

# THE DEVELOPMENT OF DATABASE MARKETING: DOES CONSUMER INFORMATION PRIVACY MATTER?

---

Anić, Ivan-Damir

Source / Izvornik: **Zbornik radova Ekonomskog fakulteta Sveučilišta u Mostaru, 2016, 39 - 56**

**Journal article, Accepted version**

**Rad u časopisu, Završna verzija rukopisa prihvaćena za objavljivanje (postprint)**

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:213:281950>

Rights / Prava: [In copyright](#) / [Zaštićeno autorskim pravom](#).

Download date / Datum preuzimanja: **2025-01-23**



Repository / Repozitorij:

[The Institute of Economics, Zagreb](#)

**dr.sc. Ivan-Damir Anić**  
The Institute of Economics, Zagreb, Croatia  
danic@eizg.hr

## **THE DEVELOPMENT OF DATABASE MARKETING: DOES CONSUMER INFORMATION PRIVACY MATTER?\***

*Review*

### **Abstract**

*Consumer concerns for information privacy (CFIP) have become an important strategic issue for companies. In order to be successful companies develop consumer databases and use consumer information to develop customized products and services, and target potential consumers more effectively. However, the intensity and the volume of direct marketing communications, and the potential misuse of consumer personal data contribute to an increase in CFIP. As a result, consumers might protect their privacy, which may inhibit the growth of database marketing, direct marketing and e-commerce as well. The purpose of this paper is to examine and present the antecedents and consequences of CFIP in the context of database marketing. This paper introduces a theoretical model that examines the impacts of consumer attitudes towards database marketing on CFIP, and the effects of CFIP on willingness to provide information, purchase intentions and consumer purchases. The model posits that perceived ability to control information might alleviate the effects of unfavourable consumer attitudes towards database marketing on CFIP, while perceived usefulness of IT might reduce negative effects of CFIP on willingness to provide information, purchase intentions and actual purchases. Managerial implications are discussed in the paper.*

**Keywords:** *database marketing, consumer information privacy concerns, consumer attitudes, willingness to provide personal information, consumer purchases*

**JEL classification:** M30

\* This work has been fully supported by Croatian Science Foundation under the project 7913

## **1. INTRODUCTION**

The intelligent use of data has become a competitive advantage of a company, while the loss of customer data is one of the biggest risks to a modern business (Beveridge, Cook and Stubbings, 2015). Companies seek to improve their

targeting ability, which increases the demand for consumer information. Modern information technology (IT) has enabled marketers to develop consumer databases with increasing amounts of information about their customers, identify likely customers of goods and services, create consumer profiles, identify potential targets and communicate with consumers through direct marketing channels more effectively. However, the intensity and the volume of direct marketing communications, the way of gathering, manipulation, and the potential misuse of consumer personal data increase consumer concerns for their information privacy (CFIP) (Schoenbachler and Gordon, 2002). In fact, today consumers have little or no control over their information (Asay, 2013). As a result of privacy concerns, consumers may wish to protect their information privacy and require more control over information. As a consequence they might restrict company's efforts to introduce new innovative ways to collect data and develop databases, which may in turn reduce consumer purchases of goods and services through direct marketing (Thomas and Maurer, 1997). Therefore, privacy dilemma still catches the attention of researchers, scholars and marketers (Beveridge, Cook and Stubbings, 2015; Osatuyi, 2015).

Previous studies have examined CFIP from different perspectives, and various concepts have been provided. CFIP is related to collection, use and control of consumer personal data, and deals with the rights of those individuals whose information is shared (Goodwin, 1991; Campbell, 1997; Milne and Bahl, 2010), and arises whenever users suspect that their personal information rights have been violated (Wang, Lee and Wang, 1998). Although previous studies have identified various antecedents and consequences of CFIP, no consensus has been reached. Existing concepts, definitions and relationships are inconsistent and neither fully developed, nor empirically validated (Xu, Dinev, Smith and Hart, 2011).

The purpose of this paper is to gain deeper insights into CFIP in the context of database marketing. The paper provides a thorough literature review related to CFIP, its antecedents and consequences, and proposes an integrative model of privacy issues and their moderating variables as a foundation for further research. First part of proposed model explores the link between consumer attitudes towards database marketing and CFIP, taking perceived ability to control information as a moderating variable. The second part of the model examines the relationships among CFIP, willingness to provide information (WPI), purchase intentions and consumer purchases, taking perceived usefulness of IT as a moderating variable.

This paper builds on previous studies involving CFIP in relation to database marketing (Culnan 1993; Nowak and Phelps 1992; 1995; Patterson, O'Malley and Evans, 1997; Milne and Boza, 1999; Milne and Rohm 2000; Phelps, D'Souza and Nowak, 2001). The study attempts to integrate research in consumer information

privacy area and develop a comprehensive view about its antecedents and consequence factors. Proposed model examines whether the level of perceived ability to control information affects the impact of consumer attitudes towards database on CFIP. Few studies verified the link between perceived ability to control the information and CFIP. Past research has examined only the direct effects, but it failed to examine moderating effects.

Further contribution of this model is the examination of the impacts of CFIP on WPI, purchase intentions and actual purchases, taking perceived usefulness of IT as a moderator variable. Past research examined separately the impacts of privacy concerns on purchase intentions and consumer purchases, but not in the same model. Although privacy concerns are seen as a challenge for Internet technology and services acceptance, the role of CFIP in the acceptance of new information technology for database marketing purposes is not clear (Van Ittersum et. al., 2006; Lallmahamood, 2007). Although past research examined privacy as external variables and antecedent to perceived usefulness of IT, perceived ease of use and intention to use new technology (Lallmahamood, 2007), it failed to examine moderating effects.

