

Credit Search

Simangaliso Biza-Khupe
University of Botswana

There is a notable paucity of studies on the antecedents to consumer credit and debt behaviour, despite the importance of this subject matter. Moreover, there is anecdotal evidence of Data Smog within consumer credit markets, and yet this element remains relatively unexplored in the literature. This study proposes and empirically tests a comprehensive model of consumer credit search behaviour using structural equation modelling. Also, and simultaneously, the model tests for the antecedents of Data Smog, and its effect on Credit Search. The findings allude to the role that Data Smog plays in consumer financial markets and provide insights to the complexities of consumer financial decision-making processes. The paper concludes by discussing the implications of these findings to theory and policy, particularly as concerning rethinking financial information regulation in consumer financial markets.

INTRODUCTION

Consumer external information search is the time, effort, attention and money that an individual expends towards obtaining environmental information relating to a product being considered for either an imminent or future purchase (Schmidt & Spreng, 1996; Srinivasan & Ratchford, 1991). 'External search begins when one first considers the purchase seriously and ends with the actual purchase. This effort is affected by information that consumers obtain prior to considering the purchase' (Srinivasan & Ratchford, 1991, p. 253). Understanding how consumers search and gather information is therefore precursory to explaining consumer rationalisation behaviour. This area of research has gained momentum because of its increasing relevance in today's dynamic global environment where boundaries of innovation, and hence the order of market operations, are on a constant shift. The role that such micro entities as individuals and households play in the process has been found particularly pivotal in determining market efficiency. For example, to the extent that some researchers have attributed poor credit decisions and choices by individuals and households as one of the causes of the recent Global Financial Crisis, and in particular excessive leverage, increased risk appetite and the global phenomenal rise in personal bankruptcies (Begg, 2009; Kay, 2009), scholars and policymakers have in the recent past become increasingly interested in understanding consumer financial behaviour.

The literature is replete with studies on consumer information search, search strategies (Kim & King, 2009; Mattila & Wirtz, 2002), and the myriad of antecedents to information search (Srinivasan & Ratchford, 1991; Punj & Staelin, 1983). Most of these studies have been on consumer durables such as household appliances, clothing and vehicles. Moreover, goods are fundamentally distinct from services and consumers employ different search strategies across product class (Kim & King, 2009; Mitra, Reiss, & Capella, 1999). Research in consumer external search for services has not been as robust as in consumer search for goods (Heaney & Goldsmith, 1999) and therefore is not as well understood.

There has been particular paucity in research on consumer search for financial instruments, i.e. credit and investment. The few studies that have been conducted on credit search, notably; Chang & Hanna (1992), Worden & Sullivan (1987), and Lee & Hogarth (2000a), have not considered an integrated structural model of consumer credit search, in spite of the fact that structural equation modelling (SEM) has been found to be a more powerful analytic technique than the conventional bivariate and regression analysis (Cheng, 2001). For example, SEM makes it possible to investigate considerably complex theoretical models in a relatively robust fashion, and thereby providing an alternative to enhancing theory and practice in personal finance (Tabachnick & Fidell, 2007; Schumacker & Lomax, 2004)).

More critically, there is anecdotal evidence to suggest that consumer financial markets are subjected to financial information oversupply, also known as Data Smog. This proposition is born out of an observation that the statutory financial disclosures promulgated by the 'truth in lending' legislation, coupled with technological innovations that have made the production, retrieval and distribution of information easy, have led to information propagation and oversupply (Kozup, Howlett, & Pagano, 2008; Waddington, 1997). Thus, borrowers have been observed to be barraged by an aggregate mass of financial data involving disclosures that are extensive and complex (Lee & Cho 2005; Lee & Hogarth 1999b), which they find overwhelming (Bernthal, Crockett, & Rose 2005). In this regard, there are suggestions of a Data Smog in consumer financial markets (Lee & Cho 2005). Considering that individual search behaviour is a function of: (i) memory and cognitive processing capacity (Rischkowsky & Doring, 2008; Datta & Chatterjee, 2008) and; (ii) cost-benefit evaluation of choices (Kulviwat, Guo, & Engchanil, 2004; Guo, 2001; Stigler, 1961), Data Smog is a conceivable antecedent to consumer external search and purchase behaviour. The impact of Data Smog on consumer external search and purchase behaviour has not been investigated a priori.

The paper contributes to the literature by pursuing two primary objectives. First, the paper proposes and tests a comprehensive structural model of consumer credit search which is comparable in complexity with those on consumer search for goods. Second, the paper investigates the impact of perceived data smog on consumer external search.

The previous section was an introduction. The next section is an overview of literature of information search and a background discussion on Data Smog. Research hypotheses are developed from the literature and a theoretical model of consumer credit search proposed. Thereafter is a deliberation on research method and the results. The paper concludes with a discussion on the research findings and its implications to theory and practice.

CONSUMER SEARCH BEHAVIOUR – AN OVERVIEW OF LITERATURE

Consumer Information Search

The literature has two established theoretical streams of consumer external information search behaviour: the psychological (or motivational/information processing) perspective and the economic (or cost-benefit) perspective (Kim & King, 2009; Schmidt & Spreng, 1996; Srinivasan, 1990). The psychological perspective is concerned with consumers' cognitive abilities and motivation to process information, as predetermining factors to an effortful search. It operates from the premise that consumers' inclination to actively engage in information gathering is affected by individual constraints, threshold, aspirations and capabilities (Thøgersen, 2005). Conversely, the economic perspective projects consumers as sovereign economic entities motivated by rationale to calculate and match their consumption needs to offers in the market in a judicious manner (Rischkowsky & Doring, 2008). In this regard, a consumer is theorised to behave in a manner which maximises his/her net expected gains construed from estimates of the difference between expected positive and negative utility (Kulviwat et al., 2004).

On the basis of the two theoretical streams, past research has identified dozens of variables that intervene in consumer external information search behaviour, as many as sixty (60) variables according to other studies (Srinivasan & Ratchford, 1991). Over the past three decades researchers have suggested that consumer external search behaviour is most realistically conceptualised as a series of interrelated activities among variables across the two theoretical streams (for example: Kulviwat et al., 2004; Punj &

Staelin, 1983). Most crucially, it is suggested that the interwoven nature of this myriad of variables and their collective influence on consumer search behaviour could only be realistically captured if their interrelationships are simultaneously tested. The conventional approach by many studies where the exogenous variables are projected as independent of each other has been castigated for redundancy, possessing limited explanatory strength and most critically failing to project a realistic representation of the complexities of consumer behaviour (Kulviwat et al., 2004; Gursoy & McCleary, 2003; Guo, 2001).

A study generally considered a pioneer in consumer search behaviour modelling was by Punj and Staelin (1983) who conducted a study on information search for new automobile purchases. The study posited that usable prior knowledge, prior memory structure, desire to seek information, cost of search and size of feasible set directly influence search. Also, the proposed model predicted search outcomes as satisfaction and cost savings. The study results found prior knowledge and search cost to be negatively related to search, and the desire to seek information and feasible set size to be positively related to search. Search was not found to significantly influence satisfaction with purchase decision, but was however found to positively relate to cost savings. A major shortcoming of the study was the validity of measures used, i.e. with four, out of nine, constructs measured by a single item, thereby failing to capture the multiplicity in the dimensions of the projected construct factors (Guo, 2001; Beatty & Smith, 1987), hence the study was subjected to strong criticism (Srinivasan & Ratchford, 1991). Also, the study had an underlying assumption of the non-existence of interrelationships among search predictor variables. These limitations may have contributed to the low squared multiple correlations ($R^2 = 0.11$) realised by the structural equation model tested in the study.

