How Consumer Trust in Financial Institutions Influences Relationships between Knowledge, Cognitive Effort and Financial Healthiness

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ABSTRACT

Trust not only relates to customer trust in individual financial companies (i.e., narrow-scope trust) but also relates to the broader business context in which consumers carry out their financial decisions (i.e., broad-scope trust). Based on two surveys comprising 1,155 bank consumers and 764 pension consumers, respectively, the results of this study indicate that broad-scope trust negatively moderates relations between knowledge and financial healthiness and between cognitive effort and financial healthiness. In addition, it is demonstrated that broad-scope trust negatively influences cognitive effort and positively influences financial healthiness.

Keywords: Relationship marketing; attribution theory; broad-scope trust; narrow-scope trust; satisfaction; loyalty

INTRODUCTION

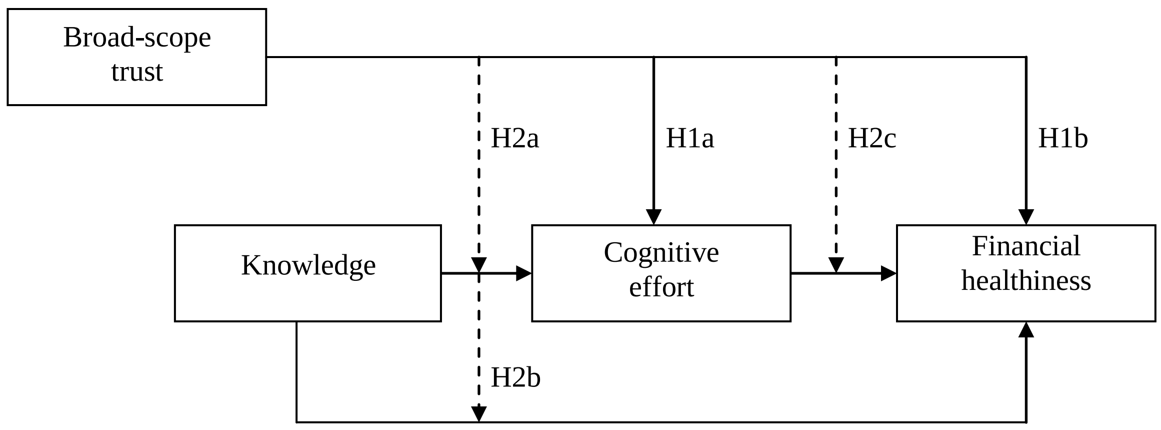
While trust has long been regarded as one of the most critical variables for developing and maintaining well-functioning customer-seller relationships (e.g., Sharma and Patterson 2000; Eisingerich and Bell 2007), past research (Grayson, Johnson, and Chen 2008; Scott 2004) suggests that trust not only relates to customer trust in individual companies. Trust also relates to the broader business context in which consumers may plan and carry out their financial behaviour. Consistent with this suggestion, a distinction can be made between two kinds of trust: narrow-scope trust and broad-scope trust. Following Sirdeshmukh, Singh, and Sabol (2002) narrow-scope trust can be defined as ''the expectation held by the customer that the service provider is dependable and can be relied on to deliver on its promises'' (p. 17), is adapted. In a similar vein, broad-scope trust can be defined as the expectation held by the consumer that companies within a certain business type are generally dependable and can be relied on to deliver on their promises. Despite the well-recognized significance of trust in marketing research, only few previous studies (i.e., Grayson, Johnson, and Chen 2008; Hansen 2012a, 2012b) have investigated the influence of broad-scope trust on consumer behaviour. This research seeks to address this shortcoming in the marketing literature by investigating direct and moderating effects of broad-scope trust on consumer financial healthiness. Our study is based on two surveys. Survey 1 comprises 1,155 bank consumers, whereas survey 2 comprises 764 pension consumers. Trust is likely to be especially important in consumer financial behaviour because financial companies have an implicit responsibility for the management of their customers' funds and the nature of financial advice supplied.