Several managerial implications might be derived from this study. The results might be interesting for companies that rely on consumer databases in their marketing activities. The paper helps identify situations when CFIP matters and proposes suggestions for productive strategies and tactics for alleviating consumer concerns related to the use of individual-level consumer information.

The paper is organized in the following manner. The second section presents the literature dealing with database marketing and CFIP, its antecedents and consequences. In the third section the conceptual model is presented, while the fourth section contains a conclusion of results, managerial implications and directions for future research.

## **2. LITERATURE REVIEW**

Database marketing is a form of direct and relationship marketing. It is a systematic approach to gathering, consolidation and processing of consumer data that is maintained in a company's databases that is used to customize goods and services to better suit the preferences of particular individuals and generate personalized communications (O'Malley et al., 1997; Hui and Png, 2006). Targeted advertising may reduce the cost of communication and marketing expenses (Hui and Png, 2006). Companies may also sell personal information for extra revenues (Hui and Png, 2006), which is the most controversial issue causing consumer privacy concerns. Consumer databases may include a variety of data, including

demographic information, psychographic characteristics, data associated with credit card account, telephone or Internet browser, and history of purchases (Shaver, 1996; Milne, Gabisch, Markos and Phelps, 2012). A variety of methods may be used to gather consumer information, for example scanner data, flyer programs, subscriptions, purchase orders, financial transactions, coupons, trial and free offers, census, telephone directories, media surveys (Nowak and Phelps, 1995). Database marketing has been successful in industries that have the ability to generate significant amounts of transaction data for large numbers of customers, especially in financial services, telecommunications, and retailing industry.

The volume and the way of gathering, manipulation, and the sale of consumer personal information are increasing people's privacy concerns (Campbell 1997; Milne and Boza, 1999; Phelps, Nowak and Ferrell, 2000; Phelps, D'Souza and Nowak, 2001; Nam et al., 2006). Previous studies have provided various definitions, constructs and items of CFIP (Patterson, O'Malley and Evans, 1997). Westin (1967, p. 10) defines information privacy as "the claim of individuals, groups or institutions to determine for themselves when, how, and to what extent information about them is communicated to others." CFIP deals with the rights of those people whose information is shared, and arises whenever users suspect that their personal information rights have been violated (Wang et al., 1998).

Smith, Milberg and Burke (1996) developed a 15-item scale that measures CFIP on four dimensions: improper access to personal information, collection of personal information, errors in personal information, and unauthorized secondary use of personal information. The scale has received empirical validation in several contexts (Milberg, Smith and Burke 2000; Stewart and Segars, 2002; Okazaki, Li and Hirose, 2009). Furthermore, Malhotra, Kim and Agarwal (2004) used the construct with dimensions control over personal information, awareness of privacy practices and data collection, while Dinev and Hart (2004) used two dimensions: abuse of personal information and information finding.

With the spread of Internet, much attention has been paid to online information privacy, which is defined as consumer concerns about what data is being collected by an online vendor about the customer and how it will be used (Li and Zhang, 2009; Morimoto and Macias, 2009). Past research has examined the situations in which CFIP matters, and various antecedents and consequences related to database marketing were identified (see Table 1).

Table1: Previous research on antecedents and consequences of CFIP

<b>MAJOR FINDINGS/SOURCES</b>	
<b>1. ANTECEDENTS</b>	
Demographic variables	<ul style="list-style-type: none"> <li>- Females are more concerned about privacy than men (Sheehan, 1999; Graeff and Harmon, 2002; Grubbs Hoy and Milne, 2010).</li> <li>- There are no gender differences (The Lares Institute, 2011; Milne and Boza, 1999; Zukowski and Brown, 2007; Zhang, Chen and Lee, 2013).</li> <li>- Younger and higher income consumers are less concerned about privacy (Milne et al., 1996; Milne and Boza, 1999; Milne and Rohm, 2000; 2004; Graeff and Harmon, 2002; Zukowski and Brown, 2007; Graeff and Harmon, 2002; Zhang et al., 2013).</li> <li>- Education is positively correlated with CFIP (Zhang et al. 2013)</li> </ul>
Individual's knowledge of corporate policies and practices	<ul style="list-style-type: none"> <li>- Knowledge accumulated is negatively related to CFIP (Li, 2011).</li> </ul>
Information sensitivity	<ul style="list-style-type: none"> <li>- Information sensitivity does not have a significant impact on privacy concerns (Yang and Wang, 2009).</li> </ul>
Company related factors	<ul style="list-style-type: none"> <li>- Positive consumer perceptions are negatively related to privacy concerns (Kiryanova Bernard and Makienko, 2011).</li> <li>- Perceived convenience has negative impact on privacy concerns (Nam et al., 2006).</li> <li>- Reputation has no impact on privacy concerns (Nam et al., 2006).</li> <li>- Website informativeness has a negative impact on CFIP (Pavlou, Liang and Xue, 2007).</li> </ul>
Perceived ability to control information	<ul style="list-style-type: none"> <li>- Perceived ability to control the data is negatively related to CFIP (Milne and Boza, 1999; Bandyopadhyay, 2011).</li> </ul>
Third-party privacy certification (TPSA)	<ul style="list-style-type: none"> <li>- TPSA is negatively related to privacy concerns (Nam et al., 2006).</li> </ul>
Attitudes towards direct marketing (ATDM) and relationship marketing (ATRM)	<ul style="list-style-type: none"> <li>- ATDM are negatively related to privacy concerns (Phelps, Nowak and Ferrell, 2000; Phelps, D'Souza and Nowak, 2001).</li> <li>- ATRM is significantly and negatively related to CFIP (Phelps, D'Souza and Nowak, 2001).</li> <li>- ATRM is not significantly related to CFIP (Milne and Boza, 1999).</li> </ul>
Previous personal experience	<ul style="list-style-type: none"> <li>- Previous experience with information misuse is positively related to privacy concerns (Smith, Milberg and Burke, 1996; Okazaki, Li and Hirose, 2009).</li> </ul>
<b>2. CONSEQUENCES</b>	
Willingness to provide personal information	<ul style="list-style-type: none"> <li>- Privacy concerns are negatively related to WPI (Nam et al., 2006; Phelps, D'Souza and Nowak, 2001).</li> </ul>
Privacy-related behavior	<ul style="list-style-type: none"> <li>- Privacy concerns are positively related to intention to protect information privacy (Rose, 2006; Li, 2011).</li> <li>- Privacy concerns affect consumer intention to fabricate, protect and withhold information (Lwin, Wirtz and Williams, 2007).</li> <li>- Privacy concerns are negatively related to purchase behavior (Phelps, D'Souza and Nowak, 2001).</li> <li>- Privacy concerns are positively related to consumer preferences for higher level of regulatory control (Okazaki, Li and Hirose, 2009).</li> </ul>

