.

Differences by Education (RQ_{4a} and RQ_{4b}): 

An analysis was made to determine if there were differences among the five groups with differing educational attainment on expectations and performance ratings on summated scores for the five SERVQUAL dimensions and the total summated scores over the twenty items. No significant differences were found in expectations on any of the five dimensions individually or the summated ratings over the entire instrument. The analysis of performance ratings, though, did reveal some significant differences. The summated scores on ratings for all the five dimensions of performance were significantly different at the 5% level of significance, as were the summated ratings over the full instrument. Post-hoc analysis on the group differences revealed that on each of the dimensions as well as the overall performance ratings, the groups with the lowest educational attainment (did not complete high school) had given higher performance ratings to their banks than the other groups.

Differences by frequency of visit to bank (RQ_{5a} and RQ_{5b}): 

An analysis was made to determine if there were differences among the four groups with differing frequency of transactions with their banks, on expectations and performance ratings on summated scores for the five SERVQUAL dimensions and the total summated scores over the twenty items. Significant differences were found between the groups only on the factor scores for expectations of tangibles at the 5% level, and the factor score for the dimensions of assurance at the 10% level of significance, indicating weaker differences. A post-hoc analysis of the differences on tangibles revealed that the respondents in two groups with higher frequencies of visits to their banks (“5 to 8 times” and “9 or more times”) had higher expectations from their banks on the dimension of tangibles than the other two groups (“one time or less” and “2 to 4 times”). No differences were found between the groups on performance ratings on any of the five dimensions or the summated score for performance ratings over the entire instrument.

Differences by banking mode (RQ_{6a} and RQ_{6b}): 

Respondents were asked to indicate their mode of banking by allocating 100 points over five modes: bank lobby, motor bank, automated teller machine (ATM), internet and mail, based on their relative frequency of use. Based on their responses to this question, respondents were classified into two categories: those receiving banking services mostly through employee
interaction (bank lobby or motor bank) and those receiving banking services primarily through modes that did not involve employee contact (ATM, internet and mail). Two discriminant analyses were conducted between these two categories of banking mode: one with the 22 expectation variables and another with the 22 performance rating variables. The first analysis showed a Wilks’ lambda value of 0.968 (significant at 0.05 level of significance), and revealed the following expectations to significantly contribute to discrimination between the two categories of respondents:

- “The behavior of employees in banks should instill confidence in customers” (higher mean rating for contact mode customers).
- “The operating hours of banks should be convenient to all of their customers” (higher mean rating for contact mode customers).
- “Employees in a bank should never be too busy to respond to customers’ requests” (higher mean rating for non-contact mode customers).
- “Employees in banks should have the knowledge to answer customers’ questions” (higher mean rating for non-contact mode customers).

The second discriminant analysis had only one variable — “Bank employees should understand the specific needs of their customers” — discriminating between the contact mode customers and non-contact mode customers, with a Wilks lambda of 0.979 (significant at p<0.05), with a higher mean score on the variable for contact-mode customers.

**DISCUSSION**

Customer characteristics and their method of banking play a vital role in determining how banks will meet the expectations of their customers. The significance of this study was the revelation of how individual characteristics may subtly influence customer expectations and performance ratings of banks. Banks that wish to excel in service delivery should perhaps focus on the subtleties of customer expectations to gain a performance advantage in the highly competitive banking environment.

Older bank customers tend to focus on tangibles, reliability, and empathy, while customers with income over $100,000 have higher expectations in the area of empathy. The group with less than a high school education appeared to have lower expectations.

Expectations differences by banking mode displayed a significant discrimination between the customers with more direct contact with employees and those who had nominal contact. It was concluded that customers with more direct contact expected banks to instill confidence and have convenient hours of operation. Customers with nominal contact expected bank employees to never be too busy to respond to customer requests and have the knowledge to answer customers’ questions.

There is a tendency among many organizations to wait until significant dimension changes occur before taking action, which reflects a reactive attitude of responding to customer expectations. On the other hand, the top performing institutions are more proactive, identifying and taking advantage of subtle changes to ensure that expectations match up with perceptions. There is a need, therefore, for bankers to continually monitor the profile of their clientele and assess the effects of changing demographics on customer expectations and performance perceptions. Banks that offer service in multiple locations across vastly differing geo-demographic service areas must be particularly sensitive to these differences. It would be folly for such banks to study demographics at an aggregate level – each location calls for its own...
understanding of the demographics, and an assessment of their impact on expectations and performance ratings.

LIMITATIONS

This study offers a test of the influences of the individual demographic characteristics of age, sex, income and education, as well as transactional variables like customers’ frequency and mode of transaction with the bank. A limitation of the study is the use of a specific sample in the United States – a mature banking market that is characterized by relatively high incomes, increasing SST-based transactions, and reduced choice of banking institutions available. The sample was also characterized by individuals with a higher level of education than the general population. It is conceivable that the findings may be different in other locales due to differences in the availability of banks and competitive behavior among them, the prevailing service ethos, the influence of culture, leading to different expectations as well as service quality evaluations than what was found by the present study.

CONCLUSION

Banks, like other service businesses, often seek a differential advantage over their competitors. With the actual products offered by banks becoming more and more similar, service performance remains one way of achieving a differentiation in the minds of the customer. In order to achieve this differentiation, banks need to fully understand their customer base, its expectations of service performance from a bank, and its evaluation of the bank’s performance. This study investigated the influence of the customer’s demographic characteristics and mode of transaction with the bank on expectations and evaluation of service performance. The findings show that not all customer characteristics may be influential on customer expectations and performance evaluations. Banks and other service institutions would benefit from focusing on those aspects of their service design, performance and communications that matter to the relevant segments of their customer base.
REFERENCES


Appendix

Table 1: Respondent Profile by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>47.8</td>
</tr>
<tr>
<td>Female</td>
<td>52.2</td>
</tr>
</tbody>
</table>

Table 2: Respondent Profile by Age

<table>
<thead>
<tr>
<th>Age, in years</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 21</td>
<td>18.2</td>
</tr>
<tr>
<td>21-34</td>
<td>42.9</td>
</tr>
<tr>
<td>35-49</td>
<td>17.2</td>
</tr>
<tr>
<td>50-64</td>
<td>17.7</td>
</tr>
<tr>
<td>65 and older</td>
<td>3.9</td>
</tr>
</tbody>
</table>
Table 3: Respondent Profile by Income

<table>
<thead>
<tr>
<th>Annual income in $</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25,000</td>
<td>32.5</td>
</tr>
<tr>
<td>25,000-49,999</td>
<td>23.2</td>
</tr>
<tr>
<td>50,000-74,999</td>
<td>13.8</td>
</tr>
<tr>
<td>75,000-100,000</td>
<td>13.3</td>
</tr>
<tr>
<td>Over 100,000</td>
<td>17.2</td>
</tr>
</tbody>
</table>

Table 4: Respondent Profile by Education

<table>
<thead>
<tr>
<th>Educational attainment</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not complete high school</td>
<td>2.0</td>
</tr>
<tr>
<td>Completed high school</td>
<td>18.7</td>
</tr>
<tr>
<td>Completed some college</td>
<td>44.8</td>
</tr>
<tr>
<td>Obtained a bachelor’s degree</td>
<td>27.1</td>
</tr>
<tr>
<td>Master’s degree or higher</td>
<td>7.4</td>
</tr>
</tbody>
</table>