Srinivasan and Ratchford (1991) expanded and improved on the Punj and Staelin (1983), although their model did not consider the outcomes of external search. The study proposed that search for automobiles was directly influenced by interest in cars, search cost, search benefits, experience and evoked set size, and indirectly influenced by risk, positive experience and product knowledge. The model remains one of the most comprehensive and complex in the literature (Gursoy & McCleary, 2003; Schmidt & Spreng, 1996). Among the direct relationships, size of evoked set, search benefits and search cost were found to be positively related to search effort, while the amount of experience was found to be negatively related to search effort. The study used apt multiple measures for the variables and provides exemplary guidance on consumer search research.

In sum, research on consumer search behaviour for goods has been extensive and comprehensive theoretical models have been developed and tested. While this body of literature provides a good theoretical foundation, it is not a substitute for equally robust studies in consumer search behaviour for services (Guo, 2001; Heaney & Goldsmith, 1999). On the backdrop of widely acknowledged measurable differences between goods and services (Kim & King, 2009; Mattila & Wirtz, 2002), and the different search strategies consumers adopt across product classes (Mittra et al., 1999; Murray, 1991), independent studies on consumer search for services are imperative. Considering that the properties of services pose particularly vexing challenges to market players, the construction of service-oriented solutions for service-oriented problems would be the most apt strategy.

Heaney and Goldsmith (1999) proposed and tested one of the most comprehensive structural models of consumer search for services. The study examined consumer information acquisition activities for banking services by proposing a model postulating search as influenced by perceived benefits, perceived risk, perceived search cost and prior knowledge. Further, the study proposed interrelationships among the predictor variables. The results indicated that perceived benefits, perceived search cost and prior knowledge significantly related to external search. There was no statistically significant relationship found between search effort and perceived risk. Notwithstanding the extensiveness of the model, in structure, scale measurement and findings, the study had some shortcomings. The use of a convenience sample could have affected external validity. Also, the term 'banking services' refers to a cluster of products which could possibly be perceived by consumers as characteristically different, and thus the element of variability may have influenced the outcome.

Credit Search

There is a paucity of studies on consumer credit search, and none of these studies are as extensive and rigorous as those in consumer search for goods. Lee & Hogarth (1999b) conducted a study to examine factors that impact returns on information search for consumer mortgage. Interest rate savings were hypothesised to be a function of search effort, term and source of loan, age and education of respondent, household size and region and credit experience. The study results found the mortgage's APR to be significantly influenced by all the predictor variables. The study had some shortcomings, particularly with relation to the operationalisation of some constructs, for example search effort, which might have affected the results.

In a study conducted to investigate consumer search behaviour in the credit card market, Kerr & Dunn (2008) found the size of the credit balance to have a positive and statistically significant effect on the probability of a credit card application rejection and credit search. These findings are contrary to earlier studies that postulated a negative relationship between credit balance and search, based on the notion that high-balance carrying (high default probability) borrowers are insensitive to interest rates, and therefore, not motivated to search (Calem & Mester, 1995).

In as far as this author can determine, a study by Chang & Hanna (1992) is the most comprehensive published research in examining antecedents to consumer credit search. The study projected consumer credit search as a function of loan size, time constraint, income, age, prior experience and education. In a regression model, the results found loan size and education to be positively related to credit search. The hypothesis that income is negatively related to credit search was partially supported by curvilinear results. However, the data used was from secondary sources, an element which may have compromised the external validity of some of the variables used. Also, the constructs of credit search, prior credit experience and time constraint were each measured by single and somewhat dubious items. Time constraint was, for instance, measured as the condition of employment for a household. Most notably, though, the Chang & Hanna theoretical model is basic. As already discussed, variables that affect consumer search behaviour are extensive (economic and psychological theoretical streams) and intricately interrelated, an aspect that was not captured by the proposed model of credit search and thereby diminished its explanatory strength (Kulviwat et al., 2004; Gursoy & McCleary, 2003; Schmidt & Spreng, 1996). The model indicated a low R^2 of 0.10.

Data Smog in Consumer Credit Markets

According to classical economics theory, the establishment of financially-informed consumer-driven markets is the pinnacle of market efficiency. In a consumer-driven market, consumers engage in judicious, effective and optimal financial decisions in acquiring debt and investing, and hence lenders compete for market share on the basis of price and other quantifiable market related terms (Lee & Hogarth, 1999a). This paradigm therefore views the problem of consumer over-indebtedness and personal bankruptcy as caused by, or at least symptomatic of, market imperfections (and information asymmetry in particular) (Ferretti, 2007; Malbon, 2001; Lee & Hogarth, 1999a).

In a bid to restore market efficiency, many governments (particularly the USA and those in the OECD financial region) have intervened by imposing legislation prescribing minimum financial information disclosures from lenders to borrowers (Buch, Rhoda, & Talaga, 2002; Malbon, 2001; OECD, 1992), laws that have been dubbed 'Truth in Lending'. Ordinarily, the information required to be disclosed by lenders under the 'Truth in Lending' laws includes finance charges as an annual percentage rate, the calculation of interest charges, the amount of repayments, other fees and charges, and other non-price information details (Kerr & Dunn, 2008; Malbon, 2001; Lee & Hogarth, 1999a). These statutory financial disclosures, coupled with technological innovations that have made the production, retrieval and distribution of information easy, have led to information propagation and oversupply (Kozup et al., 2008; Waddington, 1997). Thus borrowers have been observed to be barraged by an aggregate mass of financial data involving disclosures that are extensive and complex (Lee & Cho, 2005; Lee & Hogarth, 1999b). Also, a proliferation of credit product choices and a wide permutation of credit terms at the borrowers' disposal

have been observed to compound the problem (Bernthal, Crockett, & Rose, 2005). Overall, there is anecdotal evidence of a Data Smog in consumer credit markets (Lee & Cho, 2005).

Drawing from the psychological theoretical perspective, the search and buying behaviour of individual is a determinant of memory and cognitive processing capacity. The theory argues that consumer memory and cognitive capacity to process information is limited (Bettman, Johnson, & Payne, 1991; Bettman, 1979), and hence Data Smog would intuitively be expected to have adverse effects on consumer rationalisation and decision-making processes. For example, in studies conducted in different countries information overload was found to play an increasingly significant role in inhibiting optimal decision making in today's information cluttered marketplace (Walsh, Mitchell, & Hennig-Tharau, 2001; Hiu, Siu, Wang, & Chang, 2001). In a separate study designed to investigate the effect of financial information regulation on the competitiveness of credit markets, a substantial portion of consumers found it difficult and confusing to compare loan products and the available financial information was found not to allow easy comparison of loan products (Malbon, 2001). Moreover, Biza-Khupe (2011) probed underlying factors to the perception of information oversupply in consumer financial markets. The study postulated consumer perceived financial information oversupply in the financial markets to be directly influenced by the four factors of Cost of Search, Prior Memory Structure, Credit Knowledge and Age. Using multiple regression analysis, the results of the study found Cost of Search and Prior Memory Structure to be antecedents of consumer perceived financial information oversupply. In light of these studies, Data Smog is a factor to be reckoned in this field of study.