Source: Past research.

The most important variables that affect consumer perceptions of various forms of database marketing are consumer characteristics, knowledge of corporate policies and practices, relevance and sensitivity of information, reputation of a company and perceived ability to control information (Patterson, O'Malley and Evans, 1997). Demographic variables have been the most frequently analyzed antecedents of privacy concerns. In general, more concerns about their privacy were shown to express females, older, lower-income, and higher-educated consumers (Milne et al., 1996; Milne and Boza, 1999; Sheehan, 1999; Milne and Rohm, 2000; Graeff and Harmon, 2002; Grubbs Hoy and Milne, 2010; Zukowski and Brown, 2007; Zhang et al., 2013).

Consumers' knowledge of actual corporate policies and practices may affect CFIP. There are two opposing arguments about this effect. On one hand, the more knowledge individuals have about the collection and use of personal information, the more concerned they may be about information privacy practices. On the other hand, if consumers understand that the data collected has the potential to build a relationship in which they could participate in the creation of goods or services, privacy concerns might be diminished by their desire to participate (Campbell, 1997).

Another issue related to CFIP is the sensitivity of the information requested by the marketers. Malhotra et al. (2004) found that a request for more sensitive information in an e-commerce setting reduces trust and increases perceived risk, because the request makes consumers more cautious and suspicious about a marketer (Okazaki, Li and Hirose, 2009). Numerous research indicates that consumers are most willing to provide marketers with demographic and lifestyle information, while they are the least willing to provide financial information and personal identifiers, like annual household income, credit card information and social security number (Phelps, Nowak and Ferrell, 2000). Most consumers are concerned about the ways companies use personal information. Potential privacy threats might include misclassification, inappropriate advertising, loss of "the right to be alone", and public disclosure of embarrassing private facts (Nowak and Phelps, 1995). Privacy especially matters in situations when consumer is unaware that information is being collected and used; when consumer supplies the information for one purpose and the information is used for other purposes without the consumer's knowledge or consent; and when third party supplies personal information without the consumer's knowledge or consent to the data transfer and ultimate uses of that data (Nowak and Phelps, 1995).

Previous studies have also examined the attitudes of respondents regarding their general experience or their experience with specific website (Li, 2011). Firm reputation can contribute to greater trust and perception of a customer-company

relationship (Schoenbachler and Gordon, 2002). Consumers may be more accepting of potential privacy infringements when they are conducted by certain kinds of companies, such as those with whom consumers are already familiar, or who supply products that appear to be potentially useful (Wang and Petrison, 1993). Positive consumers' perceptions of the e-tailer privacy policy were shown to have a negative influence on their privacy concerns (Kiryanova and Makienko, 2011). In general, consumer attitudes towards privacy depend on how direct marketing activities are presented. When the advantages for consumers are well described, privacy concerns decreases (Wang and Petrison, 1993). If marketers promise consumers to receive, as part of the information exchange, some benefits, such as savings or greater selections of products and services, consumers might be more willing to provide information, and consequently they will be less concerned about their privacy (Phelps, Nowak and Ferrell, 2000). Previous negative experience increases consumer and privacy concerns (Okazaki, Li and Hirose, 2009).

Past research shows that consumer attitudes towards direct marketing and relationship marketing might affect consumer privacy concerns. Consumers' attitudes towards direct marketing include consumer perceptions of direct marketing activities with respect to its impacts on prices, convenience, development of new products and services, time saving, and enjoyment in shopping. Attitudes towards relationship marketing include consumers' perceptions of the way companies are informing them about new products and services, perceptions of awards for their loyalty, individual attention provided by a company, maintaining long term relationship with organizations and the purchase likelihood from those companies (Milne and Boza, 1999). Attitudes towards direct marketing were shown to negatively influence information privacy concerns, while no significant relationship was found between privacy concerns and attitudes towards relationship marketing (Milne and Boza, 1999; Phelps, D'Souza and Nowak, 2001; Phelps, Nowak and Ferrell, 2000).