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

Marketing researchers have long recognized that consumer knowledge and effort is central to understanding consumer behaviour (e.g., Park, Mothersbaugh, and Feick 1994). Specifically, cognitive effort and the quality of consumer actions are inherent in the effort–accuracy framework of cognition proposed by Payne (1982). According to this framework the primary objectives of a decision maker are to maximize the quality of her/his actions (accuracy) and to minimize cognitive effort. Cognitive effort is the amount of cognitive resources – including perception, memory, and judgment - devoted to a particular cognitive process or activity and is believed to vary with individual characteristics (knowledge, practices) and task demands (complexity of the task) (Cooper-Martin 1994; Garbarino and Edell 1997). More cognitive effort is generally believed to lead to higher action quality, although this relation may be influenced by ability such that a highly knowledgeable person may attain action quality with relatively less cognitive effort (Kuo et al. 2004). Also, no clear relation between choice complexity and action quality has been evidenced.

Drawing on previous research concerning consumer knowledge, effort, and consumer action quality, a baseline model is initially developed (in the following referred to as the 'KCF baseline model') comprising the constructs knowledge (K), cognitive effort (C), and financial healthiness (F) (Figure 1). Although previous research results are mixed concerning the relationship between knowledge and cognitive effort, in the baseline model we expect consumer knowledge to positively influence both cognitive effort and financial healthiness. Our expectation is based on research suggesting that knowledge encourages cognitive effort by facilitating the learning of new information, and that knowledgeable consumers acquire and retain more information than less knowledgeable consumers (Brucks 1985). Also, as noted by Brucks (1985) knowledge of product attributes may allow the consumer to formulate more questions. In a series of studies Hilgert, Hogarth, and Beverly (2003) found that financially knowledgeable consumers are more likely to behave in financially responsible ways. The survey results obtained by Perry and Morris (2005) support this notion. Also, as discussed above, cognitive effort is expected to positively influence financial healthiness. In the baseline model, we use the term ‘financial healthiness’ to describe the outcome quality of consumer financial actions. In line with Joo and Grable (2004) and Perry and Morris (2005) we conceptualize financial healthiness as the extent to which the customer exhibits positive financial behaviours, such as paying credit card bills in full each month and avoiding financial troubles caused by not having enough money. In the remainder of this paper, the KCF baseline model is used as a basis for modelling the effects of broad-scope trust by investigating the direct and moderating effects of broad-scope trust on the relations included in the KCF baseline model.

FIGURE 1: CONCEPTUAL MODEL USED TO INVESTIGATE THE DIRECT AND MODERATING EFFECTS OF BROAD-SCOPE TRUST ON KNOWLEDGE, COGNITIVE EFFORT AND FINANCIAL HEALTHINESS



Notes
KCF model = relationships between knowledge, cognitive effort, and financial healthiness.

Direct effects

Moderating effects

Hypotheses
It is predicted that cognitive effort is negatively influenced by broad-scope trust. Past research suggests that consumers have limited cognitive resources and allocate them judiciously. Because of this resource limitation cognitive effort can be seen as costly leading consumer to expend only the effort necessary to make a satisfactory, rather than optimal, decision (Garbarino and Edell 1997). Since many financial services are experiential in nature, and since they may even contain credence properties (Darby and Karni 1973), a customer may perceive considerable difficulties and risk in reaching a decision because the customer can often not fully evaluate the consequences of the service before actually purchasing it (Sharma and Patterson 2000). When broad-scope trust is low, customers are faced with an even higher risk when considering alternative services than when broad-scope trust is high. This is true because low broad-scope trust means that consumers cannot just rely on all services having satisfying outcome characteristics. Thus, lack of broad-scope trust may induce risk, which in turn may lead to higher cognitive effort (N’Goala 2007). Conversely, high broad-scope trust means lower general uncertainty about the service outcome, which reduces reliance on cognitive effort. Thus, consumers may benefit from broad-scope trust in order to reduce cognitive effort. In line with these considerations the following hypothesis is proposed.