THE PROPOSED CONSUMER CREDIT SEARCH MODEL

Variables that have been found in the literature to influence consumer search behaviour are voluminous, as already discussed, and thus presenting a vexing challenge. A criterion was therefore formulated to determine variables for inclusion. First and foremost, the importance of incorporating both theoretical streams of consumer external search was recognised and adopted. Previous research has indicated that the two streams are intricately intertwined (Guo, 2001; Fodness & Murray, 1999) and when combined, the proposed model's explanatory strength is amplified (Kulviwat et al., 2004; Gursoy & McCleary, 2003; Schmidt & Spreng, 1996). Second, it was considered apt to select the most widely used variables in the literature (Heaney & Goldsmith, 1999; Schmidt & Spreng, 1996; Srinivasan & Ratchford, 1991; Punj & Staelin, 1983) as means to allow for juxtaposition to other related studies. Finally, it was important that the selected variables were in synchrony with the study research objectives. Following from the above, five (5) independent variables were selected:

- i. Prior memory structure
- ii. Perceived cost of search (search cost)
- iii. Perceived data smog (data smog)
- iv. Perceived financial risk (financial risk)
- v. Prior credit knowledge (prior knowledge)

Perceived risk has in the literature been defined as the probability of an anticipated loss compounded by the importance of that loss to the decision-maker (Heaney & Goldsmith, 1999; Srinivasan & Ratchford, 1991). The economic theoretical stream associates consumer uncertainty to perceived risk. Increased consumer uncertainty about a product and/or its domain increases the potential for consumers to commit to costly, suboptimal decisions and choices (Mitra et al., 1999; Murray & Schlacter, 1990). The intangibility, heterogeneity, inseparability and perishability properties of a service, vis-à-vis a good, increase both the variability in the essence of a service and uncertainty in its ascertainment by consumers (Zeithaml, Parasuraman, & Berry, 1985), particularly considering that services are difficult to evaluate even after purchase and consumption (Mattila & Wirtz, 2002; Murray, 1991).

It is postulated in the literature that under circumstances of identified uncertainties regarding the outcome of an action and where there exists an identified discrepancy between internal and external information, consumers are inclined to engage in an effortful search as a risk reduction and utility maximisation strategy (Gursoy & McCleary, 2003; Mitra et al., 1999; McColl-Kennedy & Fetter, 1999).

Conversely, lack of adequate information deprives a consumer of an opportunity to profit from good deals, good buys, cost-savings and other related returns of search (Srinivasan & Ratchford, 1991; Punj & Staelin, 1983). In sum, perceived risk induces an effortful search and it is therefore postulated that perceived financial risk is positively related to credit search. Thus, it is hypothesised that:

H₁: Consumer credit search is positively related to perceived financial risk.

Prior credit knowledge is defined as credit-specific information that is readily accessible to a decision-maker from long-term memory during the external search process (Heaney & Goldsmith, 1999; Srinivasan & Ratchford, 1991). The retrieval of internal information is low in cognitive effort and hence costs very little relative to external search. Consistent with the information/psychological theoretical stream, consumers are cognitive misers naturally inclined to engage a heuristic approach to external search, effectively substituting internal information for external search (Srinivasan & Ratchford, 1991). For example, it is suggested by researchers that as prior knowledge increases, consumers are more likely to develop routine problem-solving structures that do not require much effort (Fodness & Murray, 1999). Thus, only if internal information is non-retrievable from memory or insufficient to address an impending decision, does a consumer resort to an external search (Gursoy & McCleary, 2003; Ratchford, Talukdar, & Lee, 2001), thereby culminating to a negative relationship between prior knowledge and search effort. It is in this respect that prior credit knowledge is postulated to be negatively related with consumer credit search. Thus, it is hypothesised that:

H₂: Consumer credit search is negatively related to prior credit knowledge.

Prior memory structure is defined as the degree of the consumers' cognitive aptitude in acquiring and processing information (Heaney & Goldsmith, 1999; Punj & Staelin, 1983). Increased prior memory structure facilitates and supports consumers' extensive information gathering and complex information processing capabilities. Thus, prior memory structure allows consumers to develop more complex cognitive structures of choice decisions and thereby formulate more complex questions that require more information (Gursoy & McCleary, 2003). To the extent that prior memory structure provides an impetus for external search (Punj & Staelin, 1983), it is therefore hypothesised to be positively related with credit search. Thus,

H₃: Consumer credit search is positively related to prior memory structure.

The studies using the theory of information processing have determined that consumers have a threshold to the amount of information that they can acquire and efficiently process at any given point in time (Scammon, 1977; Payne, 1976). In particular, information clutter found in consumer markets, compounded with the observed proliferation of products and choices, has been suggested to create data smog. Data smog has been suggested to arouse psychological anxiety and tension, reduced attention span, difficulties in memorising and remembering, and thereby associated with suboptimal financial decisions (Lee & Cho, 2005). Studies found evidence of an association between information oversupply and disjointed and/or dysfunctional rationalisation of situations and hence, suboptimal decisions and choices by consumers (Jacoby, Kohn, & Speller, 1973).

With consumer markets subjected to data smog (Biza-Khupe, 2011), it is presupposed that data smog influences consumer credit search. Less obvious though is the relationship between the two variables as this relationship has not been tested a priori. The theoretical streams of consumer information processing and economic analysis offer a lead in this respect. Drawing from the psychological theoretical stream, it could be presupposed that the degree of data smog within consumer credit markets exceeds individuals' cognitive thresholds, and hence consumers respond by either ignoring or readily discarding information considered superfluous (Payne, 1976). Drawing from this viewpoint, perceived data smog would be postulated to be negatively related with credit search. Under scrutiny, this proposition has a drawback,

which is the (untested) assumption that the data smog levels within the consumer credit market have exceeded consumers' cognitive threshold. Substantiating this claim would be an arduous task and is beyond the scope of this paper. It is for this reason that this proposition was not further considered.

An alternative proposition drawn from the economic theoretical perspective of search is that data smog impedes on the utility maximisation objective of consumers, and hence heightens the perceived risk of attaining suboptimal or undesired credit choices. In view of the fact that individuals are generally regarded as risk averse, heightened perceived risk engenders the adoption of risk mitigating strategies (Schmidt & Spreng, 1996) by, for instance, gathering additional information (Heaney & Goldsmith, 1999; Srinivasan & Ratchford, 1991; Beatty & Smith, 1987). The advantage of this proposition is that the relationship between perceived data smog and perceived risk can be incorporated into the proposed model and explicitly tested. Therefore, data smog is therefore posited to be positively related to perceived risk and credit search. Thus;

H₄: Perceived financial risk is positively related to perceived data smog.

H₅: Consumer credit search is positively related to perceived data smog.

Perceived search cost is defined as the sum total of all subjectively assessed monetary expense; time sacrifice; physical effort; and psychological sacrifice endured during an information acquisition exercise (Kulviwat et al., 2004). In this regard, cost of search are resources that are invested in the normal course of gathering information (Stigler, 1961). It therefore follows that the availability, or lack thereof, of such resources would affect the search activity. In particular, time and financial constraints would curtail consumer credit search. For example, time availability has been found to be positively related to search effort (Beatty & Smith, 1987), while time and income constraints have been found to be negatively related to external search (Weenig & Maarleveld, 2002; Avery, 1996).

The net effect of search cost on credit search is hypothesised in this study to depend on its relative positive impact on perceived data smog and perceived financial risk. First, the deficiency in the necessary resources to gather information, thereby resulting in the curtailment of a credit search activity, is expected to exacerbate the perception of data smog. To the extent that time or income constraint, or both, are considered an impediment to consumers' predisposition to the process of sifting, gathering, organising and analysing credit information from the marketplace. Therefore, and based on the evidence that consumers are generally resource constrained, both financially and temporally (Thogersen, 2005), it is hypothesised that perceived search cost is positively related to perceived data smog. Thus

H₆: Consumer perceived data smog is positively related to perceived search cost.

Following from the same argument, a resource constrained consumer is forced to restrict their credit search activity, a condition which effectively impedes on the efficacy of an individual's risk minimisation strategy (Heaney & Goldsmith, 1999; Punj & Staelin, 1983). To the extent that consumers acquire information to address uncertainties relating to their credit decisions, the lack or limited resource availability to gather such information heightens the risk of committing to a suboptimal decision process and choice. In this regard, the perceived cost of a credit search is hypothesised to be positively related to perceived financial risk. Thus;

H₇: Consumer perceived financial risk is positively related to perceived search cost.