Several studies show that consumers might desire more control over information collection and use (Phelps, Nowak and Ferrell, 2000). Consumers tend to have lower privacy concerns if they perceive a certain degree of control over the collection and use of their personal information (Nowak and Phelps, 1997; Sheehan and Hoy, 2000). Third-party privacy certification (e.g. TRUSTe and BBB9) has evolved as a major self-regulatory practice to address consumers' concerns about privacy during online transactions, and they might encourage consumer to disclose information and engage in e-commerce, when perceived risk was high.

Past research has also examined various consequences of privacy concerns, including WPI, purchase intentions and consumer purchases (Li, 2011). Higher level of CFIP might lead to actively protective behaviors (e.g., requesting deletion



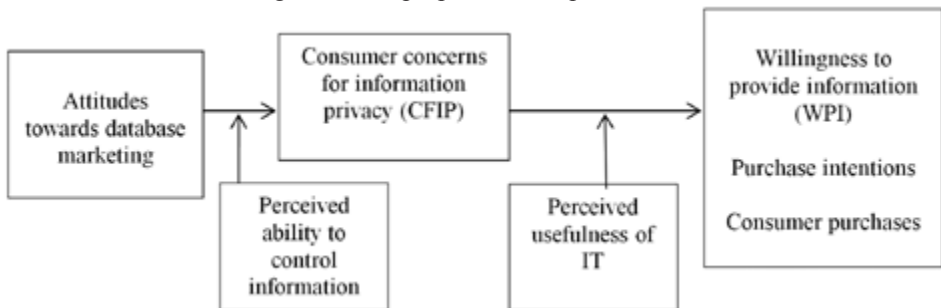
of private information from the company's database; rejecting providing personal information to marketers, providing incomplete information, and providing inaccurate information) or passively protective behaviors (e.g., avoiding purchasing of products and services) (Sheehan, 1999; Phelps, D'Souza and Nowak, 2001; Nam et al., 2006; Dolnicar and Jordaan, 2007; Bandyopadhyay, 2009; Li, 2011). The consumer protective behavior might be the real threat to the development of database marketing. Privacy concerns might be negatively related to purchase decision process and purchase behavior (Phelps, D'Souza and Nowak, 2001). People highly concerned about privacy were shown to exhibit lower recency, frequency and monetary value of catalog purchases (Phelps, D'Souza and Nowak, 2001). Finally, consumers' attitudes and perception towards information privacy protection might impact its legislation and implementation.

It might be concluded that past research identified various antecedents and consequences of CFIP (Li, 2011). Much of this literature is based within a context of developed countries, while there is a paucity of research on privacy issues in relatively underdeveloped countries (Patterson, O'Malley and Evans, 1997). Past research mostly examined direct effects of various variables to CFIP, but very few studies have examined the moderating roles of privacy concerns and more efforts are needed to further investigate these effects (Li, 2011). Also, there is a room for investigation of CFIP in online setting from the perspective of the introduction of new technologies related to database marketing.

### 3. THE CONCEPTUAL MODEL

Figure 1 presents the proposed framework. First part of the model explores the link between consumer attitudes towards database marketing and CFIP. Model posits that this link depends on the degree of perceived ability to control information. The second part of the model examines the relationships among CFIP, WPI, consumer purchase intentions and their actual purchases, while perceived usefulness of IT is treated as moderating variable.

Figure 1: The proposed conceptual model



Source: Author.

### **3.1. Attitudes towards Database Marketing and CFIP: Moderating Role of Perceived Ability to Control Information**

This paper proposes that perceived ability to control information moderates the link between consumer attitudes towards database marketing and CFIP. CFIP includes consumer perceptions related to improper access to personal information, collection of personal information, errors in personal information, and unauthorized secondary use of personal information (Smith, Milberg and Burke, 1996). Although past research suggests that positive consumer attitudes towards the company or its direct marketing efforts reduce CFIP, this link is not so straightforward (Milne and Boza, 1999). Milne and Boza (1999) examined how are perceived control, attitudes towards relationship marketing and attitudes towards direct marketing related to trust, concern and mail usage in direct marketing industry. The study showed that attitudes towards direct marketing act as an antecedent to CFIP, while there was some uncertainty regarding the relationship between consumers' attitude towards direct marketing and the level of concern (Milne and Boza, 1999). In general, the more positive attitudes consumers have towards companies' initiatives, the less CFIP is (Phelps, D'Souza and Nowak, 2001). In order to test proposed model attitudes towards database marketing should be developed as a new and separate construct from already existing measures (i.e. CFIP, attitudes towards direct and relationship marketing), and it should contain more specific items focused on database marketing procedures (i.e. identifying, gathering, consolidation and processing of relevant information about consumers).