H1a: Broad-scope trust has a negative influence on cognitive effort.

Our specification of the direct effect of broad-scope trust on financial healthiness builds upon institutional theory (Scott 2004; Collin et al. 2009). Institutional theory argues that the processes and structures that are established within a society, or a community, act as authoritative guidelines for social behaviour. Social behaviour needs to be legitimized by the rules and norms that exist in the broader social environment (Scott 2004). The normative mechanism can, however, be expanded to include all normative pressures on individuals (Collin et al. 2009). When facing normative pressure consumers may internalize the viewpoints and norms, making them evident instead of subject to choice. This implies that institutions not only may create legitimacy, but that they also may be influential on the very shaping of consumers preferences and behaviour. If trust is common within financial institutions, meaning that businesses are generally honest and can be relied on to keep their promises, it should be expected to legitimate and encourage the development of similar positive financial behaviours among their customers (e.g., paying bills on time, avoid spending more money than one has, etc.), and vice versa when broad-scope trust is low. This suggests the existence of a positive relationship between broad-scope trust and financial healthiness.

> H1b: Broad-scope trust has a positive influence on financial healthiness.

Complex decision problems may encourage the consumer to apply choice heuristics (Thorngate 1980), which can be defined as "rules which systematically simplify search through the problem space by disregarding some elements of the problem space" (Johnson and Payne 1985, p. 396). Past research indicates that broad-scope trust may be applied as a choice heuristics (Sjöberg 2001). However, in incidents where broad-scope trust is insufficient (i.e., at a low level), consumers may compensate for this by relying on their knowledge and increasing search and cognitive effort suggesting that the relation between knowledge and cognitive effort is negatively moderated by broad-scope trust.

> H2a: The influence of knowledge on cognitive effort is negatively moderated by broad-scope trust, such that knowledge has a greater positive effect on cognitive effort when broad-scope trust is low compared to high.

When broad-scope trust is low it means that consumers cannot just rely on any service provider to reduce the complexity and uncertainty they are faced with. Hence, the consumer risks that her/his interests will not be properly served. That is, when broad-scope trust is low even higher demands are put on consumers' knowledge and cognitive skills. Moreover, even when people possess knowledge and information, they may ignore it if they feel that their decision-environment can be trusted (Rotfeld 2007). In summary, we expect that when broad-scope trust is low consumers will rely more on their financial knowledge in determining their financial decisions than when broad-scope trust is high. We hypothesize as follows.

> H2b: The influence of knowledge on financial healthiness is negatively moderated by broad-scope trust, such that knowledge has a greater positive effect on financial healthiness when broad-scope trust is low compared to high.

Because of bounded rationality even consumers expending high cognitive effort may keep an open mind towards additional guidance in the marketplace (Todd and Gigerenzer 2003). Institutional theory predicts that broad-scope trust may act as such guidance. While even consumers expending high cognitive effort may fail to reach optimal financial decisions, cognitive effort should also be expected to be more important for the outcome of the decision-making when broad-scope trust is low compared to high. In a decision environment with low broad-scope trust consumers expending only a low level of cognitive effort have a higher risk of making poor decisions than in environments where broad-scope trust is high. This is because low broad-scope trust means that not all service providers can be trusted to deliver satisfying services and since consumers expending only a low level of cognitive effort are likely to be less aware of the pitfalls in the marketplace, i.e., they risk ending up with poor financial services, which do not facilitate positive financial behaviour. Thus, we suggest that high broad-scope trust acts as a safeguarding mechanism in the financial marketplace such that cognitive effort is less important for consumers' ability to carry out a reasonable financial behaviour when broad-scope trust is high compared to low.

> H2c: The influence of cognitive effort on financial healthiness is negatively moderated by broad-scope trust, such that cognitive effort has a greater positive effect on financial healthiness when broad-scope trust is low compared to high.