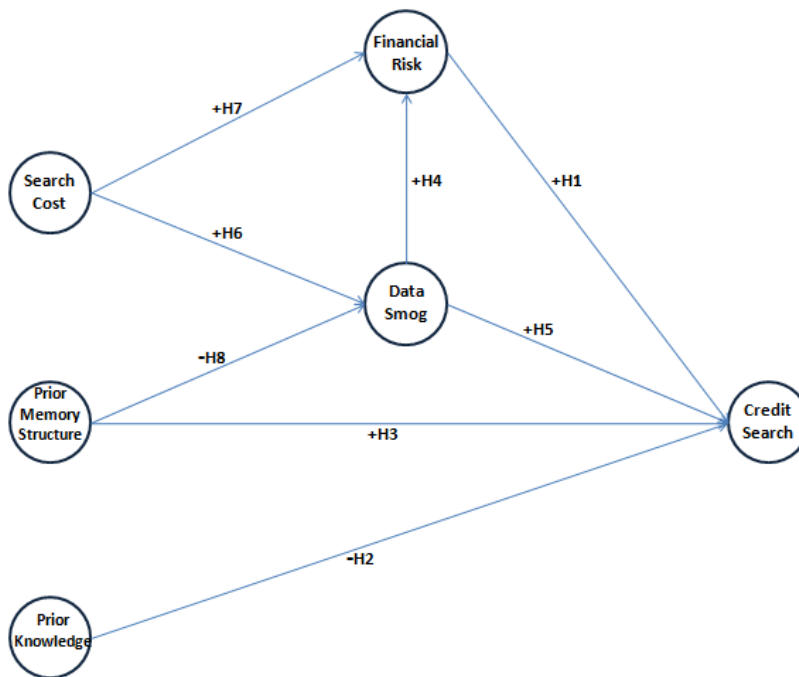
Prior memory structure embodies consumer knowledge structure and problem-solving capabilities (Lin & Lee, 2004; Brucks, 1985). To the extent that high prior memory structure proxy higher-order intellectual capabilities, it is postulated that individuals with high prior memory structure are less susceptible to data smog. Further to that, prior memory structure has been found to induce extended information gathering on the part of consumers (Kiel & Layton, 1981), it can be reasoned that consumers with a high prior memory structure spend time in credit markets and command high knowledge of the

credit domain. In this respect, such consumers are sharply efficient in gathering and organising the plethora of available financial information and hence less predisposed to data smog. To this end, prior memory structure is hypothesised to be negatively related to data smog. Thus;

H₈: Consumer perceived data smog is negatively related to prior memory structure.

Overall, the model proposes that the five variables of financial risk, data smog, prior memory structure and prior credit knowledge have a direct relationship with credit search, whilst the relationship of search cost with credit search is posited to be mediated by perceived financial risk and perceived data smog. The relationship of prior memory structure with credit search is also posited to be mediated by perceived data smog. Another indirect relationship between credit search and data smog, through financial risk, is proposed. The proposed credit search model and the eight hypothesised relationships are presented in diagram 1.

**DIAGRAM 1
THE PROPOSED THEORETICAL MODEL OF CONSUMER CREDIT SEARCH**



RESEARCH METHODS

A personally-administered questionnaire survey was conducted to empirically test the proposed model of consumer credit search. With a purpose to achieve demographic representation, data was collected from a reasonably large geographic area, covering twelve postal codes of the city of Melbourne, Australia, and targeted a variety of community centres, including schools, social clubs and a mall. Quasi-random sampling was achieved by randomly intercepting potential respondents. The targeted population were individuals who acquired credit to purchase a household appliance for personal use in the past 12 months. A timeframe was imposed on the period after the acquired credit with a purpose to enhance data validity by, for example, minimising on the effect of selective memory and memory decay on the reliability of measures used (Guo, 2001).

The drafting of the questionnaire was informed by the literature in both consumer search behaviour and research methods. Preliminary draft questionnaires were refined through processes that included assessment by doctoral candidates and senior academicians at the School of Commerce and Marketing, Central Queensland University, Australia, and three waves of pilot tests. Through this process, the definition, conceptualisation and operationalisation of key variables were considerably improved.

Measures used were predominantly adopted from the extant literature and adapted to the study. The guiding principle espoused the use of multi-item measures to capture the multiple dimensions associated with a variable (construct), thereby increasing scale reliability and validity. Also, to the extent possible, items representing the endogenous and exogenous variables were measured on the recommended 7-point semantic differential scale (Tabachnick & Fidell, 2007; Schumacker & Lomax, 2004), unless if an item could otherwise be better represented and scaled.

Credit Search is a multi-dimensional concept which has incorporated the depth of search, breadth of search and patterns of search (Murray, 1991; Beatty & Smith, 1987). In operationalising Credit Search, multi-dimensionality was captured by encapsulated the dual concepts of consumers' consultation of various financial information intermediaries and the amount of effort expended in procuring information. Other studies have supported and used these two dimensions to represent the depth and breadth of external search (Klein & Ford, 2003; Heaney & Goldsmith, 1999).

Perceived Data Smog was adapted from Sproles and Kendall's (1986) construct of 'Confusion from Overchoice' (representing the extent to which a consumer was overwhelmed/confused by information and product choice) and operationalized using the indicator variables suggested and tested by Biza-Khupe (2011). The latent construct of Perceived Data Smog was operationalised as a measure of the degree to which a consumer perceived the proliferation of credit information and products, and the associated degree of confusion. In addition, the dimension of the degree of exposure to financial information by a consumer was considered relevant and hence included in the construct.

Perceived Search Cost was operationalised by five items that represented the dual dimensions of perceived monetary and time cost of search, as adapted from previous studies (Moorthy, Ratchford, & Talukdar, 1997; Srinivasan & Ratchford, 1991). The temporal dimension captured time constraint attributable to the urgency of the decision and the general unavailability of time during the credit search process, while the monetary cost dimension captured the perceived costliness of gathering the required amount of information on credit facilities. Combined, these dimensions encapsulated the opportunity cost of time.

Perceived Risk has been developed as a construct with the dual dimensions of 'chance' and 'consequence' of a loss (Srinivasan & Ratchford, 1991; Peter & Ryan, 1976). 'Chance' embodies the essence of the probability of a loss occurring or the likelihood of an undesired outcome, while 'consequence' encapsulates the essence of the severity of that loss or undesired outcome. Informed by these studies, Perceived Financial Risk was conceptualised as (i) the subjective likelihood of a consumer encountering financial difficulties as a direct result of committing themselves to further debt (thus, the marginal effect of specific credit acquisition on consumers' overall financial wellbeing) and (ii) the severity of the anticipated financial difficulty. 'Chance' was operationalised as the perceived probability of an individual being led into financial difficulties due to high financial commitments and/or low income, while 'consequence' was operationalised as the inclination by a respondent to curtail financial commitments and/or increase the income-earning capacity.

Cognisant of the importance of cost of credit/debt on consumer credit decisions (Lee & Hogarth, 2000b; Worden & Sullivan, 1987), and by adapting an approach similar to that used by Lee & Hogarth (1999a) in a study of consumer credit knowledge, Prior Credit Knowledge was conceptualised as the level of consumer understanding of the cost of debt.

Prior Memory Structure is a complex, multi-dimensional variable operationalised using three dimensions. The first dimension captured the self-assessed adequacy of a consumer's knowledge of credit facilities (Heaney & Goldsmith, 1999; Punj & Staelin, 1983). The second dimension captured consumer experience with credit (Lee & Hogarth, 2000b; Chang & Hanna, 1992). Thirdly, the highest level of

education of the respondent was used as a measure of the respondent's ability to learn, develop skills and assimilate relevant information (Kulviwat et al., 2004; Schmidt & Spreng, 1996).