Past research also examined the link between perceived ability to control information and CFIP, but no moderating effect was explored. Proposed model suggests that perceived ability to control information might moderate the link between consumer attitudes towards database marketing and CFIP. Perceived ability to control information measures consumers desires, perceptions and their actions in situations if company or sites offers the ability to control information, and if control policy is verified/monitored by a reputable third party (Dinev and Hart, 2004). The perceived ability to control information is a separate construct from privacy concerns. It acts as antecedent to CFIP in such a way that CFIP is likely to be reduced if the level of perceived ability to control information increases (Milne and Boza, 1999; Xu, 2007; Bandyopadhyay, 2011; Li, 2011). The perceived ability to control information would offset the risk of negative consequences. Consumers tend to think that information disclosure is less invasive to their privacy, and less likely to lead to negative consequences when they believe that they can control when and how such information is disclosed and used in the future. Control is possible through limiting self-disclosure or by determining how information disclosed will be used. Perceived ability to control information might be

high or low. A high degree of control means that consumers can influence how information about them is used, while little or no control means that consumers have a negligible influence on decisions regarding how personal data will be used and who will have access to it (Phelps, Nowak and Ferrell, 2000). Few studies have clarified the nature of control in the privacy context, and mostly direct impact of control on CFIP was examined.

Based on previous research, it is likely to expect that attitudes towards database marketing are negatively related to CFIP, while perceived ability to control information is expected to moderate the link between consumer attitudes towards database marketing and CFIP. Moderating variable perceived ability to control information might influence the effects between consumer attitudes towards database marketing and CFIP in such a way that unfavourable consumer attitudes towards database marketing may result in lower level of CFIP if perceived ability to control information is stronger than if it is weaker. That is, consumer may be less concerned about their personal information, even if consumer attitudes are lower if perceived ability to control information is higher.

### **3.2. CFIP and Purchasing Outcomes: Moderating Role of Perceived Usefulness of IT**

In proposed model perceived usefulness of IT moderates the links between CFIP and several outcome variables (WPI, purchase intentions and consumer purchases). WPI includes consumer willingness to provide personal information to marketers (Phelps, Nowak and Ferrell, 2000; Nam et al., 2006; Okazaki, Li and Hirose, 2009). Previous studies suggest that consumers who are concerned about their online privacy will be unwilling to disclose personal information (Nam et al., 2006; Faja and Trimi, 2006; Dinev and Hart, 2006). This may result, e.g. in browsing Websites where no personal data is captured or providing only limited and anonymous, or even false personal information to Websites (Dinev and Hart, 2006) that require “registration” to use content (Bandyopadhyay, 2009). Prior research suggests that WPI is based on assessment of costs and benefits, consumer personal experience and company reputation. It can be affected by novelty or familiarity of a particular marketing technology for collecting personal information (Milne et al., 2012). Based on past research it might be proposed that CFIP should be negatively related to WPI.

Past research suggests that privacy concerns are negatively related to purchase behavior and purchase decision process. Purchase intentions include the likelihood of purchasing products from a company (Phelps, Nowak and Ferrell, 2000). Empirical evidence indicates that concerns for privacy might negatively affect purchase intentions (Phelps, Nowak and Ferrell, 2000, Phelps, D’Souza and

Nowak, 2001; Eastlick, Lotz and Warrington, 2006), the willingness to buy (Faja and Trimi, 2006), and the intention to transact (Dinev and Hart, 2006). In model proposed in this study, examined consequences also include actual purchases, as purchase intentions might not be highly correlated with actual purchases. Previous findings show that the correlation between intentions and behavior in privacy context was between 0.41 and 0.53 (O'Keefe, 2002), while the study of Norberg, Horne and Horne (2007) shows that respondents provided significantly greater amounts of personal information than they say they would. This suggests that purchase intentions and actual purchases should be analyzed separately.

Previous studies that investigated direct effect of consumer privacy concerns on consumer purchases (i.e. no. of items consumer purchased from a company) show that consumer privacy concerns are negatively related to direct marketing usage, measured as the number of times consumers purchased goods or services by mail, phone or Internet (Milne and Boza, 1999) and consumer purchases (Phelps, D'Souza and Nowak, 2001). People highly concerned about their privacy exhibited lower recency, frequency and monetary value of catalog purchases (Phelps, D'Souza and Nowak, 2001). Privacy concern is also negatively associated with Web purchase (Krohn, Luo and Hsu, 2002). Based on past research it might be proposed that CFIP should be negatively related to both purchase intentions and actual purchases.

Perceived usefulness of IT in this study is treated as a moderator between CFIP and outcome variables. Perceived usefulness of IT describes the extent to which a technology is expected to improve a potential adopter's performance: i.e. work more quickly, better job performance, increase in productivity and effectiveness; makes job easier and useful. Technology can be defined as the practical application of knowledge or a manner of accomplishing a task. In literature the most common examined technologies are Internet and information technologies, financial, healthcare, telecommunications and library systems. Previous research shows that the perceived usefulness of a technology positively influences the acceptance of technologies (Ittersum et al., 2006), although it may not fully reflect the users' intention to adopt new technology due to additional factors that also predict the acceptance of information technology, including trust, perceived risk, and privacy. The study of Lallmahamood (2007) shows that a customer's perceived privacy has a positive impact on his/her intention to use and perceived usefulness of Internet banking, and perceived ease of use of Internet banking.

The proposed model in this study claims that if the level of perceived usefulness of IT is stronger, it is possible that even if CFIP is higher WPI, consumer purchase intentions and their actual purchases might be higher too. It is expected that perceived usefulness of IT moderate the link among CFIP and several outcome

variables, WPI, purchase intentions and consumer purchases. Promised benefits to consumers, in exchange for information, might stimulate consumers to provide their information and purchase products or services (Phelps, Nowak and Ferrell, 2000). Analyzed IT technology would include technologies that enable database marketing, i.e. new digital technologies that contribute to the collection, storage and trading of personal data.