METHODOLOGY

Data Collection

Two financial service industries were selected for our study: banks and pension companies. The use of multiple service industries provides a robust test of model relationships by allowing greater variability in study constructs (Sirdeshmukh, Singh, and Sabol 2002). For each industry, a two-step procedure was utilized to sample respondents from Capacent Epinion's online panel of approximately 30,000 (Danish) consumers. In the first step, a stratified random sample of 4,590 respondents aged 18+ was drawn from the online panel, reflecting the distribution of gender, age, and educational level in the population (aged 18+) as a whole. In the second step, these 4,590 respondents were contacted by email, and asked to respond to the screening question: "Have you recently been in contact with your current (main) bank/pension company?" (Yes/No/Not currently engaged with a bank/a pension company) to ensure that only ongoing relationships were included in the sample.

In the final samples (bank sample, n=1155; pension sample, n=764), 52.3% (bank sample) and 52.5% (pension sample), respectively, were women and average age was 46.5 years (bank sample) and 46.1 years (pension sample), respectively, with ranges between 18-85 years (bank sample) and 18-84 (pension sample), respectively. χ^2-tests of difference between sample and population frequencies on each of these criteria produced p-values >.12 for both samples, indicating that both samples reflected the demographic profile of the studied country population.

Measurements

Our measurement items were based on prior research, modified to fit the financial service context of this study where relevant. Four items based on Tax, Brown, and Chandrashekara (1998) measured broad-scope trust. Cognitive effort was measured by three items adapted from cognitive effort scale developed by Cooper-Martin (1994). The measurement of cognitive effort related to the last service that the respondent has acquired from her/his main bank/pension company. The knowledge calibration paradigm (e.g., Pillai and Hofacker 2007) states that even low levels of objective knowledge can represent a valuable knowledge resource as long as consumers assess it correctly and thus take proper action. In accordance with this notion both consumers' subjective and objective financial knowledge are measured in this study. Objective knowledge was measured using a series of 11 financial knowledge items. The items were developed upon a 20-item pool, derived partly upon financial basics, partly from official regulations issued by financial authorities. Six of the items related to both types of financial services and were identical across service industries, whereas five items related to the specific service industry under consideration. All items were exposed to respondents as true/false items. Subjective knowledge was measured in two ways. First, for each of the eleven items, respondents indicated their answer and also indicated their confidence (subjective knowledge) that the answer was correct. We adapted the restricted scale procedure applied by Pillai and Hofacker (2007) and exposed respondents to a scale ranging from 50% to 100%. Second, we used the three-item subjective knowledge scale provided by Mukherjee and Hoyer (2001). The coefficient alpha for the combined objective and subjective measures was .82, indicating a high degree of internal consistency. Also, a factor analysis of the scores for the objective and subjective measures yielded only one factor with an eigenvalue greater than one with all the scores loading highly on this factor. Since the subjective and objective measures of knowledge are highly related, we combine them into one measure of knowledge since it is more reliable (Cowley and Mitchell 2003). Financial healthiness was measured using six items adapted from the financial healthiness scale provided by Joo and Grable (2004). In the questionnaire, the items used to measure the study constructs were presented in random order.

RESULTS

Validation of Measurements

Confirmatory factor analysis (CFA) was conducted on the four latent factors, with each indicator specified to load on its hypothesized latent factor. Raw data was used as input for the maximum likelihood estimation procedure (Gerbing and Anderson 1988) using the pooled sample of respondents. The measurement model yields a chi-square of 597.24 (d.f.=129, p<.01). However, the Hoelter(0.05) (Hoelter 1983) estimate (n=497) suggests that the lack of absolute fit can be explained by sample size. Moreover, the root mean square error of approximation (RMSEA=.044), the comparative fit index (CFI=.97) and the normed fit index (NFI=.96) suggest that the measurement model fit the data reasonably well (Bagozzi and Yi 1988). All composite reliabilities were close to or greater than .80, indicating good reliability of measured constructs (Bagozzi and Yi 1988). Finally, extracted variance was equal to or greater than .5 for all latent constructs, which satisfies the threshold value recommended by Fornell and Larcker (1981). In order to investigate discriminant validity discriminant validity, the baseline measurement model was compared to alternative models where covariances between pairs of constructs were constrained to unity. In every case, the restricted model had a significant (p<.05) poorer fit than the unrestricted model suggesting sufficient discriminant validity.