In sum, 30 items were used to measure the six variables, as presented in Appendix 1. Also presented is the Cronbach's coefficient alpha for each variable. The overall results indicated a reliability scale range of 0.64 – 0.86, with one latent constructs below 0.78. Considering that Cronbach's alpha values greater than or equal to 0.6 are considered acceptable (Robinson, Shaver, & Writghtsman, 1991), with values greater than 0.7 preferred (Hair, Black, Babin, Anderson, & Tatham, 2006), scale reliability was thus confirmed.

THE RESULTS

A total of 600 questionnaires were distributed and completed by respondents, with 245 cases found usable for this research. Descriptive statistics indicated that the average credit amount acquired was AU\$1,008. The sample constituted of 56% females and 44% males, with most of the respondents (34.4%) falling in the age-group of 31-40 years. The length of the time span between survey administration and the acquisition of credit by respondents had a mean period of five (5) months. The amount of credit acquired ranged between \$50 and \$5,000. Details of the sample descriptive statistics are provided in Table 1.

TABLE 1
SAMPLE DESCRIPTIVE STATISTICS

Factor	Categories	Frequency	Percent (%)	Cumulative %
Gender	Male	96	43.8	43.8
	Female	123	56.2	100
Age Group	20 yrs and below	8	3.3	3.3
	21-30 yrs	66	27.4	30.7
	31-40yrs	83	34.4	65.1
	41-50yrs	56	23.3	88.4
	51-60 yrs	22	9.1	97.5
	Over 60 yrs	6	2.5	100
Annual Income Before Tax	Less than \$13,000	16	6.9	6.9
	\$13,000 - 24,000	35	15.2	22.1
	\$25,000 - 39,000	56	24.2	46.3
	\$40,000 - 59,000	69	29.9	76.2
	\$60,000 - 79,000	40	17.3	93.5
	\$80,000 - 104,000	9	3.9	97.4
	\$105,000 or more	6	2.6	100
Highest Level of Education	Secondary school or less	65	27.4	27.4
	Post-secondary school diploma or certificate	47	19.8	47.2
	Trade qualification	51	21.5	68.7
	University bachelors degree	49	20.7	89.4
	University higher degree	25	10.6	100
Credit amount	\$500 and less	40	17.4	17.4
	\$501 - \$750	33	14.4	31.8
	\$751 - \$1,000	57	24.7	56.5
	\$1,001 - \$1,500	32	13.9	70.4
	\$1,501 and more	68	29.6	100

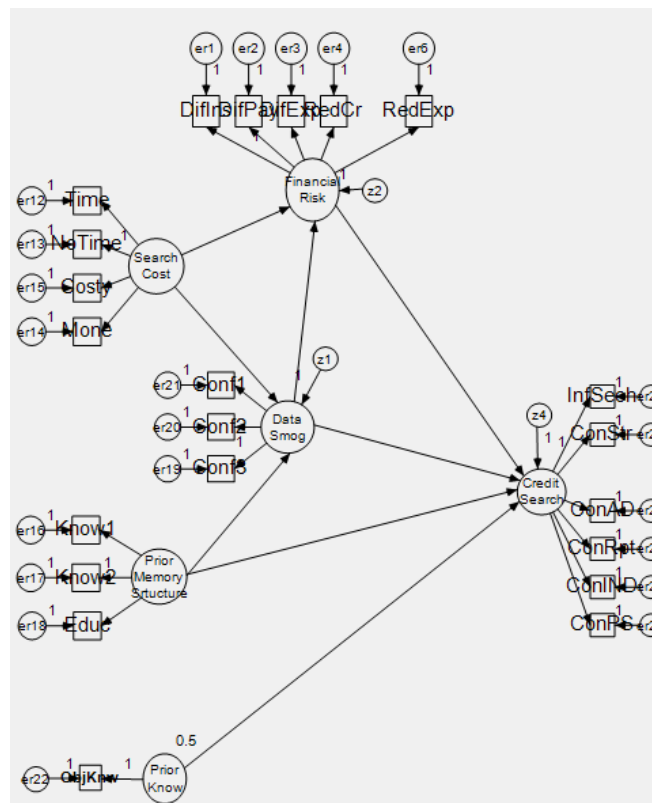
This table shows the demographic descriptive statistics of the sample.

A two-step model-building approach of: (i) assessing the measurement model (CFA) and; (ii) structural equation modelling (SEM), was adopted in this research. The first phase involved testing the integrity of measurement items and the overall model fit (Confirmatory Factor Analysis). In the analysis, each latent construct was related to its predetermined items and allowed to covary with all the other variables (Cheng, 2001). This approach improves the psychometric properties of measures because it takes into consideration the relationship among indicator variables of different constructs (Hair et al., 2006). The results indicated standardised factor loadings ranging between 0.52 and 0.93, which is above the recommended cut-off point of 0.5 (Hair et al., 2006). All items hypothesised to measure a latent construct had statistically significant factor loadings by the critical ratio test ($> \pm 1.96$, $p < .05$), suggestive of convergent validity.

Model respecification was executed by systematically deleting items found not to perform well with regard to model integrity, model fit, or construct validity. In the process, the criterion of reconsidering items that loaded into more than one variable; had high modification indices; had low squared multiple correlations; had low factor loadings; and theoretical reasoning was applied (Cheng, 2001). Also, considering the simultaneous interdependency of the various components of the model, such that the deletion of a single indicator potentially affected other parts of the model simultaneously, model revision was carried out one item at a time. The CFA analysis, through multiple measures of goodness-of-fit, standardised factor loadings and statistically significant factor loadings, supported that the estimated model of the revised CFA model reproduced the sample variance-covariance matrix reasonably well, and thus affirming construct validity in terms of convergent and discriminant validity.

The second phase involved specifying hypothesised relationships among variables as posited by theory. Figure 1 shows the structural model that was finally tested.

FIGURE 1
A STRUCTURAL MODEL OF CONSUMER CREDIT SEARCH BEHAVIOUR



This diagram shows the structural model of consumer credit search that was tested using the Amos program.

Model evaluation was ascertained using the multiple indexes of the absolute goodness-of-fit and incremental fit criterions, as presented in Table 2.

TABLE 2
GOODNESS-OF-FIT FOR THE MODELS

Model	CMIN/DF	RMSEA	GFI	TLI	IFI	CFI
Revised CFA Model	2.62	.081	.82	.84	.86	.86
Structural Model	2.98	.09	.82	.83	.85	.85
Targeted Benchmark*	< 3.0	.05 - .10	> .80	> .80	> .80	> .80

*(Ho, 2006; Chau, 1997; McCullum, Browne, & Sugawara, 1996; Hoyle, 1995; Hair, Anderson, Tatham, & Black, 1995; Browne & Cudeck, 1993)

This table shows the results of the goodness-of-fit results for both the Confirmatory Factor Analysis and the Structural Equation model. The literature used for benchmarking is also indicated*.

From, the results, the measure of CMIN/DF (2.98) was within the targeted benchmark score of less than 3.0; RMSEA (0.09) was within the targeted range of 0.05 – 0.10; and GFI (0.82) was above the targeted minimum benchmark of 0.8. The incremental fit indices of TLI (0.83), IFI (0.85) and CFI (0.85) surpassed the targeted minimum benchmark value of 0.80. These indices compared the fit of the hypothesised model to the null or independence model. Given the range of the incremental fit indices, the possible improvement in the fit for the hypothesised model (range: 0.15 - 0.18) appears so small as to be of no practical significance (Ho, 2006). In sum, the results of the absolute and incremental fit indexes were indicative that the structural model was a reasonable fit.

The structural model of credit search indicated an R^2 of 0.69 for Credit Search, in which seven out of the eight hypothesised relationships were statistically significant by the critical ratio test ($> \pm 1.96$, $p < .05$), and theoretically meaningful. A summary of the test outcome for each hypothesised relationship is presented in table 3.