#### **4. CONCLUSION**

The purpose of this research was to enhance the understanding of information privacy issues in the context of database marketing. A theoretical model with a few new relationships was proposed based on privacy theory. The proposed model posits that consumer attitudes towards database marketing negatively affect CFIP, while perceived ability to control information might alleviate the effects of unfavourable consumer attitudes on CFIP. CFIP is likely to be negatively related to WPI, purchase intentions and consumer purchases, while perceived usefulness of IT might reduce negative effects of CFIP on WPI, purchase intentions and consumer purchases.

This study provides implications for direct and database marketers. As privacy is likely to continue to be important as long as consumers do not trust marketers, marketers must address consumer privacy in a responsible manner, if they want to be successful. Main goal should be related to the reduction of CFIP and encouragement of consumers to provide personal information, so marketers can use them for direct marketing and promotion activities. Lower level of CFIP contributes to a higher level of WPI, purchase intentions and consumer purchases.

CFIP might be reduced by improving consumer attitudes towards database marketing. If marketers give consumers ability to control their information, they might reduce CFIP. Similarly, if they offer them more benefits in exchange of information, and increase usefulness of IT, consumers might be more willing to provide their personal information and purchase goods and services. Marketers should routinely inform consumers when individual-specific information is collected, let them know how the information will be used, and tell them who will have access to the data.

There is a need for future studies to address CFIP in database context. The next step should be to test the model with the data. In order to test the model new construct and items related to consumer attitudes towards database marketing should be developed. Future studies might also take into consideration various situations, and industry sectors in which privacy can pose a threat. Researchers might investigate consumer behaviour consequences of CFIP more in detail (e.g.

satisfaction, loyalty, purchases of various products), especially related to different types of information.

## REFERENCES

1. Asay, C.D., (2013), Consumer Information Privacy and the Problem(s) of Third-Party Disclosures, *Northwestern Journal of Technology and Intellectual Property*, 11(5), 322-356, (<http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1193&context=njtip>, accessed November 4, 2015).
2. Bandyopadhyay, S., (2009), Antecedents and Consequences of Consumers' Online Privacy Concerns, *Journal of Business and Economics Research*, 7(3), 41-48.
3. Bandyopadhyay, S., (2011), Online privacy concerns of Indian consumers, *International Business & Economics Research Journal*, 10(2), 93-100.
4. Beveridge, A., Cook, C., and Stubbings, A. (2015), Privacy, The Futures Company, <http://thefuturescompany.com/free-thinking/privacy/> (accessed 6 March 2015).
5. Campbell, J.A. (1997), Relationship Marketing in Consumer Markets, *Journal of Direct Marketing*, 11(3), 44-57.
6. Culnan, M. J. (1993), 'How did they get my name?': An exploratory investigation of consumer attitudes toward secondary information use, *MIS Quarterly*, 17, 341-363.
7. De Pechpeyrou, P., Nicholson, P., (2012), An Integrated Framework for Privacy Concerns in France, *International Journal of Integrated Marketing Communications*, 4(1), 19-32.
8. Dinev, T., Hart, P., (2004), Internet Privacy Concerns and Their Antecedents -Measurement Validity and a Regression Model, *Behavior & Information Technology* (23)6, 413 - 422.
9. Dinev, T., Hart, P., (2006), An Extended Privacy Calculus Model for E-Commerce Transactions, *Information Systems Research*, 17(1), 61-80.
10. Dolnicar, S., Jordaan, Y., (2007), A Market-Oriented Approach to Responsibly Managing Information Privacy Concerns in Direct Marketing, *Journal of Advertising*, 36(2), 123-149.
11. Eastlick, M.A., S.L. Lotz, Warrington, P., (2006), Understanding Online B-to-C Relationship: An Investigated Model of Privacy Concerns, Trust, and Commitment, *Journal of Business Research*, (59)8, 877-886.

12. Faja, S., Trimi, S. (2006), Influence of the Web Vendor's Interventions on Privacy-Related Behaviors in E-Commerce, *Communications of the Association for Information Systems*, 17(Article 27), 593–634.
13. Goodwin, C., (1991), Privacy: Recognition of a consumer right, *Journal of Public Policy & Marketing*, 10(1), 149-166.
14. Graeff, T.R. Harmon, S., (2002), Collecting and using personal data: consumers' awareness and concerns, *Journal of Consumer Marketing*, 19(4), 302 – 318.
15. Grubbs Hoy, M., Milne, G. (2010), Gender differences in privacy-related measures for young adult Facebook users, *Journal of Interactive Advertising*, 10(2), 28-45.
16. Hui, K.L., Png, I.P.L., (2006), The Economics of Privacy, in Hendershott, E. (Ed.), *Handbooks in Information Systems (1-27)*, Amsterdam: Elsevier B.V.
17. Janda, S., (2008), Does Gender Moderate the Effect of Online Concerns on Purchase Likelihood?, *Journal of Internet Commerce*, 7(3), 339–358.
18. Kiryanova, B.E., Makienko, I., (2011), The effects of information privacy and online shopping experience in e-commerce, *Academy of Marketing Studies Journal*, 15 (1), 97-112.
19. Krohn, F., X. Luo, Hsu, M.K., (2002), Information Privacy and Online Behaviors, *Journal of Internet Commerce*, 1(4), 55–69.
20. Lallmahamood, M., (2007), An examination of individual's perceived security and privacy of the Internet in Malaysia and the influence of this on their intention to use e-commerce: using an extension of the technology acceptance model, *Journal of internet banking and commerce*, 12(3), 1-26.
21. Li, S., Zhang, C., (2009), An empirical investigation of information privacy concern and its antecedents and consequences, *Proceedings for the Northeast Region Decision Sciences Institute (NEDSI)*, 344-349.
22. Li, Y., (2011), Empirical studies on online information privacy concerns: literature review and an integrative framework, *Communications of the Association for information systems*, 28, 453-496.
23. Lwin, M., Wirtz, J., Williams, J.D. (2007), Consumer online privacy concerns and responses: a power - responsibility equilibrium perspective. *Journal of the Academy Marketing Science*, 35(4), 572-585.
24. Malhotra, N.K., Sung S.K. and Agarwal, J., (2004), Internet Users' Information Privacy Concerns (IUIPC): The Constructs, the Scale, and a Causal Model, *Information Systems Research*, 15(4), 336–355.
25. Milberg, S.J.H., Smith, J., Burke, S.J., (2000), Information Privacy: Corporate Management and National Regulation. *Organization Science*, 11(1), 35–57.