Model and Hypotheses Testing

The moderating effects were formed using the residual-centering (i.e., orthogonalizing), two-step procedure recommended by Little, Bovaird, and Widaman (2006). As an advantage of this procedure, the regression coefficients and standard errors of the first-order effect terms remain unchanged when the corresponding interaction term is entered. The hypothesized model was fitted simultaneously to the bank and pension services samples using multiple-group latent variable structural equation modelling (SEM) analysis. Initially, a fully restricted model was estimated holding all paths invariant across the two datasets. Next, using a chi-square difference test, we investigated whether paths with significant test statistics varied across subsamples. All of the released paths failed to enhance model fit suggesting that the investigated path coefficients did not differ significantly across the two subsamples; therefore the fully restricted model was used to represent the datasets. The model chi-square statistic was 6728.94 (d.f.=2439, p<.01), indicating that the model fails to fit in an absolute sense. However, since the χ^2-test is very powerful when n is large, even a good fitting model (i.e., a model with just small discrepancies between observed and predicted covariances) could be rejected. The more robust fit indexes (CFI=.92; NFI=.91; RMSEA=.074) indicated an acceptable model fit. In addition, the NNFI, which is thought to be sensitive to both explanation and parsimony, equals .91, suggesting that the model shows an appropriate balance between these competing goals. To test the improvement in fit due to broad-scope trust, the KCF baseline model (omitting any relationships involving broad-scope trust, but retaining all other relationships), was estimated. Compared with the proposed model the results suggest that baseline model had inferior fit statistics: χ^2=6984.81, d.f.=2447, p<.01; CFI=.90; NFI=.89; RMSEA=.084; NNFI=.89; $\Delta\chi^2$=255.87, Δd.f.=8, p<.01. To conclude, the hypothesized model is a reasonable fit to the data.

The results indicate that all relationships in the KCF model are significant and in the expected directions. Knowledge positively influenced cognitive effort (bank services: β=.15, p<.01; pension services: β=.15, p<.01) and financial healthiness (bank services: β=.23, p<.01; pension services: β=.23, p<.01). Also, cognitive effort had a positive influence on financial healthiness (bank services: β=.11, p<.01; pension services: β=.11, p<.01). More important, the results suggest that broad-scope trust negatively influenced cognitive effort (bank services: β=.09, p=.04; pension services: β=.09, p=.04) and positively influenced financial healthiness (bank services: β=.22, p<.01; pension services: β=.22, p<.01). Thus, H1a and H1b were both accepted in the study. In contrast to the expectation that a negative moderating effect would occur, broad-scope trust did not moderate the relation between knowledge and cognitive effort (bank services: β=-.05, p=.42; pension services: β=-.07, p=.28), although the coefficients were in the expected direction. Thus, H2a was rejected. However, we also obtained two significant moderating effects. First, broad-scope trust *negatively* moderated the relation between knowledge and financial healthiness (bank services: β=-.13, p=.04; pension services: β=-.14, p=.04). This provides support to H2b. Second, broad-scope trust *negatively* moderated the relation between cognitive effort and financial healthiness (bank services: β=-.12, p=.04; pension services: β=-.11, p=.05). Thus, H2c was accepted.