TABLE 3
CREDIT SEARCH SEM HYPOTHESES TEST RESULTS

Hypothesis	Path	Path Coefficient	Critical Ratio	Hypothesis Test Results
H1	Perceived financial risk to credit search	0.17	2.79**	Supported
H2	Prior credit knowledge to credit search	-0.62	-4.37**	Supported
H3	Prior memory structure to credit search	0.51	5.45**	Supported
H4	Perceived data smog to perceived financial risk	0.14	1.64	Not supported
H5	Perceived data smog to credit search	0.19	2.84**	Supported
H6	Perceived search cost to perceived data smog	0.60	5.56**	Supported
H7	Perceived search cost to perceived financial risk	0.32	3.95**	Supported
H8	Prior memory structure to perceived data smog	-0.17	-2.83**	Supported

*This table shows the results of the hypothesis tests derived from the empirical structural equation model. Note that ** denotes significance at $p \leq .01$ level*

DISCUSSIONS

The paper proposed and tested, simultaneously, (i) the relationship between Credit Search and its direct antecedents, (ii) interrelationships among Credit Search antecedents and (iii) the relationship between Data Smog and its direct antecedents, in a single comprehensive model.

From the results, all eight, but one (H_4), of the hypothesised relationships were supported. The hypothesised relationship between Financial Risk and Data Smog had a path coefficient of 0.14 and a critical ratio value of 1.64 that was not statistically significant at the 0.05 level. The findings suggested that the degree of perceived data smog within consumer credit markets did not heighten the perceived financial risk of credit acquisition, although respondents found some weak positive association between the two factors. It can be surmised that although the cost-benefit paradigm has associated consumer uncertainty of a product domain with the perceived risk of a purchase decision (Mitra et al., 1999; Schmidt & Spreng, 1996), perceived data smog did not seem to generate sufficiently high levels of uncertainty within the consumer credit market to affect the perceived financial risk of a credit decision.

H_1 stated that consumer credit search was positively related to perceived financial risk. The findings indicated that consumers searched for more information when they perceived the acquisition of additional credit as posing a risk to their financial wellbeing. The findings of the study are congruent with the results of previous studies in consumer search for goods (Beatty & Smith, 1987; Locander & Hermann, 1979). The only other study found which tested a structural model of consumer search for services did not find a significant relationship between perceived risk and search effort (Heaney & Goldsmith, 1999), and concluded that consumers do not view banking services as highly variable and hence the low perceived risk of making a bad decision. The findings of this study seemed to refute this view, at least in as far as it relates to credit. The findings of this study suggested that borrowers mitigated the perceived financial risk of acquiring credit through an elaborate information search strategy.

H_2 stated that consumer credit search was negatively related to prior credit knowledge. The findings suggested a substitutive effect between internal information and external search, consistent with the information processing theory of consumer search (Gursoy & McCleary, 2003; Ratchford et al., 2001). The findings were indicative that consumers are cognitive misers who resort to external search when the required information was not previously acquired or unable to be retrieved from memory (Schmidt & Spreng, 1996).

H_3 stated that consumer credit search was positively related to prior memory structure. The findings suggested that consumers engaged in more search for credit when cognitive structures and knowledge structure, and thus problem-solving capabilities, were high, consistent with the psychological paradigm of consumer search (Klein & Ford, 2003). Overall, the findings supported the theoretical perspective that prior memory structure equips consumers with improved cognitive abilities that allow them to: structure the problem in a more complex manner; gather information more efficiently; process more information; and therefore incur lower search costs; and thereby intensify the external information search activity (Lin & Lee, 2004).

H_5 stated that consumer credit search was positively related to perceived data smog. The findings suggested that the respondents considered the credit markets to be congested with information and product choices (Lee & Cho, 2005; Lee & Hogarth, 1999b) such that they had to sift through the plethora of data to finally get the relevant information required for the impending credit decision. The concept advocated by the cost-benefit approach of an average consumer being economically rational, goal-directed and a calculated economic entity motivated to gather information (Kim & King, 2009; Stigler, 1961) was vivified in this study.

H_6 stated that consumer perceived data smog was positively related to perceived search cost. The findings indicated that perceived search cost, which was conceptualised as the curtailment of an investment outlay required in the normal course of gathering information, constrained the respondents' predisposition to information on credit and search. In this regard, a resource-constrained individual forced by the circumstances to limit their search activity would therefore have had limited prior exposure to the domain of credit markets and hence the increased perception of data smog. The findings provided

supporting evidence to the proposition that the perceived search cost is an antecedent to perceived data smog. Further, the hypothesised indirect association between perceived search cost and credit search, through perceived data smog, was confirmed.

H₇ stated that consumer perceived financial risk was positively related to perceived search cost. The findings suggested that consumers who were resource constrained (temporal and monetary) had a high propensity to limit their credit search activity, in accordance with the cost-benefit paradigm (Stigler, 1961). Information search is generally regarded as a risk reduction strategy among consumers (Gursoy & McCleary, 2003; Mitra et al., 1999). Therefore, resource-constrained respondents could have had limited 'internally banked' information on credit because of the a priori deprived information gathering background. These consumers could have felt ill-equipped to competently address their credit-decision uncertainties, hence the heightened financial risk. Further, the hypothesised indirect association between perceived search cost and credit search, through perceived financial risk, was confirmed.

Finally, H₈ stated that consumer perceived data smog was negatively related to prior memory structure. The findings suggested that consumers with increasingly advanced knowledge structure and cognitive analytical processes perceived the consumer credit markets as less data-congested and overwhelming. These findings are consistent with the consumer information processing theory which suggests that increased prior memory structure facilitates processing of complex information and efficient information processing, and motivates an extended search (Heaney & Goldsmith, 1999; Srinivasan & Ratchford, 1991), and are congruent with findings of H₆.

STUDY IMPLICATIONS AND FUTURE RESEARCH

The paper contributes to theory and practice. First, although services are characteristically distinct from goods, findings of this study suggest that when interrelations among the endogenous and exogenous variables of search are simultaneously tested, they not only provide a better representation of the complexities of consumer behaviour, but also consumer search strategies across product are comparable. In this regard, higher order generic theory of consumer search behaviour which integrates, rather than segregates, the two product classes is suggested as the direction for future research.

Second, the study found Data Smog to be a significant role player in consumer credit markets. From these findings, consumers invest in sifting through the masses of data to gather the required information, with the sifting process itself being neither productive nor value-adding in terms of reducing financial risk. From a practical perspective, these findings are suggestive that the provision of 'perfect' information through financial information regulation has generated data smog, and that data smog is a liability and detrimental in consumer decision-making processes (Kozup & Hogarth, 2008). An eminent challenge is therefore to reengineer financial information regulation towards providing adequate, comprehensible and comprehensive regulated information in a manner and form that does not congest the market.

This paper was not without limitations. There were some items used to measure latent constructs that were found inapt, and hence deleted. Further research will need to be undertaken to determine whether alternative items could have improved the result outcome or new measures need to be developed. Also, there are several other potential relationships between variables that could have been hypothesised in the proposed model of consumer credit search. For example, previous studies in the literature have proposed direct relationship between Perceived Search Cost and Search, and such other interrelationships among search determinant variables as Prior Knowledge and Perceived Risk (Heaney & Goldsmith, 1999; Srinivasan & Ratchford, 1991; Punj & Staelin, 1983). Further, the development of future models of consumer search should expand in comprehensiveness to incorporate other search determinants that were not considered in this paper. Finally, the hypothesised relationship between Financial Risk and Data Smog was not supported. A conceivable explanation for these equivocal results is the role/effect of other factors not incorporated into the model. Clearly, further research is warranted.

