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Increasingly, violations of consumers' personal information are altering the way consumers feel about divulging their personal information to organisations. It is proposed that by identifying which consumers react in which ways to different uses of their personal information, distinct market segments could be constructed. Such segments could offer businesses an opportunity to act responsibly by discriminating their information use in dependence of the segment needs, creating opportunities for competitive advantage and market leadership. This paper provides a brief overview on information privacy, marketing relationships and market leadership; and empirically explores general and personal privacy concerns and behaviour segments in terms of privacy issues using a data set from South Africa. The results indicate that consumers can be grouped into eight different privacy-sensitive segments which offer good opportunities for differentiated communication strategies.

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Abstract

Increasingly, violations of consumers' personal information are altering the way consumers feel about divulging their personal information to organisations. It is proposed that by identifying which consumers react in which ways to different uses of their personal information, distinct market segments could be constructed. Such segments could offer businesses an opportunity to act responsibly by discriminating their information use in dependence of the segment needs, creating opportunities for competitive advantage and market leadership. This paper provides a brief overview on information privacy, marketing relationships and market leadership; and empirically explores general and personal privacy concerns and behaviour segments in terms of privacy issues using a data set from South Africa. The results indicate that consumers can be grouped into eight different privacy-sensitive segments which offer good opportunities for differentiated communication strategies.

Introduction

The concept of privacy has shifted from a civil and political rights issue to a consumer rights issue underpinned by the principles of data protection. Consumers, to a greater extent than legislators, are forcing privacy onto the marketing agenda (Agre and Rotenberg, 1998). This paper focuses on consumer information privacy where information privacy can be viewed as the right of individuals to safeguard information about themselves from the use or control by others (Jordaan, 2004). Whether individuals consider privacy as an absolute right or are only concerned about their privacy in an abstract sense, many are willing to change their purchasing behaviour due to privacy concerns. The relation between information privacy concerns, privacy protective behaviour and individual characteristics can be a key for marketers to strengthen their position and lead the way to market leadership. The objective of this paper is to explore whether consumers' privacy concerns and privacy-related behaviours could be used as a basis for identifying target markets to actively improve the relationship between consumers and organisations. First, several conditions for market leadership is discussed, where after the DART model of value co-creation is explained against the backdrop of information privacy. Thereafter privacy concerns and behaviours are explored with respect to their potential to serve as an information base for privacy-sensitivity segmentation aimed at improving the relationship between organisations and customers, followed by a discussion of the possible actions companies can take to develop effective marketing strategies for different privacy-sensitive segments.

Consumer Information Privacy and Market Leadership

Several conditions can be identified as necessary for market leadership. Kandampully and Duddy (1999) believe that market leadership can be attributed to the organisation's ability to think

beyond the present (anticipation), to think for the customer (innovation) and to think beyond the parameters of the organisation (relationships). A focus on competitive advantage through anticipation, innovation and relationships will provide the means to sustainable and unequivocal market leadership. It is the organisation's awareness and fulfilment of customers' evolving needs that nurtures and validates their ongoing relationship with the customer. In order to establish long-term relationships with customers, organisations need to win their customers' trust on a continuous basis. The manner in which consumers' information is obtained, stored and used is likely to affect their trust in marketers. Consumer privacy concerns related to collection, errors and secondary use of their information are all expected to have a negative effect on the trust in the organisation-customer relationship (Campbell, 1997).

Cravens, *et al.* (1998) state that the path to market leadership is in becoming market oriented, leveraging value opportunities, positioning with distinctive competencies, developing relationship strategies and organisational change. Customer profile information is crucial for relationship building. It provides an advantage in a competitive marketplace, where knowledge about the target buyer needs to be more detailed, more personal, increasingly timely and preferably exclusive. To achieve and maintain leadership positions, strategies must be flexible and adaptive to shifting market needs (Felton, 2002). As technology continues to evolve, consumer conducts will evolve along with it and as consumers learn, they can better discriminate when making choices. Increasingly, consumers engage in the processes of both defining and creating value, leading to a situation where the co-creation experience of the consumer becomes the very basis of value (Prahalad and Ramaswamy, 2004). One controversial aspect of relationship marketing in consumer markets centres on information privacy. A fundamental tenet of relationship marketing is that the role of the consumer has changed from a passive recipient of marketing practices to an interactive co-producer of marketing practices. It is implicit in this philosophy that marketers and consumers are partners in business (Campbell, 1997).