DISCUSSION

The estimation of the KCF relations in the framework indicated that the relations between constructs were significant in the expected directions. Moreover, the results of our studies provide evidence that the explanation and understanding of relations between consumer knowledge, cognitive effort, and financial healthiness is significant enhanced by inclusion of the potential direct and moderating effects of broad-scope trust. Our results suggest that consumers may benefit from broad-scope trust in order to reduce cognitive effort. Thus, broad-scope trust facilitates that even consumers with limited information-processing capabilities can potentially deal with complex decision environments (Bettman, Johnson, Luce and Payne 1993). Drawing on institutionalization theory, we found that broad-scope trust has a positive direct influence on consumer financial healthiness. Obviously, consumers may vary according to the healthiness of their personal financial behaviour. Since financial companies are dependent on customers to pay their loans and bills they have a greater interest in developing relations with consumers with a healthy financial behaviour than with the opposite. However, since broad-scope trust is an environmental effect, its positive influence on financial healthiness holds true even for service providers who have not actively participated in improving broad-scope trust. As a result a free-riding potential may exist. Financial managers may be reluctant to invest in developing broad-scope trust since all service providers benefit when broad-scope trust is high. Because it is in the interest of societies that their citizens have healthy financial behaviours this underscores the importance of developing well-functioning financial regulations, which ensures that broads-scope trust is not undermined by ‘free-riding’ service providers. Although not investigated in the present study, financial managers interested in contributing to the development of broad-scope trust may seek to cope with free-riders by focusing on developing trustful relations (i.e., narrow-scope trust) with their customers. Grayson, Johnson and Chen (2008) found that narrow-scope trust fully mediates the relation between broad-scope trust and customer relationship satisfaction suggesting that the free-riding potential does not expand to all concepts of interest to financial managers.

By taking into account the contextual effect of broad-scope trust, the present study contributes to the explanation of knowledge-effort-behaviour relations in consumer financial markets, although one moderating effect was not significant. Consistent across the two financial industries investigated, the results indicate that broad-scope trust negatively moderates the relation between knowledge and financial healthiness and negatively moderates the relation between cognitive effort and financial healthiness. From a public policy perspective these results are both interesting and encouraging. Several research results and financial reports point to the fact that many consumers possess highly limited knowledge about financial products (e.g., OECD 2006). This has resulted in the establishment of financial education programmes in many countries and also the Organisation for Economic Co-operation and Development (OECD) prioritizes this issue. As one consequence of this prioritization, OECD has developed the OECD Gateway, which serves as global clearinghouse on financial education, providing access to a comprehensive range of information, data, resources, research and news on financial education issues and programmes around the globe. While OECD (2006) suggests that "individuals will not be able to choose the right savings or investments for themselves, and may be at risk of fraud, if they are not financially literate" (p. 1), it is also acknowledged that "interesting consumers in financial education is no easy task" (p. 4). In light of such notions, the results of the present study stress the importance of broad-scope trust as it may ease the burdens put on consumers' financial knowledge and processing capabilities in order for them to achieve financial well-being. While the results of the present study indicate that knowledge and cognitive effort positively influence financial healthiness, confirming the importance of financial education programmes, our results also show that when broad-scope trust is high (compared to low), the influence of financial knowledge and cognitive effort on financial healthiness diminishes. The results suggest that broad-scope trust contributes to the financial well-being of consumers with limited financial knowledge and processing capabilities. Thus, along with educational programmes and other initiatives, politicians and financial authorities should increasingly be encouraged to deal with the development of broad-scope trust in order to facilitate consumer financial well-being, especially among financially vulnerable consumers.

There are several limitations of this study that should be acknowledged. Customers were approached via online surveys; they may behave differently when engaging in specific relationship settings. Thus, although a survey is generally accepted as a means of data collection there is little control over the contextual setting and over the response behaviour of customers. This study concentrated on analyzing the consumer population of one society and in two industries. Although the investigated financial industry types are present in most societies and even though their service offerings are most likely guided by similar financial and economic principles, this could mean that the results may suffer from a lack of generalizability when other countries and/or industries are considered. Future research is also called upon to take into account cultural characteristics such as e.g., the degree of customer uncertainty avoidance, among others. Also, this study used perceptive measures, which could be threatened by biased responses. Future research could examine this issue by manipulating broad-scope trust in an experimental setting. Such an experimental study would also replicate the present cross-sectional survey results in a more controlled laboratory setting, and thus provide stronger evidence for the direction of causality in the proposed research model.

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