APPENDIX 1
OPERATIONALISATION OF KEY VARIABLES

Construct and Cronbach's alpha	Item/ Label	Question (abridged version)
Perceived Data Smog^a .86 (3)*	Conf1	I find comparing credit facilities a confusing task.
	Conf2	The more I try to learn about credit facilities, the more confused I seem to get.
	Conf3	There are too many different types of credit facilities to choose from.
	<i>InfAv</i>	<i>There is a lot of information available on credit facilities.</i>
	<i>Acess</i>	<i>For me, sources of information on credit facilities are within easy reach.</i>
Perceived Search Cost^b .78 (5)	Time	I felt it took a lot of time to search for information on credit facilities.
	Urgent	I had to make a quick purchase decision.
	NoTime	I had little time to search for information on credit facilities.
	Costy	It is costly to obtain information about credit facilities.
	Mone	I need to spend some money in order to obtain adequate information on credit.
Perceived Financial Risk^c .80 (6)	DifIns	Acquisition of the credit may lead me to financial difficulties because of the <i>high weekly instalment</i> .
	DifPay	Acquisition of the credit may lead me to financial difficulties because of my <i>low weekly pay</i> .
	DifExp	Acquisition of the credit may lead me to financial difficulties because of my <i>high weekly expenses</i> .
	RedCr	How important is cutting back on your credit charges?
	IncrIncm	How important is getting additional income to pay for your credit instalments?
	RedExp	How important is reducing your weekly expenses to be able to pay-off your credit?
Prior Memory Structure^d .64 (3)	Know1	I know a lot about credit facilities compared to most of the people I know.
	Know2	If I had to get a loan today, I would need to gather very little information in order to make a wise decision.
	Educ	Highest level of education attained.
	<i>CreditExp</i>	<i>Credit experience - the number of times a respondent had applied for different loans before and the number of credit cards held.</i>
Credit Search .85 (8)^e	InfSech	I searched for a lot of information before using the credit facility.
	InfTime	Before using the credit facility, I took a lot of time considering my options.
	ConPS	Degree of consultation of friend/ relative/ colleague.
	ConIND	Degree of consultation of independent financial consultant.
	ConRpt	Degree of consultation of consumer report/ article/ guide.
	ConAD	Degree of consultation of commercial advert on radio/ TV/ newspaper/ magazine/ internet.
	ConBK	Degree of consultation of credit provider/ bank.
	ConStr	Degree of consultation of dealer/ salesperson.
	<i>InfNo</i>	<i>I could not be bothered to look for any information before using the credit.</i>
Prior Credit Knowledge^f	ObjKnw	Correctly ranking four instruments of consumer credit in the order of cost using the interest rate charge.

This table is a list of item that were used to proxy the six variables used in the proposed and tested structural equation model of consumer credit search. *is the number of items used to represent each variable in subsequent analysis, after reconsiderations informed both the reliability analysis. The items in *italics* were deleted due to low corrected item-total correlation and whose deletion resulted in a substantial improvement in the overall Cronbach's coefficient

REFERENCES

- Avery, R. J. (1996). Determinants of Search for Nondurable Goods: An Empirical Assessment of the Economics of Information Theory. *The Journal of Consumer Affairs*, 30(2), 390-420.
- Beatty, S. E., & Smith, S. M. (1987). External Search Effort: An Investigation Across Several Product Categories. *Journal of Consumer Research*, 14(1), 83-95.
- Begg, I. (2009). Regulation and Supervision of Financial Intermediaries in the EU: The Aftermath of the Financial Crisis. *Journal of Common Market Studies*, 47(5), 1107-1128.
- Bernthal, M. J., Crockett, D., & Rose, R. L. (2005). Credit Cards as Lifestyle Facilitators. *Journal of Consumer Research*, 32(1), 130-145.
- Bettman, J. R. (1979). *An Information Processing Theory of Consumer Choice*. Reading MA: Addison-Wesley Publishing Company.
- Bettman, J. R., Johnson, E., & Payne, J. (1991). Consumer Decision Making. In T. S. Robertson & H. H. Kassarjian (Eds.), *Handbook of Consumer Research* (pp. 50-84). Englewoods Cliffs, NJ: Prentice Hall.
- Biza-Khupe, S. (2011). Information Regulation in Consumer Credit Markets – Determinants of Financial Information Oversupply. *International Research Journal of Finance and Economics*, 71 (August), 19-33.
- Browne, M. W., & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. In K. A. Bollen & J. S. Long (Eds.), *Testing Structural Equation Models* (pp. 136-162). Newbury Park, California: Sage.
- Brucks, M. (1985). The Effects of Product Class Knowledge on Information Search Behaviour. *Journal of Consumer Research*, 12(1), 1-15.
- Buch, J., Rhoda, K. L., & Talaga, J. (2002). The Usefulness of the APR for Mortgage Marketing in the USA and the UK. *International Journal of Bank Marketing*, 20(2/3), 76-85.
- Calem, P. S., & Mester, L. J. (1995). Consumer Behavior and the Stickiness of Credit-Card Interest Rates. *The American Economic Review*, 85(5), 1327-1336.
- Chang, R. Y., & Hanna, S. (1992). Consumer Credit Search Behaviour. *Journal of Consumer Studies and Home Economics*, 16, 207-227.
- Chau, P. Y. K. (1997). Reexamining a Model for Evaluating Information Center Success Using a Structural Equation Modeling Approach. *Decision Sciences*, 28(2), 309-334.
- Cheng, E. W. L. (2001). SEM Being More Effective Than Multiple Regression in Parsimonious Model Testing for Management Development Research. *Journal of Management Development*, 20(7/8), 650-667.
- Datta, P., & Chatterjee, S. (2008). The Economics and Psychology of Consumer Trust in Intermediaries in Electronic Markets: The EM-Trust Framework. *European Journal of Information Systems*, 17, 12-28.
- Ferretti, F. (2007). Consumer Credit Information Systems: A Critical Review of the Literature. Too Little Attention Paid by Lawyers? *European Journal of Law and Economics*, 23, 71-88.
- Fodness, D., & Murray, B. (1999). A Model of Tourist Information Search Behavior. *Journal of Travel Research*, 37(3), 220-230.
- Fox, J., Bartholomae, S., & Lee, J. (2005). Building the Case for Financial Education. *The Journal of Consumer Affairs*, 39(1), 195-214.
- Guo, C. (2001). A Review on Consumer External Search: Amount and Determinants. *Journal of Business Psychology*, 15(3), 505-519.
- Gursoy, D., & McCleary, K. W. (2003). An Integrative Model of Tourists' Information Search Behavior. *Annals of Tourism Research*, 31(2), 353-373.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate Data Analysis with Readings*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6 ed.). New Jersey: Pearson Prentice Hall.