Theoretical Framework

Being partners in business imply that value is co-created by the customer and the organisation. Leaders need a new frame of reference for value creation that is different from the traditional system of organisational-centric value creation. Prahalad and Ramaswamy (2004) believe that value creation centres on co-creation of unique value with customers. This begins by recognising that the role of the consumer has changed from isolated to connected, from unaware to informed, and from passive to active. The impact of the connected, informed and active consumer is manifested in the DART model (Dialogue, Access, Risk assessment, Transparency) of value co-creation. As the consumer-organisation interaction becomes the locus of value creation, the process of co-creation can be implemented through the four key building blocks of the DART model: dialogue; access; risk assessment; and transparency.

The first building block is dialogue, which is more than listening to customers - it implies shared learning and communication between the organisation and the customer. Dialogue allows participants in a relationship to reach a shared mental model and is a way of building a basis for mutual understanding and trust (Tzokas and Saren, 2004). Marketers and managers must be aware of new developments in the relevant technology, and the possible effects thereof, because technology can affect business activities and dialogue between partners (Zineldin, 2000).

The second building block in the model of value co-creation is access of information and tools. Consumer's access to information and their ability to dialog across consumer communities have changed the role of the consumer in today's business system. The tension between information

access and control has been presented as a problem of striking a fair balance between the privacy interests of individuals and the financial interests of organisations (Campbell, 1997).

The third building block in the DART model is risk assessment. This relates to informed consent where both organisations and customers have responsibilities. As the extensive use of consumer information has become part of the fabric of the modern market, the issue of who owns consumer information has been raised (Davis, 1997). Information technology is having a vast impact in this area, changing the nature of relationships and the balance of power between the parties involved. The Internet and WWW dramatically altered the way organisations conduct business and present opportunities to develop new relationships with end users (Zineldin, 2000).

The last building block in the DART model is transparency. As information about products, technologies and business systems becomes more accessible, creating new levels of transparency becomes increasingly desirable. Information technology is increasing the ability of organisations to exchange data with third-party sources providing ethical challenges to organisations. This creates concern about individual privacy and the transparency of personal information.

The essence of business success is competitive advantage which is built on relationships. These relationships are sustained social interactions in which past impressions affect future behaviour. As markets develop and evolve, achieving competitive advantage requires an increasingly sophisticated response (Johnson and Busbin, 2000). Today, competitive advantage and market leadership require the inclusion of intangibles such as customer information.

Research Problem and Objectives

Consumer perceptions, attitudes and behaviours about privacy have been researched in public opinion surveys in various countries in a number of disciplines, including law, political science, sociology and psychology (Eddy, Stone and Stone-Romero, 1999; Goodwin, 1991). While several studies have shown strong evidence indicating different dimensions of information privacy concerns (Culnan, 1993; Nowak and Phelps, 1992; Sheehan and Hoy, 1999), no studies have attempted to understand the value requirements of specific market segments based on their information privacy concerns and/or behaviour to enable organisations to direct efforts to the most suitable segments.

The objective of this paper is to explore whether consumers' privacy concerns and privacy-related behaviours could be used as a basis for identifying target markets to actively improve the relationship between consumers and organisations. Segments who display different information privacy needs will enable companies to identify which consumers expect absolute protection from information privacy violation of any kind to assure their loyalty to the organisation. Other segments, however, might see benefits in permitting the organisation to pass on their information. Being aware of the existence of such segments may enable organisations to optimise their way of handling information with respect to the particular segment's need. This would not only open the way to marketing leadership (by establishing a competitive advantage through the ability to serve customers' present and future needs), but could also identify segments that see benefit in their information being passed on. This will again enable organisations to state honestly in which way information will be passed on, and by doing so satisfy the customer's needs, creating a competitive advantage and paving the way to market leadership.

Data and Methodology

The consumer privacy scale developed by Jordaan (2004) was used to measure respondents' privacy concerns and related behaviour. The scale contains 57 items including (1) general privacy concerns; (2) personal privacy concerns relating to data collection, data storage and security, data use, data disclosure and solicitation practices as well as behavioural intentions; and (3) privacy-related protective behaviour. Responses to general and personal privacy concerns were recorded on five-point Likert scale items, with the remaining 12 behaviour items being measured on dichotomous 'yes-no' scales. A probability (systematic) sampling design was used to draw a representative sample of households with listed telephone numbers in different provincial directories in South Africa. The sample units were randomly selected and 800 telephone interviews were conducted with adults from these households. The measurement instrument were subjected to a scale purification process and showed both reliability and validity after the reduction of certain items. Details on the scale purification process fall beyond the scope of this paper, but can be reviewed in Jordaan (2004).