26. Milne, G. R., Rohm, A. J., (2004), Consumers' protection of online privacy and identity. *Journal of Consumer Affairs*, 38(2), 217–232.
27. Milne, G.R., Rohm, A.J. (2000), Consumer privacy and name removal across direct marketing channels: Exploring opt-in and opt-out alternatives. *Journal of Public Policy and Marketing*, 19(2), 238-249.
28. Milne, G.R., Boza, M.E., (1999), Trust and Concern in consumers' perceptions of marketing information management practices. *Journal of Interactive Marketing*, 13(1), 5-24.
29. Milne, G.R., Beckman, J., Taubman, M.L., (1996), Consumer Attitudes toward Privacy and Direct Marketing in Argentina, *Journal of direct marketing*, 10(1), 22-33.
30. Milne, G.R., Gabisch, J.A., Markos, E., Phelps, J.E., (2012), Changes in Consumer Willingness to Provide Information over the Last Decade: A Cohort Analysis. *International Journal of Integrated Marketing Communications*, 4(2), 44-59.
31. Milne, G.R., Bahl, S. (2010), Are there differences between consumers' and marketers' privacy expectations? A segment- and technology-level analysis. *Journal of Public Policy & Marketing*, 29(1), 138-149.
32. Morimoto, M., Macias, W., (2009), A Conceptual Framework for Unsolicited Commercial E-mail: Perceived Intrusiveness and Privacy Concerns, *Journal of Internet Commerce*, 8(3/4), 137-160.
33. Nam, C., C. Song, Lee, E., C.I. Park. (2006), Consumers' Privacy Concerns and Willingness to Provide Marketing-Related Personal Information Online, *Advances in Consumer Research*, 33(1), 212-217.
34. Norberg, P.A., Horne D.R, Horne, D.A., (2007), The Privacy Paradox: Personal Information Disclosure Intentions versus Behaviors, *Journal of Consumer Affairs*, 41(1), 100-126.
35. Nowak, G.J., Phelps, J., (1992), Understanding privacy concerns, *Journal of Direct Marketing*, 6(4), 28–39.
36. Nowak, G.J., Phelps, J.E., (1995), Direct Marketing and the use of individual-level Consumer information: Determining how and when “privacy” matters, *Journal of direct marketing*, 9(3), 46-60.
37. Nowak, J.G., Phelps, J., (1997), Direct Marketing and the Use of Individual-Level Consumer Information: Determining How and When Privacy Matters, *Journal of Direct Marketing* 11(4), 94-108.
38. Okazaki, S., Li, H., Hirose, M., (2009), Consumer Privacy Concerns and Preference for Degree of Regulatory Control, *Journal of Advertising*, 38(4), 63-77.
39. O'Keefe, Daniel J., (2002), *Persuasion Theory and Research*, 2nd edition, Thousand Oaks, CA: Sage Publications.