- Heaney, J., & Goldsmith, R. E. (1999). External Information Search for Banking Services. *International Journal of Bank Marketing*, 17(7), 305-323.
- Hiu, A. S. Y., Siu, N. Y. M., Wang, C. C. L., & Chang, L. M. K. (2001). An Investigation of Decision-Making Styles of Consumers in China. *The Journal of Consumer Affairs*, 35(2), 326-345.
- Ho, R. (2006). *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. Florida: Chapman and Hall.
- Hoyle, R. H. (1995). The Structural Equation Modeling Approach: Basic Concepts and Fundamental Issues In R. H. Hoyle (Ed.), *Structural Equation Modeling: Concepts, Issues and Applications* (pp. 1-15). California: Sage Publications.
- Jacoby, J., Kohn, C. A., & Speller, D. E. (1973). *Time Spent Acquiring Product Information as a Function of Information Overload and Organisation*. Paper presented at the American Psychology Association's 81st Annual Convention.
- Kay, J. (2009). *The Long and the Short of it: A Guide to Finance and Investment for Normally Intelligent People Who Aren't in the Industry*. London: Erasmus Press.
- Kerr, S., & Dunn, L. (2008). Consumer Search Behavior in the Changing Credit Card Market. *Journal of Business and Economic Statistics*, 26(3), 345-353.
- Kiel, G. C., & Layton, R. A. (1981). Dimensions of Consumer Information Seeking Behaviour. *Journal of Marketing Research*, 18(2), 233-239.
- Kim, W. J., & King, K. W. (2009). Product Category Effects on External Search for Prescription and Nonprescription Drugs. *Journal of Advertising*, 38(1), 5-19.
- Klein, L. R., & Ford, G. T. (2003). Consumer Search for Information in the Digital Age: An Empirical Study of Prepurchase Search for Automobiles. *Journal of Interactive Marketing*, 17(3), 29-49.
- Kozup, J., & Hogarth, J. M. (2008). Financial Literacy, Public Policy, and Consumers' Self-Protection - More Questions, Fewer Answers. *The Journal of Consumer Affairs*, 42(2), 127-136.
- Kozup, J., Howlett, E., & Pagano, M. (2008). The Effects of Summary Information on Consumer Perceptions of Mutual Fund Characteristics *The Journal of Consumer Affairs*, 42(1), 37-59.
- Kulviwat, S., Guo, C., & Engchanil, N. (2004). Determinants of Online Information Search: A Critical Review and Assessment. *Internet Research*, 14(3), 245-253.
- Lee, J., & Cho, J. (2005). Consumers' Use of Information Intermediaries and the Impact on their Information Search Behavior in the Financial Market. *The Journal of Consumer Affairs*, 39(1), 95-120.
- Lee, J., & Hogarth, J. M. (1999a). The Price of Money: Consumers' Understanding of APRs and Contract Interest Rates. *Journal of Public Policy and Marketing*, 18(1), 66-76.
- Lee, J., & Hogarth, J. M. (1999b). Returns to Information Search: Consumer Mortgage Shopping Decisions. *Financial Counseling and Planning*, 10(1), 49-66.
- Lee, J., & Hogarth, J. M. (2000a). Consumer Information Search for Home Mortgages: who, what, how much, and what else? *Financial Services Review*, 9(3), 277-293.
- Lee, J., & Hogarth, J. M. (2000b). Relationships Among Information Search Activities When Shopping for a Credit Card. *The Journal of Consumer Affairs*, 34(2), 330-360.
- Lin, Q. C., & Lee, J. (2004). Consumer Information Search When Making Investment Decisions. *Financial Services Review*, 13(4), 319-332.
- Locander, W. B., & Hermann, P. W. (1979). The Effect of Self-Confidence and Anxiety of Information Seeking in Consumer Risk Reduction. *Journal of Marketing Research*, 16(2), 268-274.
- Malbon, J. (2001). Shopping for Credit: An Empirical Study of Consumer Decision-Making. *Australian Business Law Review*, 29(1), 44-64.
- Mattila, A. S., & Wirtz, J. (2002). The Impact of Knowledge Types on the Consumer Search Process: An Investigation in the Context of Credence Services. *International Journal of Service Industry Management*, 13(3/4), 214-230.
- McCull-Kennedy, J. R., & Fetter, R. E. (1999). Dimensions of Consumer Search Behavior in Services. *The Journal of Services Marketing*, 13(3), 242-265.

- McCullum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling *Psychological Methods*, 1, 130-149.
- Mitra, K., Reiss, M. C., & Capella, L. M. (1999). An Examination of Perceived Risk, Information Search and Behavioral Intentions in Search, Experience and Credence Services. *The Journal of Services Marketing*, 13(3), 208-228.
- Moorthy, S., Ratchford, B. T., & Talukdar, D. (1997). Consumer Information Search Revisited: Theory and Empirical Analysis. *Journal of Consumer Research*, 23(4), 263-277.
- Murray, K. B. (1991). A Test of Services Marketing Theory: Consumer Information Acquisition Activities. *Journal of Marketing*, 55(1), 10-25.
- Murray, K. B., & Schlacter, J. L. (1990). The Impact of Services versus Goods on Consumers' Assessment of Perceived Risk and Variability. *Journal of the Academy of Marketing Science*, 18(1), 51-65.
- OECD. (1992). *Consumer Information About Financial Services*. Paris: Organisation for Economic Co-operation and Development.
- Payne, J. (1976). Task Complexity and Contingent Processing in Decision-Making: An Information Search and Protocol Analysis. *Organizational Behavior and Human Performance*, 16(2), 366-387.
- Peter, J. P., & Ryan, M. J. (1976). An Investigation of Perceived Risk at the Brand Level. *Journal of Marketing Research*, 13(2), 184-188.
- Punj, G. N., & Staelin, R. (1983). A Model of Consumer Information Search Behavior for New Automobiles. *Journal of Consumer Research*, 9(4), 366-380.
- Ratchford, B. T., Talukdar, D., & Lee, M.-S. (2001). A Model of Consumer Choice of the Internet as an Information Source. *International Journal of Electronic Commerce*, 5(3), 7-21.
- Rischkowsky, F., & Doring, T. (2008). Consumer Policy in a Market Economy: Considerations from the Perspective of the Economics of Information, the New Institutional Economics as well as Behavioural Economics. *Journal of Consumer Policy*, 31(3), 285-313.
- Robinson, J. P., Shaver, P. R., & Writghtsman, L. S. (1991). Criteria for Scale Selection and Evaluation. In J. P. Robinson, P. R. Shaver & L. S. Writghtsman (Eds.), *Measures of Personality and Social Psychological Attitudes*. San Diego, CA: Academic Press.
- Scammon, D. L. (1977). 'Information Load' and Consumers. *Journal of Consumer Research*, 4(3), 148-156.
- Schmidt, J. B., & Spreng, R. A. (1996). A Proposed Model of External Consumer Information Search. *Journal of the Academy of Marketing Science*, 24(3), 246-256.
- Schumacker, R. E., & Lomax, R. G. (2004). *The Beginner's Guide to Structural Equation Modeling* (2nd ed.). New Jersey: Lawrence Erlbaum Associates, Inc.
- Sproles, G., & Kendall, E. L. (1986). A Methodology for Profiling Consumers' Decision-Making Styles. *The Journal of Consumer Affairs*, 20(2), 267-279.
- Srinivasan, N. (1990). Pre-Purchase External Search for Information. In E. V. E. Zeithaml (Ed.), *Review of Marketing* (pp. 153-189). Chicago: American Marketing Association.
- Srinivasan, N., & Ratchford, B. T. (1991). An Empirical Test of a Model of External Search for Automobiles. *Journal of Consumer Research*, 18(2), 233-242.
- Stigler, G. J. (1961). The Economics of Information. *The Journal of Political Economy*, 69(3), 213-225.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5 ed.). Boston: Pearson Education.
- Thøgersen, J. (2005). How May Consumer Policy Empower Consumers for Sustainable Lifestyles? *Journal of Consumer Policy*, 28, 143-178.
- Waddington, P. (1997). Dying for Information? A Report on the Effects of Information Overload in the UK and Worldwide. *Beyond the Beginning: The Global Digital Library* Retrieved 23/05/2006, 2006, from <http://www.cni.org/regconf/1997/ukoln-content/repor~13.html>
- Walsh, G., Mitchell, V.-W., & Hennig-Tharau, T. (2001). German Consumer Decision-Making Styles. *The Journal of Consumer Affairs*, 35(1), 73-95.

- Weenig, M. W. H., & Maarleveld, M. (2002). The Impact of Time Constraint on Information Search Strategies In Complex Choice Tasks. *Journal of Economic Psychology*, 23(6), 689-702.
- Worden, D. D., & Sullivan, C. A. (1987). *Shopping for Consumer Credit: Implications for Market Efficiency* Unpublished manuscript.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and Strategies in Services Marketing. *Journal of Marketing*, 49(2), 33-46.