The general level of privacy concerns is studied in view of the DART model and the extent to which the DART recommendations are reflected in the perceptions of consumers using frequency counts. Thereafter, a posteriori segments of consumers were constructed using topology representing network (Martinetz and Schulten, 1994). Given that there was no prior knowledge about the data structure expected, the recommendation made by Formann (1984) in the context of latent-class analysis that 2^k respondents are required for k variables were followed. A factor analysis using the principal components algorithm followed by Varimax rotation was conducted to select nine out of 12 behavioural variables to be included. Raw data for these nine variables was used for partitioning (Arabie and Hubert, 1994). The four resulting factors explained 53% of the variance. The highest loading variables (0.5 or higher) from each factor were chosen in order to assure that discriminating information would not be lost before segmentation. Stability across 30 replications for numbers of segments ranging from two to 10 was used to choose the number of segments to retain. Please note that the factors were not retained for analysis. Factor analysis was merely used as a tool to help select non-redundant items to be used as a segmentation base.

Results

Table 1 includes selected (relating to the DART model) agreement levels of respondents with the general and personal privacy concerns in descending order. As can be seen, all variables that contain elements of the DART model (indicated by *) rank very low, indicating that there is presently not much reflection of value co-creation with respect to the use of personal information. For instance the statement that companies provide customers with removal opportunities (which reflects the dialogue and transparency aspects of the DART model) is agreed with by less than a quarter of all respondents.

Table 1: Agreement Level with General and Personal Privacy Concerns

STATEMENT	Agreement
Privacy protection policies should indicate how it will protect info	97%
Companies should have privacy protection policies	97%
Companies must have privacy protection policies.	94%

Government should do more to protect safety of info	92%
I feel uncomfortable when companies share information	90%
I am concerned that companies do not provide opportunity to remove info	87%
It is unacceptable when companies share info	83%
I am concerned about misuse	79%
Companies send too much advertising material	77%
Too many companies call to sell products and services	65%
Companies have measures in place to ensure accurate records	54%*
Companies seldom collect information without permission	51%*
I can prevent companies from collecting info	51%*
Most companies allow access to information	46%
I am pleased to receive info from unfamiliar companies	44%
I am satisfied about the control you have over how information is used	40%*
Information is safe while stored in a company's records	35%
Consumers have control over how their info is used	34%*
Companies provide customers with removal opportunity	24%*
I don't mind when companies use information for other purposes	12%

The majority of respondents, however, appear to agree that there should be both company policies and government regulations to protect them from privacy invasion. This reflects the distrust that currently dominates the organisation-customer relationship in privacy issues.

Information privacy-related behaviour was used to investigate whether valuable a posteriori market segments could be constructed. In sum, eight segments emerged from the analysis, two of which offer very distinct targeting opportunities. *Informed risk takers* engage in dangerous shopping behaviour, have not taken any protective action more frequently than this is the case among members of the general sample, but do express more frequently to be aware of procedures that need to be initiated to protect oneself against privacy invasion. The difference between the segments is mainly in the shopping mode preferences, with the second group being more involved in telemarketing activities. *Informed Internet users* represent a very interesting market segment who represent 11% of the sample (86 respondents) and are characterised by two main features: they seem to be very heavy Internet users with all members using Internet banking and about half of them purchasing other goods on the Internet as well; and they take active precautions to prevent abuse of their personal information. A significant proportion of this segment has had prior negative experiences (68% were victims of privacy invasion).

The results of the segmentation analysis indicate that there is potential for a targeted marketing approach with respect to information privacy protection. *Informed Internet users* presented an example of a consumer segment which is very sensitive about their information. This group is very active in the online environment. This segment seems is most attractive in terms of measurability, substance and accessibility: they mostly speak English as a home language, followed by Afrikaans-speaking individuals. Almost one third have a postgraduate degree and 41% an undergraduate degree. Half of the *Informed Internet users* are employed full-time with 26% being self-employed. This segment shows the highest household income. The *Informed Internet users* demonstrate very low levels of trust in companies with 69% reporting prior experiences with privacy violations. To build long-term relationships, organisations should assure that the data of these individuals is not used in any form beyond the direct transaction. This

should be communicated clearly to the segment to assure them that their privacy concerns are taken seriously and retain them as loyal customers. Thus, there should be interaction with targeted segments that is consistent with the segment's expectations, values and norms.