40. O'Malley, L., Patterson, M., Evans, M., (1997), Intimacy or intrusion? The privacy dilemma for relationship marketing in consumer markets, *Journal of Marketing Management*, 13(6), 541-559.
41. Osatuy, B., (2015), Personality traits and information privacy concern on social media platforms, *Journal of Computer Information Systems*, 55(4), 11-19.
42. Patterson, M, O'Malley, L., Evans, M., (1997), Database marketing: investigating privacy concerns, *Journal of Marketing Communications*, 3(3), 151-174.
43. Pavlou, P.A., Liang, H., Xue, Y., (2007), Understanding and mitigating uncertainty in online exchange relationships: a principal- agent perspective, *MIS Quarterly*, 31(1), 105-136.
44. Phelps, J.E., Nowak, G., Ferrell, E., (2000), Privacy Concerns and Consumer Willingness to Provide Personal Information, *Journal of Public Policy and Marketing*, 19(1), 27-41.
45. Phelps, J. E., D'Souza, G., Nowak, G.J., (2001), Antecedents and Consequences of Consumer Privacy Concerns: an Empirical Investigation, *Journal of Interactive Marketing*, 15(4), 2-17.
46. Schoenbachler, D.D., Gordon, G.L., (2002), Trust and customer willingness to provide information in database-driven relationship marketing, *Journal of Interactive Marketing*, 16(3), 2-16.
47. Shaver, D., (1996), *The Next Step in Database Marketing: Consumer Guided Marketing, Privacy for your Customers, Record Profits for you.* New York: John Wiley & Sons, Inc.
48. Sheehan, B.K., (1999), An Investigation of Gender Differences in On-Line Privacy Concerns and Resultant Behavior, *Journal of Interactive Marketing*, 13(4), 24-38.
49. Sheehan, K.B., Hoy, G.M., (2000), Dimensions of Privacy Concern among Online Consumers, *Journal of Public Policy and Marketing* 19(1), 62-73.
50. Smith, H.J., Milberg, S.J., Burke, S.J., (1996), In-formation Privacy: Measuring, Individuals' Concerns about Organizational Practices, *MIS Quarterly*, 20(2), 167-196.
51. Stewart, K.A., Segars, A.H. (2002), An Empirical Examination of the Concern for Information Privacy Instrument, *Information Systems Research*, 13(1), 36-49.
52. Thomas, R.E., Maurer, V.G., (1997), Database Marketing Practice: Protecting Consumer Privacy, *Journal of Public Policy & Marketing*, 16(1), 147-155.
53. Van Ittersum, K., Rogers, W.A., Capar, M., Caine, K.E., O'Brien, M.A, Parsons, L.J. and Fisk, A.D., (2006), Understanding Technology Acceptance:

Phase 1 - Literature Review and Qualitative Model Development, Technical Report, HFA-TR-0602, Atlanta: College of Management, School of Psychology.

54. Wang, H., Lee, M.K.O, Wang, C., (1998), Consumer privacy concerns about Internet marketing, *Communications of the ACM*, 41(3), 63–70.
55. Wang, P., Petrison, L.A., (1993), Direct marketing activities and personal privacy. A consumer survey, *Journal of Direct Marketing*, 7(1), 7–19.
56. Westin, A., (1967), *Privacy and Freedom*. New York: Atheneum.
57. Xu, H., Dinev, T., Smith J., Hart, P., (2011), Information privacy concerns: Linking individual perceptions with institutional privacy assurances, *Journal of the Association for Information Systems*, 12(12), 798-824.
58. Xu, H., (2007), The Effects of Self-Construal and Perceived Control on Privacy Concerns, *Proceedings of the 28th, International Conference on Information Systems*, Paper 125, 1–14.
59. Yang, S., Wang, K., (2009), The influence of information sensitivity compensation on privacy concern and behavioral intention, *ACM SIGMIS Database*, 40(1), 38-51.
60. Zhang, R., Chen, J.Q., Lee, C.J., (2013), Mobile commerce and consumer privacy concerns, *Journal of Computer Information Systems*, 53(4), 31-38.
61. Zukowski, T., Brown, I., (2007), Examining the Influence of Demographic Factors on Internet Users' Information Privacy Concerns (paper presented at the conference), In: SAICSIT '07, *Proceedings of the 2007 annual research conference of the South African institute of computer scientists and information technologists on IT research in developing countries*, 197-204. ACM New York, NY, USA.

**dr.sc. Ivan-Damir Anić**

Ekonomski institut, Zagreb, Republika Hrvatska

mail: danic@eizg.hr

## **RAZVOJ MARKETINGA BAZA PODATAKA: JE LI VAŽNA ULOGA ZABRINUTOSTI POTROŠAČA ZA PRIVATNOST NJIHOVIH INFORMACIJA?\***

*Pregledni rad*

### **Sažetak**

*Zabrinutost potrošača za privatnost informacija je važno strateško pitanje za poduzeća. Da bi bila uspješna, poduzeća razvijaju baze podataka o potrošačima i koriste te informacije da bi razvila tržištu prilagođene proizvode i usluge i da bi efikasnije targetirala potencijalne kupce. Međutim, intenzitet i obujam direktne marketinške komunikacije i mogućnost zlouporabe podataka stvaraju kod potrošača zabrinutost za privatnost njihovih informacija. Kao posljedica toga, potrošači mogu zaštititi svoju privatnost, što može ograničiti rast marketinga baza podataka, direktnog marketinga, a i elektroničke trgovine. Ovaj rad istražuje i daje prikaz čimbenika koji utječu na zabrinutost potrošača za privatnost informacija i njezine učinke u kontekstu marketinga baza podataka. U članku je predstavljen teorijski model koji istražuje učinke stavova potrošača prema marketingu baza podataka, i učinke zabrinutosti potrošača za privatnost na njihovu spremnost da daju svoje osobne informacije, njihovu namjeru kupnje i stvarnu kupnju. Model polazi od pretpostavke da kontrola nad osobnim informacijama može umanjiti utjecaj nepovoljnih stavova potrošača o marketingu baza podataka na zabrinutost potrošača nad privatnošću. Isto tako percipirana korisnost informacijske tehnologije može umanjiti negativniji utjecaj zabrinutost potrošača na njihovu spremnost da daju svoje informacije, njihovu namjeru kupnje i samu kupnju. U radu se diskutiraju implikacije ovog istraživanja za menadžere.*

**Ključne riječi:** *marketing baza podataka, zabrinutost potrošača za privatnost informacija, stavovi potrošača, spremnost potrošača da daju osobne informacije, kupnje potrošača*

**JEL klasifikacija:** M30

*\*Ovaj rad je financirala Hrvatska zaklada za znanost projektom broj 7913.*