The opposite is true for *Informed risk takers*. They do not demonstrate high levels of protective behaviour and have some of the lowest privacy concerns. They feel that companies do not collect too much information, believe that companies have adequate measures in place to protect information, and that they do not send too much unrequested advertising material. This segment could be well suited for the contrary marketing strategy: to ask explicitly if they would like their information to be passed on in order to receive attractive offers from other organisations. Even though this segment demonstrates low levels of protective behaviour, their relatively high privacy concern suggests that they should be handled using permissions-based marketing before their data is disclosed or disseminated to third parties.

Conclusion

Information privacy has been called one of the most important ethical issues of the information age. Information privacy issues such as collection, accuracy, security and usage provide relational challenges to businesses. In today's information age, many organisations are focusing on the technical issues of information handling. It is important, however, to realise that addressing all the technical issues does not imply that it is ethical or reflective of market needs. Even though information technology may result in more complex systems, the basic relational commitments remain the same. The reported study presents one possibility of how organisations could develop competitive advantage and gain market leadership by investigating different needs of consumers with respect to consumer privacy issues. As illustrated with an empirical data set from South Africa, distinct differences between market segments exist, which could be exploited smartly by organisations through targeted communication strategies in order to improve value co-creation.

An organisation's long-term success in a market is essentially determined by its ability to expand and maintain a large and loyal customer base and the issue of privacy can be an important element in this strategy.

Acknowledgements

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Actions Based on Reviewers Comments

- ❑ First, there should be some introductory discussion on the DART model as to its compositions and specifications under a separate heading ‘theoretical framework’ so readers can follow the subsequent discussions of the results based on DART model. The abbreviation ‘DART’ can then be used in the subsequent discussion.

Change:

A discussion on the DART model under a separate heading “theoretical framework” has been added.

- ❑ Second, while discussing the results, frequent references has been made to a number of segments. I understand that a factor analysis was conducted to identify the dimensions but no information has been provided as to how much variance was explained by each factor and whether any rotation was necessary. I therefore suggest that the factors are shown in a separate Table indicating the individual factor loading and the percentage of variance explained by each factor along with their eigen values. Please note that if space does not permit to do so, at least some discussions have to be made with regard to the above so the reader can see the composition of the factors at a glance and follow the subsequent discussions.

Change:

We have obviously not explained the aim of the factor analysis well. We merely use it to select a subset of non-redundant items for further analysis. We DO NOT use factors in the subsequent analysis. Consequently factor statistics and validation figures are of no relevance to the study. To clarify this, we have added a more explicit statement explaining why we use factor analysis (to reduce the number of items in the segmentation base in a smart manner that ensured that we do not pick redundant items). We have also added information about the precise algorithm that was use as well as the rotation technique chosen.

- ❑ Third, no information has been provided as to the reliability of the scales used. I suggest that the cronbach alpha coefficient of the scales under each factor is also discussed in the methodology section of the paper.

Response:

We are not sure which “factors” you are referring to. We therefore respond to this comment in two different ways:

1. *If you are referring to the factors (= subscales) of the measurement instrument we used:*

All validity and reliability measured for the CONSUMER PRIVACY SCALE have been reported in the original publication in which the development of this scale is described in detail (Jordaan, 2004). We did not modify this scale, but used it in its original, recommended and validated form.

2. *If you are referring to the factors that emerged from the factor analysis we conducted to reduce the number of items in the segmentation base:*

We do not use the factors resulting from factor analysis as subscales. Consequently, computing coefficient alpha values makes no sense.

- ❑ Fourth, there is inconsistency in the referencing style followed that needs to be fixed. For example, while in some cases both volume and issue numbers have been reported, in some cases only the volume numbers of the relevant journal has been used.

Change:

The referencing style was edited to be consistent and in the appropriate format.

- ❑ One small (hopefully) problem: the characters seem to have not translated from your WORD submission to the online PDF version, with many words including random extra spaces. Translating from a proper computer (Mac) to a MS system? Maybe submitting as an RTF file would fix the problem.

Change:

Sorry about that. We were not aware of that problem. Unfortunately the online interface does not allow us to submit as both Word and RTF. Hopefully things will work better this time.